

**ENTREPRENEURSHIP RESILIENCE AND VULNERABILITY REDUCTION IN THE
AFROMONTANE REGION: ANALYSING THE LIVELIHOOD STRATEGIES OF
FEMALE ENTREPRENEURS IN QWAQWA**

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**This thesis is submitted in accordance with the requirements for a
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LIST OF ACRONYMS

ABCD-	Asset-Based Community Development
ABSA-	Amalgamated Bank of South Africa
ADB-	African Development Bank
AL-	Action Learning
AR-	Action Research
AS-	Action Science
AUDA-	NEPAD- African Union Development Agency-NEPAD
AWIEF-	Africa Women Innovation & Entrepreneurship Forum
BA-	Bachelor of Arts
BAA-	Basic Ambulance Attendant
BRICS-	Brazil Russia India China South Africa
BSC-	Bachelor of Social Science
BSDI-	Bavumile Skills Development Initiative
C/A-	Coarse/Acquisition
CBD-	Central Business District
CBO-	Community Based Organisations
CBPR-	Community-Based Participatory Research
CCSA-	Competition Commission South Africa
CCRED-	Collaborative Change Research, Evaluation, & Design
CEnR-	Community-Engaged Research
COVID-19-	Corona Virus Disease of 2019
CZ-	Citizen Science
DBSA-	Development Bank of Southern Africa
DESTEA-	Department of Economic Small Business Tourism and Environmental Affairs
DSD-	Department of Social Development
DTI-	Department of Trade and Industry
ECD-	Early Childhood Development
FAO-	Food and Agriculture Organisation
FGD-	Focus Group Discussion
FGDs-	Focus Group Discussions

FNB-	First National Bank
GDP-	Gross Domestic Product
GEF-	Global Environment Facility
GEM-	Global Entrepreneurship Monitor
GHREC-	General/Human Research Ethics Committee
GIS-	Geographic Information Systems
GLO-	Global Labor Organisation
GPS-	Global Positioning System
ICRW-	International Center for Research on Women
IFB-	Institute for Family Business
IFPRI-	International Food Policy Research Institute
ILO-	International Labour Organisation
IWF-	Isivande Women's Fund
KEFL-	Khula Enterprise Finance Limited
KSMS-	Khula Start and Micro Start
KZN-	KwaZulu-Natal
LRP-	Land Redistribution Programme
LRPP-	Land Reform Pilot Programme
LTC-	Local Transitional Council
MAP-	Maluti-A-Phofung
MBS-	Maldives Bureau of Statistics
MIWE-	Mastercard Index of Women Entrepreneurs
MVI-	Multidimensional Vulnerability Index
NEPA-	Ntsika Enterprise Promotion Agency
NGOs-	Non-Governmental Organisations
NYP-	National Youth Policy
ODK-	Open Data Kit
OECD-	Organisation for Economic Co-operation and Development
ONA-	Organizational Network Analysis
POPIA-	Protection of Personal Information Act
PRISMA-	Preferred Reporting Items of Systematic Reviews and Meta-Analyses

PWC-	Public Works Construction
QUOROM-	Quality of Reporting of Meta-analysis
RIMS-	Research Information Management System
ROCSA-	Rotating Savings and Credit Association
SAWEN-	South African Women Entrepreneur's Network
SDGs-	Sustainable Development Goals
SEDA-	Small Enterprise Development Agency
SLF-	Sustainable Livelihoods Framework
SLR-	Systematic Literature Review
SMEs-	Small Medium Enterprises
SMMEs-	Small Medium and Micro Enterprises
Stats SA-	Statistics South Africa
TEA-	Total Entrepreneurial Activity
TWIB-	Technology for Women in Business
UFS-	University of the Free State
UN-	United Nations
UNAGEE-	United Nations Agency for Gender Equality and Empowerment
UNCTAD-	United Nations Conference on Trade and Development
UNFCC-	United Nations Framework Convention on Climate Change
UNISDR-	United Nations Office for Disaster Risk Reduction
USD-	United States Dollar
UYS-	Umsobomvu Youth Fund
WEF-	World Economic Forum
WEI-	Women Enabled International
YES-	Youth Empowerment Services

DECLARATION

This research project is conducted as a requirement in partial fulfillment for the Doctor of Philosophy with Specialisation in Africa Studies at the University of the Free State under the Centre for Gender and Africa Studies (CGAS).

I, Jerit Dube, hereby declare the following:

- i. I declare that this is my independent original research work. This work has never been submitted previously for a qualification to any institution of higher education.
- ii. Furthermore, I declare that the requirements of the University of the Free State have been met and that I obtained authorisation and consent from all relevant stakeholders to conduct this research.
- iii. I am fully aware of the copyright that is vested in the University of the Free State.

Signed: 

Date: 24/10/2024

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- Above all, I would like to thank God and my ancestors for guiding and protecting me throughout my entire life.

DEDICATION

I dedicate this work to my late father (Israel Dube) and uncle (Robert Etji Dube) who respectively passed away (August 2021 and August 2022) in the middle of my doctoral journey. I also dedicate this work to my aunt who recently passed on when I was preparing for my final submission. Though they are not here today to witness the completion of this work. I believe they are watching me from the heavens. I would like to say, “May their precious souls continue to rest in eternal peace. Muyizele ne donodzo nekunyalala boSungwaha naBantambe!!”

ABSTRACT

Resilience in female entrepreneurship appears as a significant component that critically influences the achievement and capacity to overcome vulnerabilities inherent in the development and management of businesses. Up to now, various scholars in the field of entrepreneurship have understood resilience as a response to adversity extreme events, or disasters. However, this study understands resilience as the ability to bounce back after exposure to vulnerabilities. Concerning female entrepreneurship, this study understands entrepreneurship resilience as the ability of female entrepreneurs to bounce back and reduce their vulnerabilities. To understand entrepreneurship resilience and vulnerability reduction of female entrepreneurs, this study conducted a systematic literature review which indicated that there is an existing gap in the literature on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in marginalised regions like the Afromontane. Thus, due to this existing literature gap, less is known about the vulnerabilities encountered by female entrepreneurs in the Afromontane regions. In the Afromontane regions like QwaQwa for instance, female entrepreneurs are exposed to multidimensional vulnerabilities due to weak resilience capacity. Furthermore, due to a lack of empirical research and a gap in the literature on entrepreneurship resilience and vulnerability reduction, there is less knowledge on the resilience-building strategies that female entrepreneurs in this region can use to reduce their vulnerability exposure. To address the issue of vulnerability and resilience of female entrepreneurs and close this existing gap in literature and knowledge, this study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane. It particularly analysed the livelihood strategies of female entrepreneurs in QwaQwa to understand the vulnerabilities they are exposed to, their vulnerability reduction, and entrepreneurship resilience capacity.

This study followed a multi-theoretical framework to understand the multidimensional vulnerabilities encountered by female entrepreneurs in QwaQwa as well as their resilience to these vulnerabilities. In line with the research objectives, a qualitative approach was followed to understand the experiences and perceptions of female entrepreneurs in QwaQwa. Through a participatory approach, a total of 27 female entrepreneurs in QwaQwa were involved in this study. These participants were selected through snowball sampling. Data was collected through in-depth interviews, focus group discussions, life history narratives, transect walks, and entrepreneurship

hotspot analysis. Data was thematically analysed using ATLAS ti 22 version. The findings of the study indicate that female entrepreneurs in QwaQwa are exposed to multidimensional vulnerabilities. To reduce their vulnerabilities and strengthen their resilience, the female entrepreneurs in QwaQwa rely on various types of capital. However, though they rely on capital, their vulnerability exposure remains high while their resilience capacity remains low. They have a higher vulnerability exposure and low resilience capacity. The scientific evidence brought by this study indicates that there is a lack of research on female entrepreneurs, resilience, and vulnerability reduction in the QwaQwa region, precisely in QwaQwa. Given this gap in research and literature, female entrepreneurs in this region continue to experience multidimensional vulnerabilities. In an attempt to contribute to the body of knowledge of entrepreneurship resilience and vulnerability reduction, this study developed a vulnerability reduction and entrepreneurship resilience model from the study findings and multi-theoretical framework. This study hopes that female entrepreneurs in the future will apply the developed model to reduce their vulnerabilities and enhance their entrepreneurship resilience capacity. Recommendations for policy development and future research emerged and have been provided by this study.

Keywords: *Entrepreneurship, female entrepreneurs, entrepreneurship resilience, vulnerability, vulnerability reduction, and QwaQwa.*

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1. Introduction

This chapter presents an in-depth introduction to this study, which explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the QwaQwa community, in the Afromontane region. Compared to their male counterparts, female entrepreneurs experience a higher vulnerability exposure; thus, they are not exempted from the gendered impact of vulnerabilities on their livelihood strategies. For example, during the recent COVID-19 pandemic and the global economic turmoil of 2008, most female entrepreneurs experienced serious business losses (Birhanu et al., 2022; Manolova et al., 2020). Regardless of the vulnerabilities induced by COVID-19, most female entrepreneurs globally, manage to cope and adapt to the vulnerabilities though interventions from the government have been inefficient and limited (Elam et al., 2022). Due to limited or inefficient interventions, the capacity of female entrepreneurs to achieve entrepreneurship resilience in most African mountain communities remains low. Female entrepreneurs from QwaQwa in the Afromontane region are no exception as they also experience vulnerabilities that affect their entrepreneurship resilience. Given their exposure to vulnerabilities and low entrepreneurship resilience capacity, the researcher of this study was motivated to explore entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa. The researcher delved deeper and analysed the livelihood strategies of these female entrepreneurs given their high exposure to vulnerabilities and low entrepreneurship resilience capacity. The background of this study is provided below. The rest of this chapter covers the study scope, problem statement, research aim, and objectives. The chapter also presents the main research question, sub-questions, significance of this study as well as the research project timeline.

1.2. Background of the Study

Entrepreneurship is considered a key contributor to economic growth, employment creation, and poverty reduction while stimulating social-economic innovation in most developing countries (World Bank, 2019). Female entrepreneurs across third-world countries play a pivotal role in economic growth and poverty reduction (Global Entrepreneurship Monitor (GEM), 2023; World Bank, 2019). However, Elam et al. (2022) state that the 2021/2022 Global Entrepreneurship

Monitor's report on women indicates that there is an existing substantial difference in entrepreneurship between men and women internationally.

As illustrated by Meyer, Samsami and Bowmaker-Falconer (2024) in 2023 about 13.5% of women were involved in entrepreneurship as compared to 19.9% of men in South Africa. In 2022, female entrepreneurship was only 9.5%. This increase in female entrepreneurship was consistent with male entrepreneurship which increased from 11.1% to 19.9% (Mastercard Index of Women Entrepreneurs [MIWE], 2022b). Though there is a slight increase in female entrepreneurship, the GEM (2023) argues that there is still a need to empower women and improve female entrepreneurship. Given this lower rate of women's involvement in business, this study thus encourages that female entrepreneurship should be identified as a policy priority. Furthermore, initiatives and programmes empowering women should be implemented to improve the rate of female entrepreneurship in South Africa.

South Africa's unemployment rate as revealed by Stats SA (2023) has decreased by at least 0.7%, that is from 32.6% in 2023's second quarter to 31.9% in 2023's third quarter. Furthermore, in the second quarter of 2023, about 35.7% of women as compared to 30% of men were unemployed (Stats SA, 2023). A report published by the Competition Commission of South Africa [CCSA] (2023) on women in business study states that Black women's unemployment and challenges experienced by women in businesses are related to intersectionality between racial and gender inequality. This report further indicates that about 11% of Coloured Women, 14% of White women and 65 % of Black women were involved in entrepreneurship in 2023 in South Africa (CCSA, 2023). Black women were the majority in entrepreneurship as compared to the other races because most of them were unemployed.

According to the GEM (2023), most Black women in African countries are unemployed because of COVID-19. Most women particularly black were adversely impacted by COVID-19 both in their employment and businesses. Due to a lack of resources and support from the government, most of the women who were involved in business failed to recover after COVID-19 (Meyer et al., 2024). However, scholars like Bullough et al. (2022) argue that the challenges female entrepreneurs encounter are contextually entrenched. Thus, during the COVID-19 pandemic, female entrepreneurs were also exposed to other challenges that worsened their vulnerability exposure. For instance, gendered roles and cultural expectations are some of the vulnerabilities

that affected the livelihood strategies of female entrepreneurs during the COVID-19 pandemic (Javadian et al., 2021).

However, while there is an increase in female entrepreneurship with the expectation of empowering women, and reducing poverty (Fatoki, 2018), research on female entrepreneurship resilience and vulnerability reduction in the Afromontane region remains insufficient. This dearth of scholarship is reflective of a research field that is still in its infancy stage. As a result, to fill in this existing research gap, this study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane, specifically focusing on analysing the livelihood strategies of female entrepreneurs in QwaQwa.

According to Al-Harhi (2017), the United Nations Agency for Gender Equality and Empowerment (UNAGEE) argues that women and youth are far behind in land entitlements, access to decent employment, business loans, and credit in many developing African countries. Hence, they continue to suffer multiple vulnerabilities, including social exclusion, discrimination, exploitation, and disproportionate poverty (Osama, 2020; Makhaya, 2017). Additionally, due to such harsh conditions, especially women and young girls have become vulnerable to various forms of gender-based violence such as sexual, emotional, physical, and psychological abuse (Al-Harhi, 2017).

As argued by Zehra (2018), women and youth need to be empowered through entrepreneurship to reduce their vulnerability to poverty, discrimination, social exclusion, and all other forms of violence. While empowerment is a contested term, we have a place for it in this study. Women empowerment refers to transforming women's livelihoods from poor conditions to better or improved living conditions (Ciruela-Lorenzo, González-Sánchez & Plaza-Angulo, 2020). Such empowerment includes gender equality, economic growth, social inclusion, and poverty reduction. According to Ciruela-Lorenzo et al. (2020), empowering women economically gives them the right to access and control resources and enhances their capacity to develop entrepreneurship resilience strategies, enabling them to alleviate their vulnerability to poverty and social distress. Furthermore, women empowerment allows women involved in businesses to be equipped with skills, capabilities, and resources to control their livelihood strategies, achieve economic freedom, reduce their vulnerabilities, and enhance their entrepreneurship resilience (Nkanta, 2023). In relation to the concept of women empowerment, this study believes that if female entrepreneurs in

QwaQwa are given access to and control over resources, necessary skills, and capabilities, they can be able to reduce their vulnerabilities and build or enhance their entrepreneurship resilience.

As stated by Alonso (2016), entrepreneurship is a common approach that can be applied to empower women economically in areas that hinder women's development. Entrepreneurship plays a pivotal role in transforming women's livelihoods. As defined by Al-Harthi (2017), entrepreneurship is understood as a process in which an entrepreneur identifies and utilises social opportunities and resources to create social wealth and improve their livelihoods as well as for the benefit of their societies. As defined by Diandra and Azmy (2020), 'entrepreneurship' involves organising, developing and management of a new organisation designed for pursuing and nurturing an innovative business or enterprise into a potentially high-growth and profitable venture in an unstable and complex environment. Croci (2016) defines entrepreneurship as an 'autonomous' discipline that operates independently and is interdisciplinary. Scholars like Barot (2015) and Chang and Wyszomirski (2015) define entrepreneurship as a practice that begins with an act and innovation of a new organisation.

The African Development Bank [ADB] (2017) argues that entrepreneurship is relatively a novel research topic that focuses on exploring the management and resilience processes like creativity, autonomy, capacity, and resilience building for adaptability. As Hessels and Naudé (2019) articulated, entrepreneurship can be defined in various ways. However, in their understanding, these scholars define entrepreneurship as using skills to establish businesses that generate employment opportunities, alleviate poverty, and contribute to economic development (Hessels & Naudé, 2019). Additionally, entrepreneurship must apply manpower to mobilise resources, and acquire technical and managerial skills to withstand adversities and vulnerabilities (Hessels & Naudé, 2019). In light of these definitions, this study synthesises entrepreneurship as a process whereby an innovative and business-minded person identifies opportunities and resources to start up a business that can allow them to survive in an unstable environment. Given the above various definitions of entrepreneurship, this study agrees with Croci (2016) on the notion of entrepreneurship as an interdisciplinary. Furthermore, it understands entrepreneurship as the pursuit of business ventures by entrepreneurs through existing opportunities and resources to reduce vulnerabilities, create opportunities, boost the economy, and build or manage resilience processes in unstable complex environments like QwaQwa.

As understood by Adeyeye et al. (2019), there are two types of entrepreneurships, which are opportunity-driven and necessity-driven entrepreneurship. Opportunity-driven entrepreneurship is whereby individuals identify business opportunities when the economic conditions are good and the unemployment rate is low, and they establish their entrepreneurial activities. In the case of opportunity-driven entrepreneurship, the pull factors are profit, market opportunities, social status, innovation, self and financial actualisation, and independence. However, this study focused on necessity-driven female entrepreneurs in QwaQwa. According to Nikiforou, Dencker and Gruber (2019), necessity-driven entrepreneurship is an entrepreneurial activity whereby an individual starts a business because he or she did not get employment elsewhere. On this occasion, the main aim is to earn a living, generate small profit, and develop their community through creating informal jobs for others (Nikiforou et al., 2019). However, as argued by Fairlie and Fossen (2019), necessity-driven entrepreneurship only involves those individuals who are registered as ‘unemployed’ before launching their businesses and excludes those individuals who are unemployed and were not actively looking for jobs before starting their businesses. A necessity-driven entrepreneur thus refers to an individual who has been pushed by unemployment to start a business to survive while generating little profit and developing their community through informal job creation (Nikiforou et al., 2019). Given the history of female entrepreneurs regarding unemployment, the emergence of informal entrepreneurship, and the current socio-economic status of women in QwaQwa (Muyambo et al., 2024b), the researcher regarded the study participants as practicing necessity-driven entrepreneurs. The researcher as a female individual who at some point also encountered unemployment after completing her undergraduate studies, and resorted to selling vegetables and fruits along the busy streets of Johannesburg was motivated to conduct a study in QwaQwa and explore entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in QwaQwa.

1.3. The Historical Context of QwaQwa

QwaQwa is considered one of the marginalised regions in the Free State, where female entrepreneurs are struggling to cope and adapt to a diversity of vulnerabilities (Mukwada, Hlalele & Le Roux, 2016). This study assumes, like other scholars (Alonso, 2016; Zehra, 2018) that vulnerabilities among female entrepreneurs can be reduced by empowering female entrepreneurs and facilitating entrepreneurship resilience and strengthening capability. In the 1990s there was

deregulation in QwaQwa characterised by a reduction in state subsidies that had funded an industrialisation approach that had generated employment during most of the 1980s (Mukwada et al., 2016). During the same period, most of the traders in QwaQwa who had accrued wealth in the 1980s encountered a recession in their wealth due to de-industrialisation (Slater, 2002). This led to a rapid increase in unemployment in the industrial sector and a state reshuffle in QwaQwa. The loss of employment opportunities in this area concurred with the deregulation and relaxation of strict licensing trading and business laws for most businesses and retail in QwaQwa (Makombe & Nyambi, 2019).

The rapid increase in unemployment combined with the relaxation of trading and business laws led to the emergence of new informal livelihood strategies in this area. For example, women started to sell snacks, drinks, fruits, and fa cooks in front of school gates and along streets. Informal vendors took over the main shopping center and opened informal stalls where they mostly sold vegetables (Makombe & Nyambi, 2019). Around 1999, QwaQwa was dominated and saturated by diverse informal traders and retailers who were operating multi-businesses. As indicated by Slater (2002), before deregulation, the government required people who wanted to operate tuck-shops to possess licenses. However, after deregulation, anyone from QwaQwa started to operate tuck-shops without any constraints. Given the above illustrations on de-industrialisation and loss of economic status of QwaQwa, this study believes that unemployment, weaker governance, and lack of basic service delivery pushed most poor people to venture into informal or necessity-driven entrepreneurship in QwaQwa.

1.4. Researcher Positionality

As a principal researcher in this study, I identify myself as a Black African lady, studying for a Doctor of Philosophy in Africa Studies within the Centre of Gender and Africa Studies. As conditioned by my experience in research, I possess an interpretive epistemology that enabled me to integrate multiple theories into exploring entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa. I have never owned an enterprise, and thus, I have never experienced any vulnerabilities related to entrepreneurship. Before conducting the study, I did not understand the livelihood strategies of female entrepreneurs in QwaQwa. Furthermore, I lacked an understanding of the vulnerabilities these female entrepreneurs have been exposed to as well as their entrepreneurship resilience capacity. However, as a PhD candidate in Africa Studies within

the Centre for Gender and Africa Studies, and a Black African lady coming from an African rural community dominated by many women engaging in poverty reduction initiatives, I was motivated to conduct the study. In conducting this study, I applied a participatory approach and a multi-theoretical framework to understand how female entrepreneurs in the Afromontane communities, precisely in QwaQwa, are exposed to vulnerabilities, and how they are resilient to those vulnerabilities. I also followed a holistic approach to understanding how these female entrepreneurs empower themselves and improve their livelihoods through necessity-driven entrepreneurship.

I would like to declare that there is no formal relationship between me as the principal researcher of the study and the study participants. In addition, I have never resided in the same community where the study participants reside. As a result, I do not have direct experience with the participants' livelihoods and, or the community where the study was conducted, which could have influenced bias in the study findings. Data about participants' livelihood strategies, vulnerabilities, and entrepreneurship resilience capacity was gathered by me as the principal researcher of the study. Some of the data was generated from secondary sources obtained through a systematic literature review process. Through a participatory approach, I collaborated with the study participants and managed to collect rich and valid data. Mutual trust and respect between me and the study participants were built from this collaboration. This collaboration assisted in avoiding biases from both me and the study participants. Furthermore, to avoid bias, I adhered to the research ethical considerations, and I also applied a triangulation method in collecting data.

1.5. Study Scope

The study scope is divided into two sections, namely: the study field and the geographical location of the study, and these are respectively presented below.

1.5.1. Field of the Study

This study is located in a nascent interdisciplinary space that transcends multiple social sciences, entrepreneurship, development studies, and gender studies. The systematic literature review in Chapter Two indicates that entrepreneurship resilience and vulnerability of female entrepreneurs have been understudied in the Afromontane region. This signifies an empirical, theoretical, and

methodological gap in approaches to understanding female entrepreneurship. This study thus explored entrepreneurship resilience and vulnerability reduction in the Afromontane region by analysing the livelihood strategies of female entrepreneurs in QwaQwa. This study applied a multi-theoretical framework in identifying and understanding vulnerability exposure, vulnerability reduction, entrepreneurship resilience, and analysing the livelihood strategies of female entrepreneurs in QwaQwa. The nascency of the Afromontane entrepreneurship literature is enabling the study findings to be used as a foundation for future research in the Afromontane region. The female entrepreneurs selected in this study represented livelihood strategies from the informal sector, and unregistered entrepreneurial livelihood strategies. However, the study also focused on livelihood strategies that have been in existence for more than 10 years with an assumption that they have gone through various vulnerabilities and implemented various resilience strategies.

Given that entrepreneurship resilience scholars (Awotoye & Singh, 2017; Duchek, 2018; Roundy, Brockman & Bradshaw, 2017) point out that resilience is an evolving dynamic process, it would have been appropriate for this study to be longitudinal. However, due to time restraints, the researcher conducted a cross-sectional study, using life history narratives to provide historical information relevant to this study. As stated previously, female entrepreneurship has recently received more attention in policymaking, developmental practices, and academic circles in Africa and globally. It has received much attention because of an existing positive nexus between entrepreneurship, economic growth, and development.

A systematic literature review conducted for this study, presented in Chapter Two in Section 2.2.1 indicates that women-led entrepreneurship in the Afromontane region is still at its infant stage. As a result, there is a lack of research on women entrepreneurship in this region. Thus, many women, especially those involved in necessity-driven informal entrepreneurship, continue to encounter vulnerabilities that affect their livelihoods and their entrepreneurship resilience. Furthermore, a lack of research has contributed to limited literature on women entrepreneurship in the Afromontane. This study thus followed an interdisciplinary holistic approach and explored the livelihood strategies of female entrepreneurs in QwaQwa to their vulnerability exposure, vulnerability reduction, and entrepreneurship resilience. It also applied a multi-theoretical framework (resilience theory, vulnerability theory, and capability approach) in identifying and

understanding the vulnerabilities encountered by female entrepreneurs in QwaQwa, their vulnerability reduction, and entrepreneurship resilience strategies.

1.5.2. Geographical Location of the Study

This empirical study on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region was conducted in QwaQwa, which is one of the marginalised mountain communities of the Afromontane region. The study focused on analysing the livelihood strategies of female entrepreneurs in this area.

1.5.2.1. The Afromontane Region

The Afromontane (African Mountains) is a series of mountains that cover more than 600 km located in both South Africa and Lesotho (Mukwada et al., 2016). According to these scholars, it is crucial to understand montane issues to meet the human needs and necessities in this region where poverty is endemic. In 2022, more than 50% of the total population within the Afromontane region was unemployed and youth unemployment hovered at approximately 43.2% (Yanta, 2022). The majority of people in this rural region rely on natural resources to sustain their livelihoods. These people are commonly underprivileged and prone to vulnerabilities associated with poverty, hunger as well as other deprivation challenges (Msimanga & Mukwada, 2024). As a result, they are exposed to harsh living conditions characterised by poor housing infrastructure, water scarcity, and food insecurity.

People in Afromontane communities (QwaQwa in this case) do not receive basic services and attention from the government (Msimanga & Mukwada, 2024). Thus, their voices are seldom listened to, their knowledge is not appreciated, and their basic needs are hardly met in wider national development policies (Mukwada et al., 2016). This has been found to be true in this study as most participants reported that there is a lack of basic service delivery in QwaQwa. Given this challenge, their livelihoods have been exposed to multidimensional vulnerabilities.

1.5.2.2. Contextualising QwaQwa

QwaQwa is located in the Maluti-A-Phofung (MAP) local municipality, in the north-eastern part of the Free State province of South Africa (Msimanga, 2023). MAP is a local municipality that was established on the 5th of December 2001 and has a total of 23 wards. Furthermore, it has

QwaQwa as the Local Transitional Council (LTC) which is semi-rural (Stats SA, 2022). Maluti-A-Phofung municipality is considered a densely populated municipality in Free State, with 46% of the total population living in poverty. About 27% of the total population in this municipality, live in traditional or rural residences (Kgomo & Gelderblom, 2020). Figure 1 illustrates the map of the QwaQwa area.

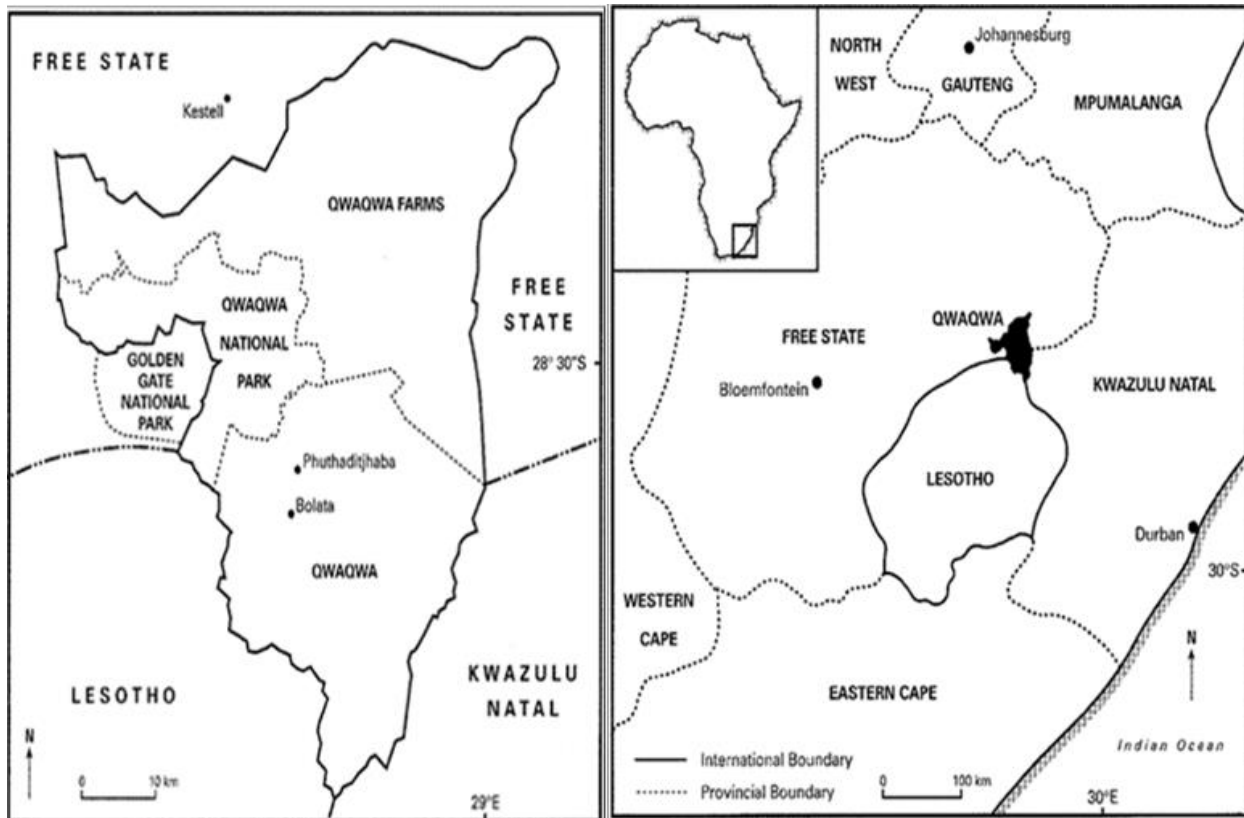


Figure 1: Map of QwaQwa (Kgomo & Gelderblom, 2020).

QwaQwa as an LTC of Maluti-A-Phofung Municipality is divided into two sections, which are an urban and a rural (villages) setting (Kgomo & Gelderblom, 2020). QwaQwa is made up of an urban settlement called Phuthaditjhaba, which covers about 63 km² of land, and has a human population of about 70000, and a rural or peri-urban community of around 250000 people who live in different villages along the Drakensberg Mountain foothills (Van der Merwe & Challa, 2015). Phuthaditjhaba is the town or ‘urban’ center of QwaQwa and is regarded as the ‘Administrative Head Office’ of Maluti-A-Phofung municipality (Kgomo & Gelderblom, 2020).

Phuthaditjhaba, as described by Msimanga (2023), is surrounded by the rural villages of QwaQwa, established on tribal land that is managed by the ‘Department of Land Affairs’. These villages are

controlled by chiefs who also exert patriarchal dominance. Culturally, men have power over men and expect their wives to be submissive to them (Nishimwe-Niyimbanira, 2020, Twala, 2020). According to Twala (2020), most of these rural settlements were not surveyed or planned. Thus, some people in these villages live on uninhabitable land. The villages are located along the ranges of the Drakensberg Mountains (van der Merwe & Challa, 2015). To meet the objectives of this study, only female participants from Makwane, Matsikeng, Monontsha, and Bluegumbosch were conveniently selected for participation in this study. Only these villages were selected because they were easily accessible to both the researcher and the participants for interviews and focus group discussions. Other villages are in mountainous areas with public transport and mobile network problems.

1.5.2.2.1. *Socio-economic status of QwaQwa*

QwaQwa, as described by Van der Merwe and Challa (2015) comprises several rural villages, rich landscape, heritage, and cultural resources. About 7km from Phuthaditjhaba, there is one of the Free State's main tourist attractions, the Golden Gate Highlands National Park (Twala, 2020). QwaQwa is incapable of efficiently preserving and turning this national park into a tourist centre that can raise revenue and create employment opportunities for the local communities (Nishimwe-Niyimbanira, 2020). As a result, most of the local communities in QwaQwa are living in poverty due to a lack of economic activities and employment opportunities (Nishimwe-Niyimbanira, 2020). In simple terms, it can be said that the heritage and tourism industry does not sustain the livelihoods of people and the development of QwaQwa. Thus, to sustain their livelihoods, the local communities have resorted to other entrepreneurship strategies like street trading, brick molding, subsistence farming, and livestock rearing, which have also led to severe land degradation (Twala, 2020).

Kgomo and Gelderblom (2020), reveal that most people from the rural villages have little or no access to basic services and infrastructure, hence they depend largely on natural resources, subsistence or small-scale farming, and informal entrepreneurship. Those people residing in urban areas like Phuthaditjhaba, depend mostly on both formal and informal entrepreneurship (Nishimwe-Niyimbanira, 2020). According to Kgomo and Gelderblom (2020), over two-thirds of residents in QwaQwa are poor and are earning less than R1600.00 per month (Kgomo &

Gelderblom, 2020). Many people in this area depend on social grants. As a result, their capability to cope with poverty and other vulnerabilities is very low (Twala, 2020).

1.6. Problem Statement

According to various studies of entrepreneurship (Irene, 2017; Nishimwe-Niyimbanira, 2020), in recent years, female entrepreneurship has remarkably increased, indicating its growing significance in the corporate world. However, despite this significant progress, female entrepreneurs, mostly the necessity-driven ones, are still facing hurdles and vulnerabilities compared to their male counterparts (Makhaya, 2017). Some of these vulnerabilities include the lack of finance, gender inequality induced by cultural values and beliefs, and lack of support networks. Due to the mentioned vulnerabilities, female entrepreneurs, particularly in the marginalised regions, find it challenging to enhance or build stronger entrepreneurship resilience. As Nassif and Garçon (2024) argued, a lower resilience capacity affects the vulnerability reduction capacity of female entrepreneurs. This is also common among necessity-driven female entrepreneurs operating in the informal sector of QwaQwa. Female entrepreneurs in QwaQwa are exposed to multidimensional vulnerabilities and lack key skills, resources, and sufficient support from the government to reduce their vulnerabilities and build stronger entrepreneurship resilience (Twala, 2020). Though some of these female entrepreneurs encounter vulnerabilities in their livelihood strategies, others are achieving success in the presence of these vulnerabilities. This raises questions like: How does entrepreneurship resilience, viewed as the capability to overcome and recover from adversity, enable female entrepreneurs to reduce vulnerabilities in their livelihood strategies? How does entrepreneurship resilience enable female entrepreneurs to achieve success in the presence of vulnerabilities? Such raised challenges and questions underscore the necessity to recognise and address the vulnerabilities encountered by female entrepreneurs while also emphasising their capabilities to surmount vulnerabilities hindering them from achieving their entrepreneurial goals.

Entrepreneurship resilience, which is of paramount importance in entrepreneurial success, is predominantly vital for female entrepreneurship. In this study, the notion of resilience involves reducing vulnerabilities, adapting to, recovering from, and persevering through adversity. Previous studies (Cosentino & Paoloni, 2021) indicate that for female entrepreneurs to be able to overcome adversities and build resilience, they need fundamental skills supported by robust governmental

support. Though research has been done on the vulnerabilities encountered by female entrepreneurs in Africa (Alozie and Isiwu, 2021; Atarah et al., 2021; Windapo, 2024), there is little or no research that has been done on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region. A lack of research contributes to a gap in both literature and knowledge of resilience and vulnerability reduction strategies for female entrepreneurs in the study region.

Research on the entrepreneurship resilience of female entrepreneurs is crucial for various reasons. Socially, entrepreneurship resilience is viewed as a significant capability for the socioeconomic empowerment of marginalised women. In addition, its practical effectiveness guides the designing and implementing policies and initiatives that support the resilience of female entrepreneurs. Given the existing gap in research, literature, and knowledge on female entrepreneurship resilience and the various reasons stipulated above, this study, through a participatory approach, explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region. It particularly analysed the livelihood strategies of female entrepreneurs in QwaQwa. Researching this neglected phenomenon, this study offers practical and innovative theoretical insights into the significant role of entrepreneurship resilience in the livelihood strategies of female entrepreneurs in marginalised Afromontane regions like QwaQwa.

1.7. Research Aim

The purpose of this study is to explore female entrepreneurship resilience and vulnerability reduction in the Afromontane region. The objectives below guided the researcher to achieve the aim of this study.

1.7.1. Specific Objectives

1. To explore the livelihood strategies of female entrepreneurs in QwaQwa.
2. To identify the vulnerabilities encountered by female entrepreneurs in QwaQwa.
3. To investigate the vulnerability reduction and entrepreneurship resilience strategies of female entrepreneurs in QwaQwa
4. To identify and map entrepreneurship hotspots for female entrepreneurs in QwaQwa.
5. To develop a vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa.

1.8. Research Question

How do female entrepreneurs in QwaQwa reduce their vulnerabilities and build entrepreneurship resilience?

1.8.1. Sub-Questions

1. What are the livelihood strategies of female entrepreneurs in QwaQwa?
2. Which set of vulnerabilities affects the resilience of female entrepreneurs in QwaQwa?
3. How do female entrepreneurs in QwaQwa reduce their vulnerabilities and build entrepreneurship resilience?
4. How can hotspot mapping assist in analysing the spatial distribution of female entrepreneurs in QwaQwa?
5. How can the developed vulnerability reduction and entrepreneurship resilience model assist female entrepreneurs in QwaQwa to improve their vulnerability reduction and entrepreneurship resilience capacity in the future?

1.9. Significance of the Study

The vulnerability of female entrepreneurs in the Afromontane region is understudied and continues to be poorly understood. Poor understanding of vulnerability exposure affects the livelihood strategies, vulnerability reduction, and resilience capacity of female entrepreneurs in the Afromontane's marginalised regions like QwaQwa. Up to now, there are few studies (Sharma & Bailey, 2022) that have been conducted on vulnerability exposure, vulnerability reduction, and entrepreneurship resilience of female entrepreneurs in QwaQwa. The lack of empirical studies on this topic in QwaQwa has contributed to a massive gap in literature and theory of understanding the vulnerability, vulnerability reduction and entrepreneurship resilience of female entrepreneurs in this region. In attempting to close this existing literature and theoretical gap, this study followed a multi-theoretical framework and explored entrepreneurship resilience and vulnerability reduction in QwaQwa. Particularly, this study analysed the livelihood strategies of female entrepreneurs in QwaQwa and studied their vulnerability exposure, vulnerability reduction, and entrepreneurship resilience capacity. The findings of this study will assist in improving the vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa who are highly exposed to vulnerabilities. This study will also provide a vulnerability

reduction and entrepreneurship resilience model and propositions to assist female entrepreneurs in QwaQwa to enhance their entrepreneurship resilience capacity. The findings of this study contribute to the existing body of literature and knowledge of female entrepreneurship and livelihood strategies of female entrepreneurs by emphasising entrepreneurship strategies of rural mountain women as well as their resilience and vulnerability reduction.

The study findings on the strategies for reducing vulnerabilities and building entrepreneurship resilience will assist policymakers and development practitioners in rethinking their policies and developing new policies that align with the needs, vulnerabilities, and resilience of female entrepreneurs in marginalised Afromontane regions like QwaQwa. Furthermore, improvement in policies will assist in promoting female entrepreneurship, empowering women, alleviating poverty, and promoting development in the informal sector of marginalised regions like QwaQwa.

The second chapter of this study provides a detailed review of existing literature that provides a background of the existing theories, in the field of female entrepreneurship, vulnerability reduction, and entrepreneurship resilience. It also provides existing gaps in literature and knowledge of female entrepreneurship resilience. As a result, future researchers can rely on the identified gaps and gathered evidence as a foundation for building up their research on similar phenomena in other regions of the Afromontane.

1.10. Representation of the Study Timeline and Chapter Outline

As presented in Figure 2, this PhD project commenced in August 2021. During this period the researcher managed to draft a research proposal, which became Chapter One of this study. Chapter Two (Literature Review) of this project was an ongoing writing process that commenced in 2021 and was completed in 2024. This means that the researcher kept on writing and updating literature since more publications are produced on daily basis.

Phase two of this project included ethics application and approval, fieldwork (data collection), data transcription, and analysis. The researcher submitted her application for ethics approval on the 10th of June 2022 and was approved on the 24th of October 2022. Thus, after obtaining ethics, fieldwork commenced on the 1st of November 2022 till April 2023. Data was collected through semi-structured face-to-face in-depth interviews, focus group discussions, transect walks, life history narratives, GIS hotspot mapping, and imagery. Transcribing of data was also done soon

after data collection was completed in April 2023. Collected data was analysed between May and June 2023.

During the data analysis process, the researcher also refined the methodology of this study (Chapter Three). Phase three (report writing) of this project commenced in July 2023 and was completed in April 2024. This included writing Chapter Four (Findings of the study), Chapter Five (Discussion of the study findings), and Chapter Six (Conclusion and recommendations). A first thesis draft was compiled in June 2024 soon after completing writing chapter Six. The second thesis draft was sent in July 2024 to the research supervisor for comments. By the end of August 2024, a third draft thesis was sent to the editors for editing. In September 2024, a final thesis draft was sent to the examiners for external examination. Below is an outline of the chapters of this study.

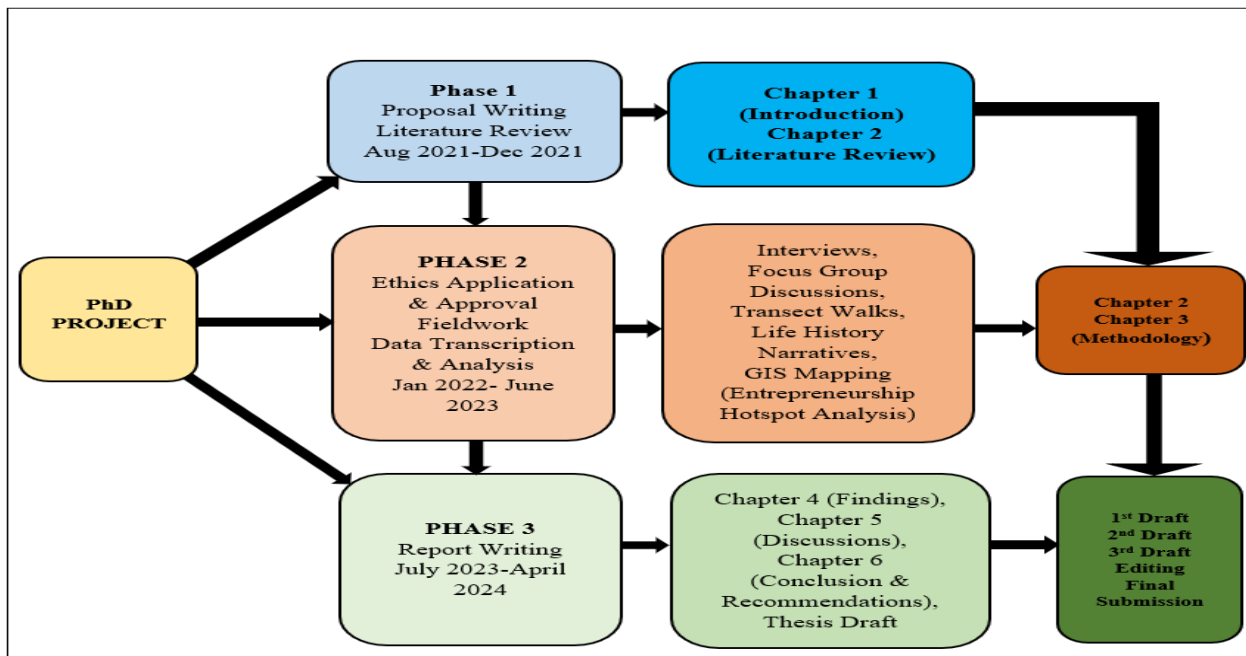


Figure 2: Representation of the Study Timeline.

1.11. Chapter Outline

The remaining chapters of this study are organised as follows:

- Chapter two provides a literature review and multi-theoretical framework of this study.
- Chapter three provides a methodology of this study and an overview of the study site.
- Chapter four presents the findings of this study.

- Chapter five provides a discussion of the study findings.
- Chapter six provides a conclusion and recommendations for this study. It also presents a proposed vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa. Chapter six also provides the limitations of this study, its contribution to scholarship, and insights for future research on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter presents a conceptual framework, literature review, and multi-theoretical framework. The first section of this chapter provides the conceptual framework that defines and discusses key concepts and how they relate to the study objectives. The second section analyses the literature stream informing this study. The literature review covers major arguments and discussions on scholarship on entrepreneurship resilience and vulnerability reduction of female entrepreneurs on different scales, that is globally, nationally, and regionally (Afromontane region). Three theories and their point of integration are discussed in the third section of this chapter. These theories include resilience theory, vulnerability theory, and capability approach. Below is a presentation of the conceptual framework of this study.

2.2. Conceptual Framework

The conceptual framework of this study includes key concepts like entrepreneurship resilience, vulnerability reduction, livelihood strategies, female entrepreneurs, Afromontane, and QwaQwa. These key concepts are defined briefly below.

2.2.1. Resilience

Resilience as defined by Mentges et al. (2023) is the ability to cope and adapt to exogenous disasters or shocks through decisive strategies. Resilience as understood by Guillaumont, McGillivray and Wagner (2017), encompasses the strategies implemented to enhance the mitigation capability of a community, individual or country when hit by shocks or disasters. This definition of resilience is also supported by Korber and McNaughton (2018), who suggest the following important components of resilience to consider when hit by different vulnerabilities, disasters, and or shocks:

- Size of exogenous disasters or shocks.
- Exposure to those disasters or shocks (size of the affected population); and
- Resilience (the capability to cope or adapt to shocks or disasters).

Resilience, in terms of entrepreneurship, can be defined as the ability to overcome or withstand adversity (Korber & McNaughton (2018). In a study conducted by McInnis-Bowers et al. (2017), on women entrepreneurship in Baruca, Costa Rica, the first distinctive factor of resilient female entrepreneurs is hardiness. This means that as female entrepreneurs become financially or economically independent, they develop the capabilities and confidence to control their businesses. Moreover, they become resourceful regarding efficiency, financial capital, and skills (Onoshakpor et al., 2020). These resourcefulness factors enable them to be resilient entrepreneurs who can cope and adapt to adverse and unstable business situations (Williams et al., 2017).

In this study, exogenous disasters or shocks like climate change, financial challenges, and COVID-19 profoundly impacted the livelihood strategies of female entrepreneurs in QwaQwa. These shocks or disasters disrupted the resilience of female entrepreneurs in QwaQwa. In relation to exposure to disasters or shocks, this study found that female entrepreneurs from QwaQwa are exposed to multidimensional vulnerabilities. These vulnerabilities did not only affect female entrepreneurs in QwaQwa. They also affected the market and suppliers (Maldives Bureau of Statistics [MBS], 2022), hence leading to reduced economic production of female entrepreneurs in QwaQwa. High exposure to multidimensional vulnerabilities also intensified the need for resilience among female entrepreneurs in QwaQwa. Resilience for female entrepreneurs in this study is significant for reducing vulnerabilities and sustaining their livelihood strategies in the face of adversity. As mentioned by McInnis-Bowers et al. (2017) and supported by Onoshakpor et al. (2020), factors that contribute to the resilience of female entrepreneurs include access to financial capital, skills, and support networks.

2.2.2. Vulnerability

Gallardo (2018) defines vulnerability as the inability of a community, social system, or individual to resist the effects or impacts of environmental, social, economic, or political shocks, hazards, or disasters. Forbes-Mewett and Nguyen-Trung (2019) articulate that the concept of vulnerability encompasses two components, which are “exposure to stress and contingencies” as well as “lack of capacity to adapt and cope with stress and contingencies”. Given the two definitions, this study understands vulnerability as exposure to risks and lack of capacity to overcome risks. This study adopts the five ‘drivers’ of vulnerability (see Table 1) articulated by Guillaumont et al. (2017). In this study, these vulnerability drivers have assisted in analysing and understanding the

multidimensionality of vulnerability and vulnerability exposure of female entrepreneurs in QwaQwa.

Table 1: Drivers and Indicators of Vulnerability (Guillaumont et al., 2017).

Vulnerability Drivers	Vulnerability Indicators
Environmental	Land ownership, road and transport infrastructure, housing infrastructure, diseases (COVID-19, Ebola, HIV/AIDS) (floods and drought) water access
Economic	Income, poverty, occupation, access to resource base
Social	Education, skills, capabilities, opportunities, knowledge, access to information, causes of vulnerabilities, adaptation mechanisms, level of resilience
Cultural	Culture (beliefs, values, norms), family (support duties and responsibilities), religion
Political	Social networks, policies, initiatives, community participatory decision-making, Non-Governmental Organisations (NGOs); Community-Based Organisations (CBOs)

Analysing and addressing the issue of vulnerability requires one to identify and understand the causes or drivers of vulnerability (Forbes-Mewett & Nguyen-Trung., 2019). As indicated in Table 1, the vulnerability drivers guided this study to understand the multidimensional vulnerabilities to which female entrepreneurs in QwaQwa are exposed. Moreover, these indicators are used to allocate resources devoted to sustainable development, promoting adaptation and building disaster resilience. Guillaumont (2022), articulates that addressing the issue of vulnerability needs one to

identify the sources or causes of vulnerability. Most of these causes of vulnerability are linked to economic, social, political, environmental, and cultural variables (Forbes-Mewett & Nguyen-Trung, 2019). As argued by the Global Environment Facility [GEF] (2019), the three common causes of vulnerability are environmental, economic, and social. The GEF (2019), states that vulnerability can be categorized into three distinctive areas, which are structural vulnerability, structural economic vulnerability, and structural vulnerability. These types of vulnerability are briefly discussed below.

2.2.2.1. Economic Vulnerability

Economic vulnerability as is defined as “the early warning system of growth collapses or balance of payments calamities caused by exogenous disasters or shocks because of underlying economic disproportions” (GEF, 2019). For example, sometime during the global economic boom, international institutions like the World Bank and the International Monetary Fund identified vulnerability indicators that were linked to the economic vulnerability drivers. They denoted these drivers and indicators as economic vulnerability (Forbes-Mewett & Nguyen-Trung, 2019; Noy & Yonson, 2018). Different ‘panel econometric models are used to estimate economic vulnerability for many countries with different types of descriptive indicators. These include (a) size and exposure of disaster or shock, (b) misalignment or alignment of policies, (c) stock of ‘external reserves’, (d) ‘debt-to-Gross Domestic Product (GDP) ratios, and (e) previous occurrence of disasters or previous growth. However, Noy and Yonson (2018), argue that though economic vulnerability reflects the probability of a disaster, the country’s conjunctural and current vulnerability, and the current policies, it does not mirror the ‘structural economic vulnerability.

Discussing economic vulnerability is critical for this study because it assisted in understanding how exogenous vulnerabilities like COVID-19 and climate change affect the economic production of female entrepreneurs in the informal sector. From this understanding, this study was able to understand how COVID-19 regulations like the national lockdown affected the livelihood strategies of unregistered female entrepreneurs like street vendors who had a lower resilience capacity.

2.2.2.2. Structural Economic Vulnerability

The concept of structural economic vulnerability has been adopted in previous studies (Adjei et al., 2014) of African countries. According to Guillaumont et al. (2017), structural economic vulnerability involves the risk caused by exogenous disasters or shocks, either naturally (structural factors like diseases, drought, and floods) or economically (financial crisis, inflation, and trade crisis).

2.2.2.3. Structural Vulnerability

Guillaumont et al. (2017), state that structural vulnerability only involves factors that do not rely on a country's present policies, being completely determined by persistent and exogenous factors. These include the level of development, human capital, and income per capita (Noy & Yonson, 2018).

Having defined all three types of vulnerability, this study only considered what makes female entrepreneurs structurally and economically vulnerable. It also adopted the definition of structural economic vulnerability which involves the risk caused by exogenous disasters or shocks, either naturally (structural factors like diseases, drought, and floods) or economically (financial crisis, inflation, and trade crisis). This study adopted this definition because QwaQwa, located in the Afromontane region, as viewed by (Msimanga, 2023), is one of the regions that are at risk of economic crisis, water scarcity due to drought, poverty due to lack of employment, entrepreneurial programs, and policies. Moreover, COVID-19 had severe consequences which led to economic turmoil globally (Mbeve et al., 2020). However, poor regions like QwaQwa have been severely hit harder due to a lack of government support and a lack of resilience strategies among emerging female entrepreneurs (Msimanga, 2023). The presented conceptual framework helps to distinguish between vulnerability and resilience. This assisted in identifying and analysing the vulnerabilities encountered by female entrepreneurs in QwaQwa and their respective resilience strategies.

2.2.3. *Vulnerability Reduction*

The proposed conceptual framework exemplified how female entrepreneurs in QwaQwa are vulnerable to disasters or shocks. It demonstrates the drivers and indicators of vulnerability which are either natural or human-induced. This conceptual framework used these drivers and indicators

of vulnerability to come up with strategies for reducing vulnerability and building entrepreneurship resilience of emerging female entrepreneurs in the area of study. As illustrated in the conceptual framework in Section 2.2.1, three factors determine vulnerability and these are as follows: (a) the degree or level of exposure to vulnerability; (b) susceptibility, which relates to economic values and infrastructure and people who are prone to vulnerabilities; and (c) resilience, which relates to sustainable coping and adaptation strategies of reducing vulnerability (GEF, 2017; Guillaumont, 2022).

2.2.4. Entrepreneurship

Entrepreneurship as a field positioned at the intersections of typically independent several disciplines. According to Schumpeter's theory of economic development, the activities of entrepreneurs have attracted the interest of various scholars in contemporary societies (Emami Langroodi, 2021).. As postulated by Schumpeter's theory of economic development, entrepreneurship is relatively linked to innovation, and it involves a combination of existent resources to generate income and create employment opportunities. From an academic perspective, entrepreneurship is a substantially intriguing subject that bridges knowledge from various fields and domains of study like business management, engineering, sociology, development studies, and theory and practice. Diandra and Azmy (2020) describe entrepreneurship as a process of discovery, assessment, and exploitation of resources and opportunities to produce goods and services and create employment necessary for improving the livelihoods of individuals. The rationality that entrepreneurship creates opportunities and improves people's livelihoods also lies at the core of this study as it views entrepreneurship as a process of creating opportunities for underprivileged female entrepreneurs in developing marginalised communities like QwaQwa.

2.2.5. Entrepreneurship Resilience

Entrepreneurship resilience is defined as involving entrepreneurial adaptation and resistance strategies to shocks (Awotoye & Singh, 2017). As argued by Koronis and Ponis (2018) entrepreneurship resilience entails developing the correct culture to tackle adversity rather than boundlessly preparing for 'unknown' future adversities. Furthermore, these scholars argue for preparedness, sensitivity, adaptability, and resilience abilities as fundamental measures embraced by resilient entrepreneurs (Koronis & Ponis, 2018). Shocks and adversity can be in the form of

natural disasters like climate change (floods and drought), diseases, economic crises, supply chain disruptions, poor markets, terrorist attacks, and industrial accidents (Koronis & Ponis, 2018). This study considers Koronis and Ponis's notion of entrepreneurship resilience, which states that emerging female entrepreneurs need the capacity, resources, skills, education, and networks to learn about coping and adaptation resilient measures and prepare and respond accordingly to shocks and adversity.

Various scholars argue that enabling determinants that can enhance positive results following adversities include processing broader knowledge and information, 'loosening' of controls, mobilisation of financial resources, and increasing innovation (Duchek, 2018; Gordon Institute of Business Science, 2018). Empowering a diversity of female entrepreneurs through extending participation in business progress planning, responsibility sharing and decision-making have also been identified as core strategies for promoting entrepreneurship resilience (Roundy, Brockman & Bradshaw, 2017).

Given the above definitions, the concept of entrepreneurship resilience in this study is thus understood as the ability of female entrepreneurs to rapidly withstand and adapt to vulnerabilities, challenges, and risks like the COVID-19 pandemic, conflicts, riots, theft, violence, climate change, and other forms of natural disasters.

2.2.6. Female Entrepreneurs

An entrepreneur is defined by Roundy et al. (2017) as an individual who can identify or discover opportunities, customers, and suppliers. Atiase et al. (2018) argue that entrepreneurs are individuals who start up new businesses in the realm of risk, adversity, uncertainty, and vulnerability for survival, growth, and achieving profit. This study adopted the definition of female entrepreneurs postulated by Cabrera and Mauricio (2017), which views a female entrepreneur as a woman who initiates, operates, and manages a business enterprise, and undertakes to counter vulnerabilities and business threats.

According to the African Development Bank [ADB] (2017), most female entrepreneurs in Africa are necessity-driven and they operate in the informal economy due to little or no resources, a lack of business plans as well as a lack of sufficient capital, skills, knowledge, resources, and networks to move further to the next business phase. They are usually self-funded; hence they tend to fail

within the very first few years of operation when faced with adversity or socio-economic turmoil (ADB, 2017). To avoid business failure, Roundy et al. (2017) suggest that female entrepreneurs need to have adequate skills, capacity, knowledge, and connections for resource and capital mobilisation that can help them develop or enhance entrepreneurship resilience and vulnerability reduction strategies. Given the above explanation, this study focuses on necessity-driven female entrepreneurs who operate informal businesses in QwaQwa for survival purposes.

This study intends to contribute to the knowledge of the nexus between entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa. Thus, it attempts to broadly respond to some of the fundamental questions of entrepreneurship resilience and vulnerability reduction highlighted in Section 1.8.1. Figure 3 gives a clear picture of what the resilience of female entrepreneurs entails.

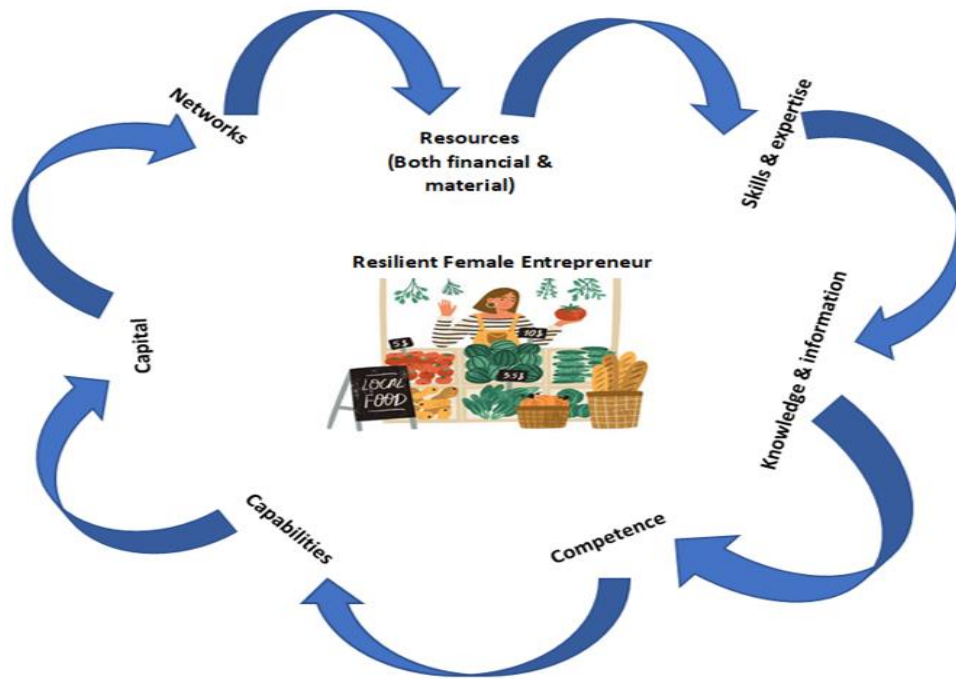


Figure 3: Factors Contributing to the Resilience of Female Entrepreneurs (Acevedo-Duque et al., 2021).

2.2.7. *Afromontane Region*

The concept of ‘Afromontane’ is derived from the African Mountains. It encompasses mountains in the Southern African region, that is, Angola, Comoros, the Democratic Republic of the Congo (southern mountains), Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Réunion, South Africa, southern Tanzania, Zambia, and Zimbabwe (Clark et al., 2019; Le Roux

et al 2018). Phuthaditjhaba, a peri-urban area of QwaQwa in the Free State province of South Africa is the backyard where the Afromontane Research Unit is located.

2.2.8. QwaQwa

QwaQwa is located in the Afromontane region and is considered a marginalised area, facing various challenges and vulnerabilities. These challenges and vulnerabilities include lack of service delivery by the Maloti-a-Phofung Local Municipality (mainly water), poor governance, unemployment, and poverty (Clark et al., 2019; Le Roux et al., 2018). QwaQwa is one of the densely populated areas in the Eastern Free State province and accommodates about 25% of the entire population of the Sotho people in the province of Free State (Nishimwe-Niyimbanira, 2016). QwaQwa is made up of both urban and rural settlements. The majority of its residents are poor and depend on entrepreneurship activities like subsistence farming, backyard gardening, and street trading (Mocwagae, 2020). In addition, the socio-economic situation of QwaQwa appears to be rudimentary, with poor infrastructure. According to Msimanga and Mukwanda (2024), about 40% of the residents of the Maluti-APhofung Local Municipality are employed and earn a basic salary. In summary, through this conceptual framework, this study incorporated the drivers and indicators of vulnerability to capture the nexus between entrepreneurship resilience and vulnerability reduction. Below is a presentation of the relevant literature stream.

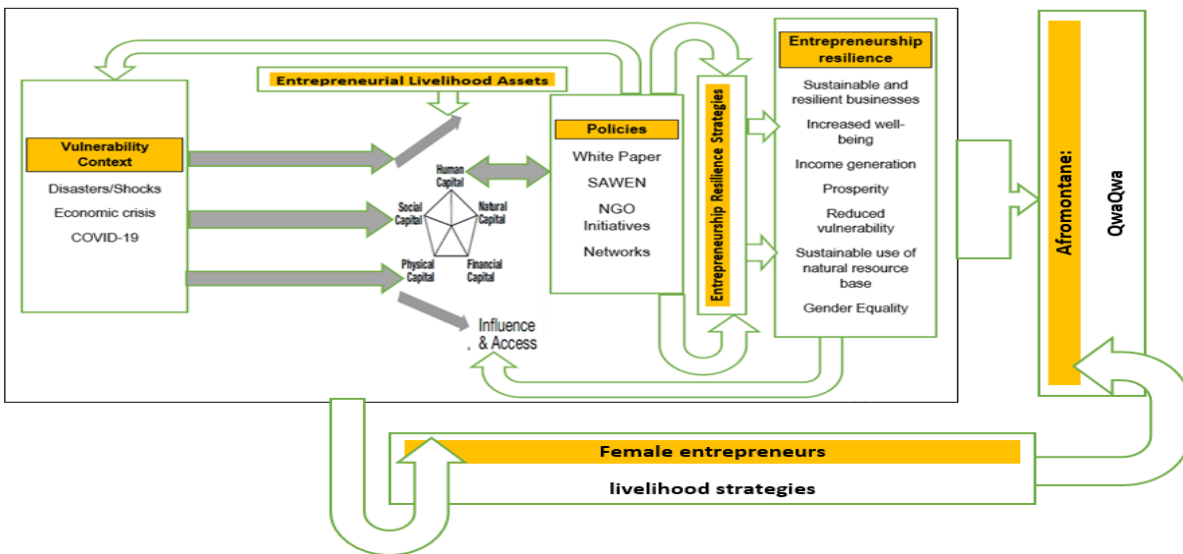


Figure 4: Conceptual Literature Framework of this study as informed by the Sustainable Livelihoods Framework (Illu et al., 2021).

2.3. Literature Review

Two systematic literature reviews (SLR) were conducted to explore existing scholarly streams on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afrimontane communities. Methodologically, a SLR was used to search for relevant literature for this study. Below is a detailed discussion of how the SLR was conducted in this study through EBSCOhost.

2.3.1. Systematic Literature Review Through EBSCOhost

A systematic literature review according to various scholars is suitable when the researcher seeks to demonstrate the general or specific constructs, theories, and methods that are broadly used (Kraus et al., 2020; Paul & Criado, 2020). The SLR was conducted in this study for the reasons outlined below:

- It helped to understand the concepts of entrepreneurship resilience and vulnerability reduction. Understanding these concepts helps develop and discuss a theoretical framework, basing arguments on previous scholars.
- It allowed the researcher to synthesise the literature on female entrepreneurship resilience and vulnerability reduction and achieve the research objectives.

In search of relevant literature, this study followed three main steps of systematic literature review. As indicated by Kraus et al. (2020), the first step that was taken is planning. In this step, the researcher created a list of sources that might contain literature related to this study. Although some researchers use grey literature, hardcopy books, magazines, and conference papers, this study used electronic sources which included academic journals obtained from the EBSCOhost database. EBSCOhost has been chosen because it offers an alternative method of searching for ‘academic information’, and it appears to be one of the biggest ‘multidisciplinary’ databases for academic resources in the world (Machado et al., 2020).

The second step followed in this systematic literature review involves conducting the literature review process (Kraus et al., 2020). During this step, the researcher first searched for articles containing literature on female entrepreneurship livelihood strategies, resilience, and vulnerability reduction in the African mountain region. She used Boolean/Phrase to search for key terms like “female entrepreneurs' livelihood strategies”; AND “entrepreneurship resilience and vulnerability

reduction”; AND “African mountain* OR African highland*”. From this search, the researcher got 88 articles published between 1965 and 2023. According to Sony, Antony and Douglas (2020), the researcher should review recent articles to extract emerging and developing trends in the subject under investigation. Thus, in this study, the researcher limited the search to articles published from 2017 to 2023 and got a result of 24 articles. About 64 outdated articles from Education Source, Humanities Source Ultimate, and Sociology Source Ultimate were discarded.

The next step that was taken in conducting this systematic review included a search for theoretical-empirical articles on developing countries. In so doing, articles containing literature from magazines on ‘entrepreneurship resilience of developed countries and unreferenced articles were disregarded. Among the 24 articles, the researcher removed six unreferenced magazine articles. The final review included 18 full texts, peer-reviewed and referenced articles (see Figure 2.3). Among these 18 articles, 16 of them were academic journals and 2 were books. The final review included 10 Academic Ultimate Source journal articles, five (5) journal articles from Africa-Wide Information, and three (3) journal articles from Business Source Ultimate.

Alsadi et al. (2021), argue that the value of an SLR is determined by its quality, the methods used, and the presentation of findings. To enhance the reporting of the SLR findings, a meta-analysis reporting guideline called the ‘QUOROM’ (Quality of Reporting of Meta-analysis) was developed. Alsadi et al. (2021) further state that in 2009, this QUOROM was updated, and it included the systematic reviews, and thus it was renamed ‘PRISMA’ (Preferred Reporting Items of Systematic Reviews and Meta-Analyses). PRISMA is an evidence-based set of entries that must be used to report SLRs and meta-analyses (Alsadi et al., 2021). PRISMA is further articulated as a dynamic document that is constantly reviewed as the evidence keeps on changing. In this study, the SLR was used to evaluate the extent of research on resilience and vulnerability of female entrepreneurs in the African mountain regions. It also helped to map the existing literature and knowledge gap in the above-indicated topic (Alsadi et al., 2021).

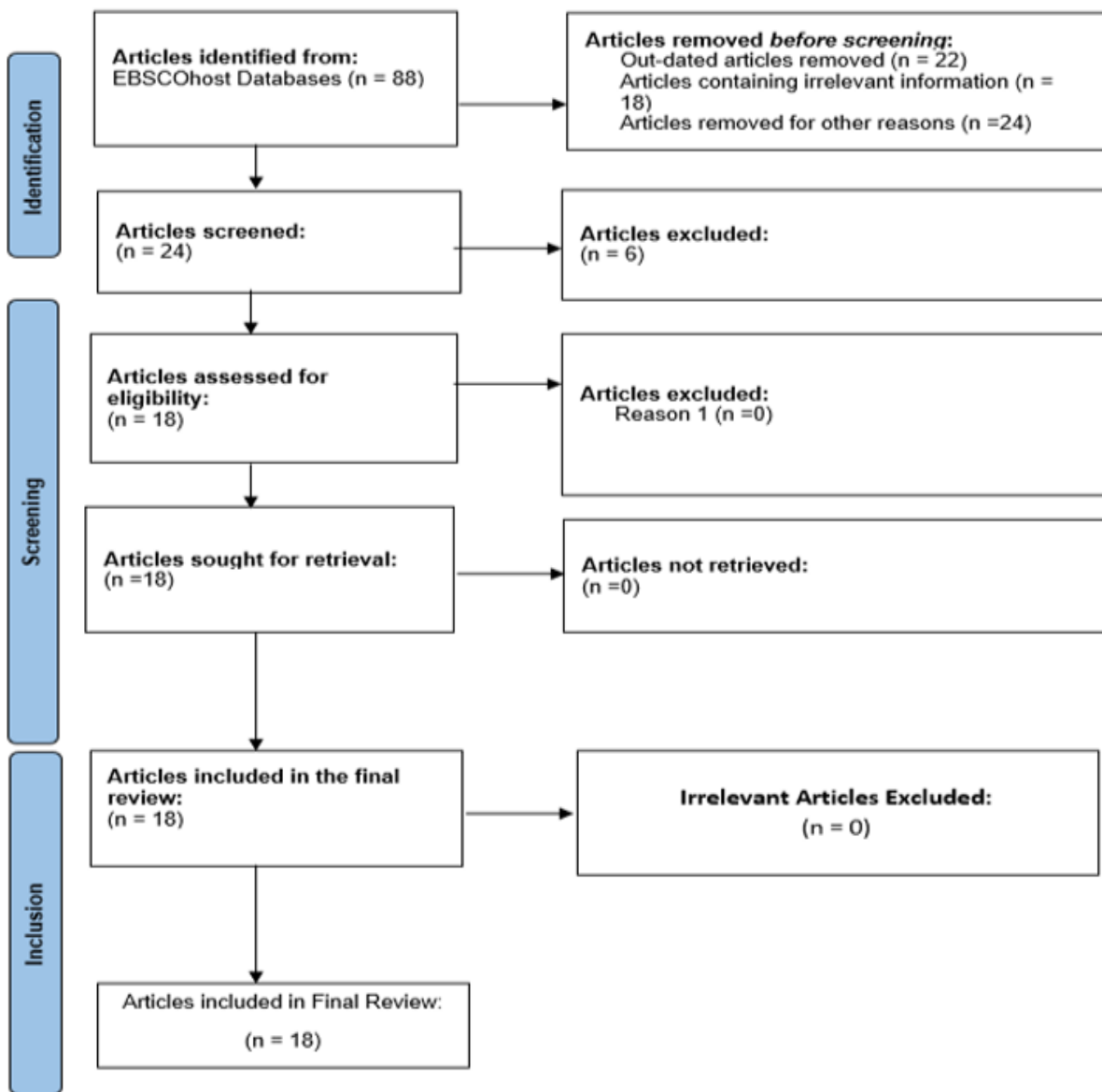


Figure 5: PRISMA 2020 Flow Diagram as guided by (Alsadiet al., 2021).

This study adopted the PRISMA (2020 version) to assess the extent of research on entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in the Afromontane region. The conducted SLR produced 18 articles. The number 18 is considered a very small number, which confirms that little research has been done on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane. A research gap also indicates that there is an existing gap in the literature and knowledge of entrepreneurship resilience, vulnerability reduction, and livelihood strategies of

female entrepreneurs in the study region. Given these existing research, literature and knowledge gaps arch, this study calls for more research on the topic under investigation.

However, Kahale et al. (2021) argue that PRISMA limits the number of keywords, and this reduces the number of literature findings (Kahale et al., 2021). As indicated in Figure 2.3, the articles that were included in the final review were few (18). The selected articles were not enough for a solid literature review. To increase the literature stream, this study thus conducted another SLR through Scopus, Google Scholar, and Science Direct. Below is a detailed discussion of how the SLR was conducted through Scopus, Google Scholar, and Science Direct.

2.3.2. Systematic Literature Review Through Scopus, Google Scholar, and Science Direct

To overcome the literature limitation cited above, the researcher in this study decided to increase the number of relevant articles by conducting another SLR process from three database sources, namely, Scopus, Google Scholar, and Science Direct. The SLR included peer-reviewed, full-text, and referenced academic journal articles. According to Carrera-Rivera et al. (2022). Each database has a particular scholarly emphasis that was explored to enhance the depth of the literature stream. Science Direct is an online-based collection of scientifically published research articles and a citation index managed by the publisher Elsevier. Scopus is also an online database of peer-reviewed published articles worldwide (Cardella et al., 2020). It covers emerging markets that give the researcher access to significant, ‘high-quality’ research on developing countries (Cardella et al., 2020; Kraus et al., 2020; Paul & Criado, 2020). Moreover, Scopus offers an extensive and comprehensive variety of academic information, hence enabling the researcher to get a broader understanding of the topic under investigation (Cardella et al., 2020; Kraus et al., 2020; Paul & Criado, 2020).

As argued by Mengist et al. (2020) Google Scholar, unlike Scopus and Science Direct, does not give a list of publishers, journals, or time-span details and the status of the refereed records. However, the ‘advanced’ search engine for Google Scholar helps cover references that are not included by Scopus and Science Direct (Mengist et al., 2020).

The syntax below was used to search for literature on the advanced search engine. Key terms such as “entrepreneurship resilience and vulnerability reduction”; AND “female entrepreneurs’

livelihood strategies”; OR “female entrepreneurs in the African mountain” were used to search for relevant literature.

2.3.2.1. Inclusion and Exclusion Criterion

By following the inclusion and exclusion criterion, relevant articles were selected for literature review and analysis. The pre-defined inclusion and exclusion criterion to achieve this SLR work is presented in Figure 2.4 below.

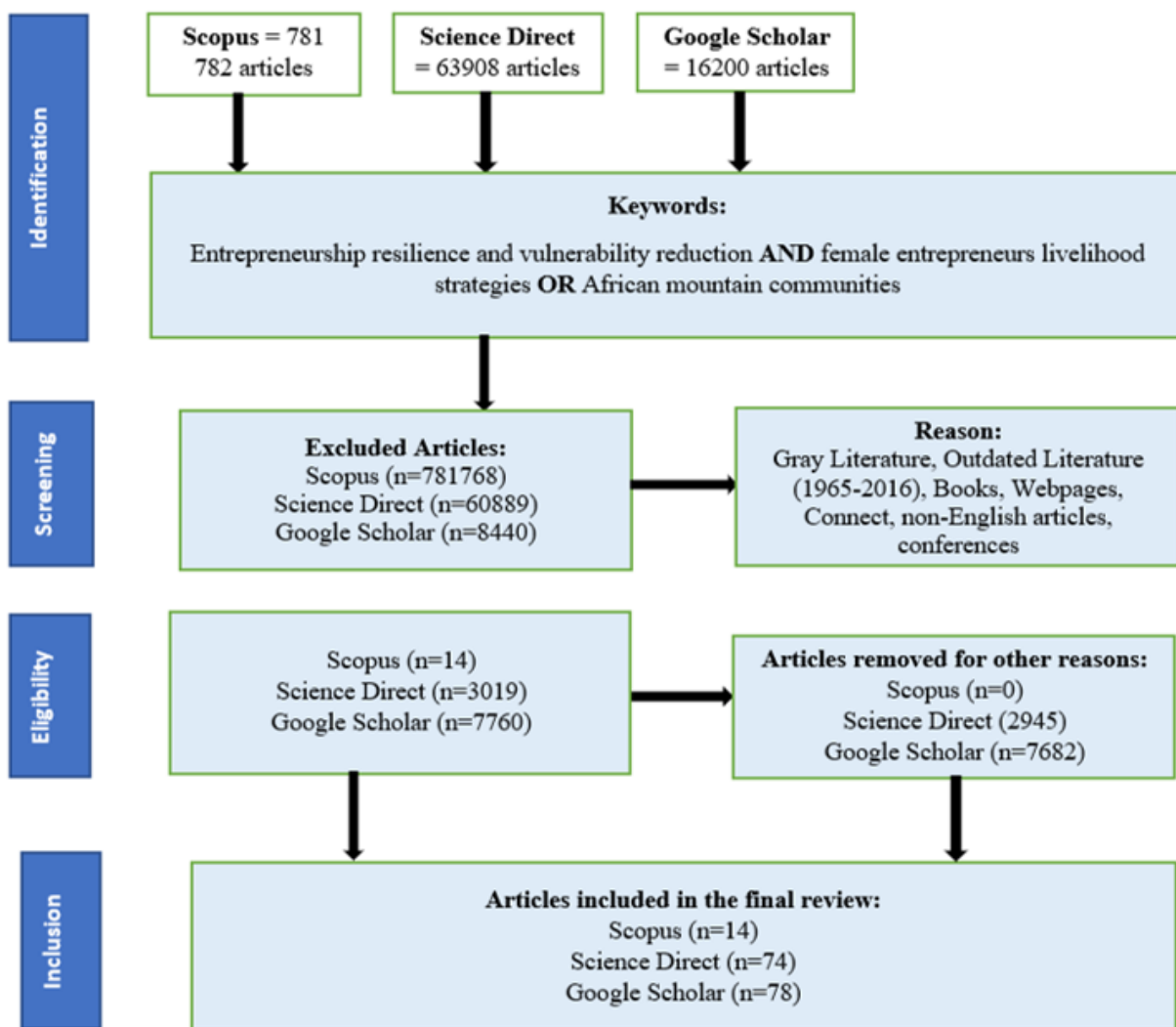


Figure 6: Inclusion and Exclusion Criterion as guided by (Alsadi et al., 2024).

As indicated in Figure 6, literature from gray articles, Webpages, Connect, conferences, books, and non-English language articles were excluded. The flow of inclusion and screening (exclusion) processes above indicate the type of literature that was excluded and included in the final review. As indicated above, only 14 articles from Scopus, 74 articles from Science Direct, and 78 articles from Google Scholar were included in the final review. All these articles included in the final review are peer-reviewed journal articles containing relevant literature on entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in the Afromontane region. Duplicated articles, abstracts, books, conferences, and non-English language articles were excluded from the final review.

Undertaking a systematic literature review is highly recommended for every discipline because it helps the researcher identify and assess existing knowledge gaps on specific issues, which helps develop the knowledge base (Mengista et al., 2020). The researcher in this study adopted the SLR because of its uniqueness of adopting replicable, transparent, and scientific producers to reduce bias occurrences during literature search, identification, assessment, synthesis, and analysis of studies. In addition, the SLR helps to gather all relevant literature that fits this study's inclusion and exclusion criterion. Mengista et al. (2020) state that when the SLR is properly conducted and there is a minimum error, the study can produce reliable findings, conclusions, and recommendations that could assist decision-makers, development practitioners, and other scientific scholars to perform accordingly (Mengista et al., 2020).

The SLR, therefore, in this study was adopted to enhance the researcher's understanding of the existing scientific knowledge gaps and previous research on entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in the Afromontane region. Korber and McNaughton (2018) note that an SLR helps to build a literature review, which is considered a roadmap for the theoretical and empirical progress of a study. This systematic review, therefore, serves to guide and stimulate the study. The results of the SLR of this study thus respond to the call for more female entrepreneurship resilience and vulnerability reduction research, which generates a comprehensive understanding of the livelihood strategies of female entrepreneurs in the Afromontane region. Although there is published literature on female entrepreneurship resilience in this region, there is still an existing gap in the literature on entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female

entrepreneurs in QwaQwa. As a result, this study contributes to filling this gap by exploring entrepreneurship resilience and vulnerability reduction in the Afromontane, specifically focusing on the analysis of livelihood strategies of female entrepreneurs in QwaQwa. The following sections present reviewed relevant literature for this study.

2.4. Reviewed Relevant Literature

Based on the study objectives, the relevant literature reviewed through SLR consists of the following topics: Global perspectives on female entrepreneurship, education as a building pillar for female entrepreneurship, and understanding vulnerability through a Multidimensional Vulnerability Index (MVI). A brief overview of the MVI is also presented, followed by literature on the exposure of female entrepreneurs to vulnerability in Africa, then female entrepreneurs in a South African context. Literature on the policy ecology of female entrepreneurship in South Africa is also presented in this chapter, followed by the importance of female entrepreneurship in South Africa and the relationship between female entrepreneurship and economic growth in South Africa. Some topics covered in this chapter include entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in global and local contexts. The next section presents literature on the global perspective of female entrepreneurship.

2.4.1. Global Perspective on Female Entrepreneurship

According to the International Labour Organisation [ILO] (2018), most African women are in entrepreneurship due to necessity. Their living standards are low; hence, they are prone to vulnerabilities and run informal businesses. Though they are operating informal businesses, their economic contribution is very high. Although their contribution to the economy is high, fewer women are in entrepreneurship than men (GEM, 2023). Figure 7 indicates the prevalence of entrepreneurship in eight selected African countries.

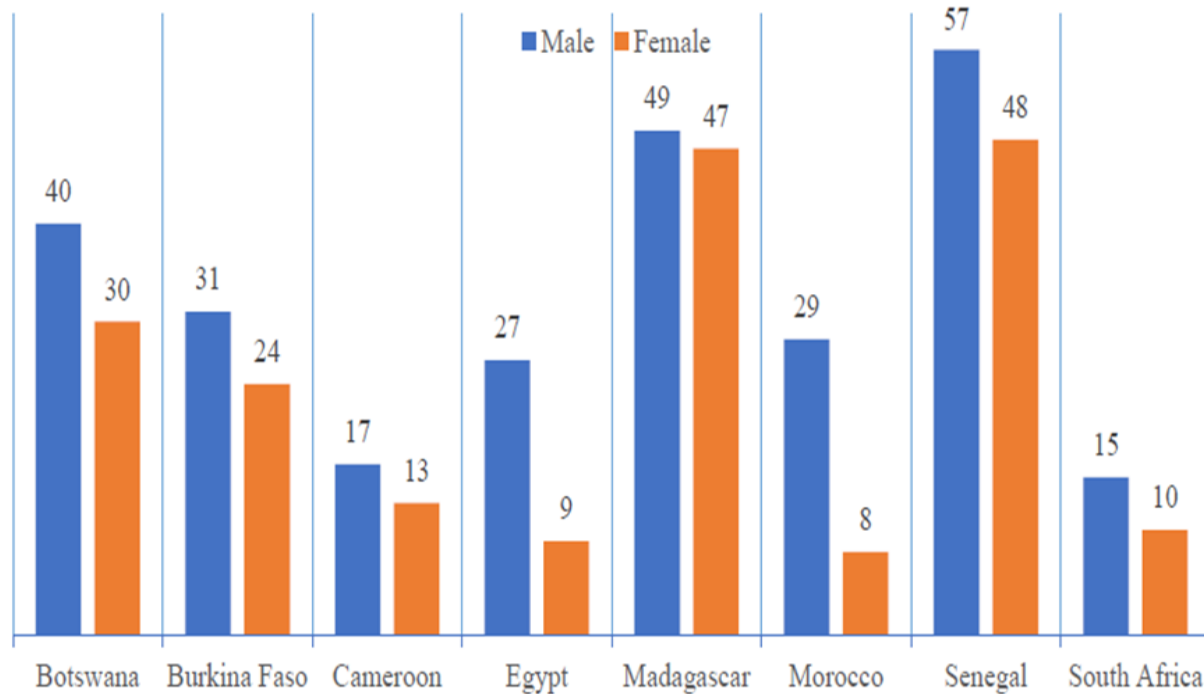


Figure 7: Graph Indicating Entrepreneurship Prevalence by Gender (GEM., 2023).

Figure 7 presents an overview of entrepreneurship prevalence by gender in eight African countries in 2017. The height of each bar indicates the rate of entrepreneurs in each country by gender. In 2017, in countries like South Africa, Morocco, Cameroon, and Egypt, about 10 % of women were involved in entrepreneurship, with substantial gender gaps, particularly in North Africa (GEM, 2023). In Senegal and Madagascar, female entrepreneurship ranged beyond 45% with trivial gender gaps in entrepreneurship prevalence. In Burkina Faso and Botswana, the entrepreneurship prevalence rate was around 30% with average gender gaps in 2017 (GEM, 2023). Figure 7 also indicates that in 2017, entrepreneurship in the illustrated countries was dominated by men. In South Africa where the current study was conducted, entrepreneurship was very low, and female entrepreneurs were fewer than male entrepreneurs in 2017. There are no exact figures that show the current statistics of female entrepreneurship in the Afromontane. Thus, a lack of such statistics confirms the research and literature gaps on female entrepreneurship in the Afromontane identified by the SLR conducted in this study.

Previous studies (Dolan & Rajak, 2018; Ngek, 2018) indicate that most established African women entrepreneurs have come from humble beginnings but now are pursuing business opportunities in more innovative zones. These entrepreneurs have become role models for other female

entrepreneurs, and they have highlighted education as the most important factor for building entrepreneurship resilience (Henning & Akoob, 2017).

2.4.1.1. Education as a Critical Pillar for Female Entrepreneurship

Education, as articulated by Sindhwani and Dhawan (2021), influences most women to pursue entrepreneurship and how they acquire skills, knowledge, resources, and funding for building or improving their entrepreneurship resilience. Moreover, Henning and Akoob (2017) argue that less educated people possess little or no skills and therefore, are more likely to pursue informal self-employment. Most of the uneducated and self-employed female entrepreneurs operating in the informal sector run necessity-driven entrepreneurship (Sindhwani & Dhawan, 2021).

Previous scholars indicate that necessity-driven entrepreneurship is predominant at lower education levels in underprivileged areas (Henning & Akoob, 2017; Ngek, 2018). Furthermore, as educational achievement increases, entrepreneurship prevalence decreases because people will be moving to better-paying employment opportunities. However, due to the lack of employment opportunities in most rural, urban informal settlements, educated entrepreneurs pursue profitable entrepreneurial opportunities in lucrative sectors using their skills and educational backgrounds (Neneh, 2017). For example, the educational field of specialisation determines the choice of industry or sector in which an individual establishes her business. For instance, unemployed graduates with Agriculture or Horticulture qualifications tend to pursue small-scale farming entrepreneurship (Sindhwani & Dhawan, 2021). Given the socio-economic conditions of QwaQwa, this study decided to focus on necessity-driven female entrepreneurs.

According to Neneh (2017), education enhances access to networks or connections and creates self-efficacy and largely entrepreneurial capability. Unfortunately, research evidence from South Africa is insufficient to improve the entrepreneurship resilience of female entrepreneurs through education, especially in rural and semi-urban areas (Fatoki, 2018). To tackle this knowledge gap, this study followed a three-split approach which includes a ‘vulnerability exposure and reduction’, the resilience capacity of female entrepreneurs as well as the importance of capabilities and skills in building entrepreneurship resilience for female entrepreneurs. This three-split approach is interlinked with the multidimensional vulnerability index and the multi-theoretical framework in understanding the vulnerability reduction and entrepreneurship resilience of female entrepreneurs

in QwaQwa. The following section presents a discussion of the understanding of vulnerability through a Multidimensional Vulnerability Index (MVI).

2.4.2. Understanding Vulnerability through a Multidimensional Vulnerability Index

The concept of vulnerability as viewed by Russell (2023) can be understood from various dimensions. Furthermore, scholars like Philips and Fordham cited in Russell (2023), understand vulnerability from an environmental perspective and define it as the likelihood of a group or an individual to be exposed to or adversely affected by hazards. Cutter (1996) as cited in McEntire (2011) understands vulnerability as a state of ‘defenselessness’ which renders an individual or group powerless to survive the unbearable impacts of events generally recognised as natural hazards, risks, or disasters. McEntire (2011) emphasises that since vulnerability is a multidimensional concept, its various dimensions should be understood through applying a Multidimensional Vulnerability Index (MVI). A Multidimensional Vulnerability Index (MVI) is a complex tool used to quantify and assess the vulnerability of a population within a geographical area (United Nations, 2024). Typically, it integrates different indicators that portray various vulnerability dimensions like social, environmental, and economic factors (Assa & Meddeb, 2021). In this study, the MVI provided a complete understanding of the various vulnerabilities the female entrepreneurs in QwaQwa are exposed to. To understand the various vulnerabilities experienced by female entrepreneurs in QwaQwa, this study followed a Multidimensional Vulnerability Framework (see Figure 8). Below is a detailed presentation of the Multidimensional Framework applied in this study.

2.4.2.1. Multidimensional Vulnerability Index

As guided by MBS (2022), the Multidimensional Vulnerability (MVI) includes five components as presented in Figure 8. Three of these components design a three-dimensional (3-D) indicator of vulnerability. The fourth (4th) one presents an indicator of lack and the fifth (5th) one corresponds to policy (lack of resilience). This index is called multidimensional because it consists of three crucial dimensions which are social, economic, and environmental indicators. According to the UN (2024), each indicator must indicate the vulnerability of a specific region in its precise dimension. The social indicators encompass social risks like epidemics, violence, corruption, lack of information or data, lack of opportunities and basic service delivery as well as lack of social

protection (Assa & Meddeb, 2021). Economic indicators include the risk of being impacted by economic shocks like inflation, lack of market, poor infrastructure, lack of financial resources, poverty, and unemployment. Environmental indicators of vulnerability encompass the physical aspects, which include climate change, poor soils, water scarcity, and land degradation (Guillaumont, 2022).

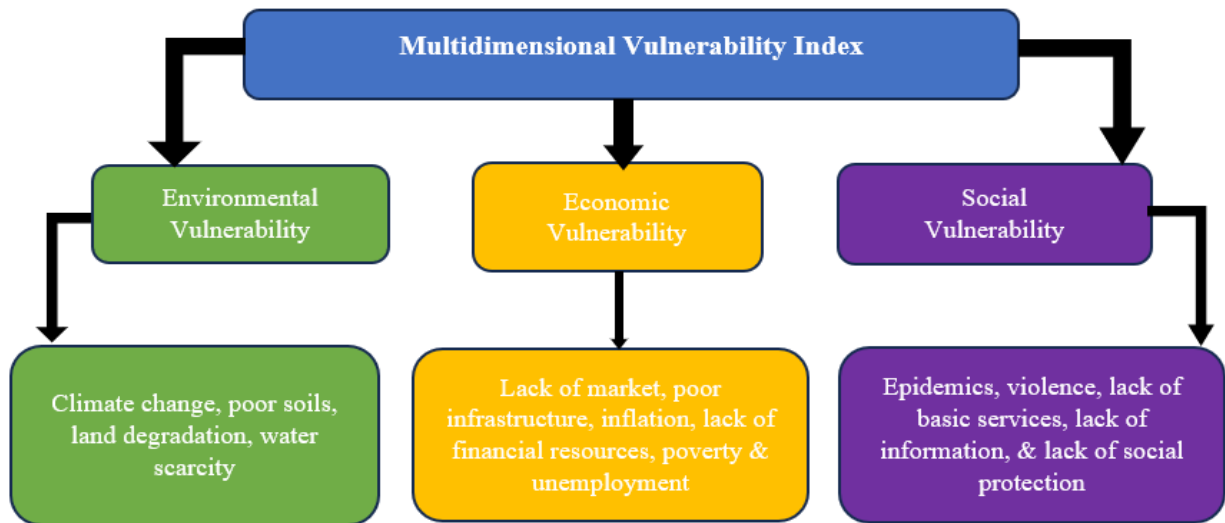


Figure 8: The Multidimensional Vulnerability Index as guided by the (UN, 2024).

As articulated by the UN (2024), to be accepted and applied, the MVI should practically meet the following conditions:

- Reliability and availability of data
- Transparency and readability of the Multidimensional Vulnerability Index
- Acceptability and applicability of the vulnerability indicators

The MVI used in this study met the above conditions. The data in the MVF is reliable and available. As shown in Figure 8, the vulnerabilities encountered by female entrepreneurs in QwaQwa are classified into different indicators like environmental, physical, economic, and socio-cultural vulnerabilities.

In this study, data indicating various vulnerabilities faced by female entrepreneurs in QwaQwa was collected by the researcher using GPS, and ODK. It was then transferred to ONA data for analysis purposes. It was a challenge for the researcher to access statistical data due to the lack of documented literature on entrepreneurship resilience and vulnerability reduction in QwaQwa.

However, the researcher managed to analyse the available and reliable qualitative data to produce vulnerability analysis maps for female entrepreneurship in QwaQwa. A detailed discussion of these maps is presented in Chapter Five.

Transparency and readability of the MVI should result from a clear framework where all three dimensions together with their sub-components are clearly defined (UN, 2021). As indicated in Figure 8 above, all three dimensions of the MVI and the sub-components have been described and clearly defined. As for its acceptance and applicability within QwaQwa, an entrepreneurship resilience model has been developed from the MVI, and a multi-theoretical framework has been developed to enhance the resilience of female entrepreneurs in QwaQwa. This model will be shared with all the female entrepreneurs involved in this study by the end of the research process. The researcher is hopeful that if properly implemented, the proposed model will assist the female entrepreneurs in QwaQwa to reduce their vulnerabilities and strengthen their resilience capacity.

As noted by Olarewaju and Fernando (2020) to understand the vulnerability of female entrepreneurs in informal sectors, it is significant to study the gender impact and the historical background of these female entrepreneurs. The issue of gender impact on entrepreneurship resilience is centered on women's gendered experiences of work and education, the demands of their household and reproductive roles, and the lack of key-dedicated time to explore and mobilise resources (Mmereki, Hovorka & Gwebu, 2020). Women's lack of access to essential skills, capabilities, experiences, and resources for business start-ups and management is also adversely impacted by several constraints like societal responsibilities, cultural beliefs, values, and expectations.

The vulnerabilities presented in the framework above constitute the production of literature and study findings that aim at analysing the vulnerability of female entrepreneurs in QwaQwa to guide resilience building. An existing literature gap identified during the literature search highlighted a list of vulnerability indicators whose descriptions can be used to understand the hindrances of building stronger entrepreneurship resilience. As a result, this study attempts to close this existing literature gap by understanding vulnerability as a multidimensional concept where the vulnerability of a particular population or region is the total of specific indicators of vulnerability.

2.4.3. Exposure of Female Entrepreneurship to Vulnerability in Africa

In order to explore and understand the vulnerability exposure of female entrepreneurs in QwaQwa, it is important first to understand the situation of female entrepreneurs in Africa. According to Fatoki (2018), Africa is viewed as a less developed continent due to poor leadership epitomised by corruption as well as mismanagement and unequal distribution of resources. This on its own makes it difficult for female entrepreneurs in marginalised regions to establish sustainable businesses and build resilience to hardships like economic crisis, climate change impacts, political instability, terrorism, and many other adversities (Quak & Barenboim, 2022).

The International Center for Research on Women [ICRW] (2019) reveals that corruption causes major barriers to sustainable social, economic, environmental, and political development in most African countries. As indicated by the World Economic Forum (WEF), corruption at a global scale is approximately \$2.6 trillion (USD), which is about 5 % of the world's GDP (ICRW, 2019). While corruption affects the mechanisms of the market at both macro and micro levels, it also contributes to additional transaction costs, causes entrepreneurship uncertainty, and suppresses innovation (Quak & Barenboim, 2022).

The ICRW (2019) asserts that female entrepreneurs are usually vulnerable to corruption more than their male counterparts due to the existing power imbalances between women and men. The World Bank (2022) further articulates that female entrepreneurs are often viewed as 'easy' targets for both sexual and physical harassment, thus, they always pay a lot of money to avoid protracted shenanigans like bribery with corrupt officers. Given the above assertions, this study believes that the 'gendered' corruption experience for female entrepreneurs is a major obstacle to reducing vulnerabilities and building entrepreneurship resilience in most African countries. A study conducted by the World Bank (2019) indicates that female entrepreneurs in countries like Kenya, Tanzania and Uganda are vulnerable to corruption and this limits their growth (see Figure 9).

More Female-Owned Firms See Corruption As A Very Severe Obstacle

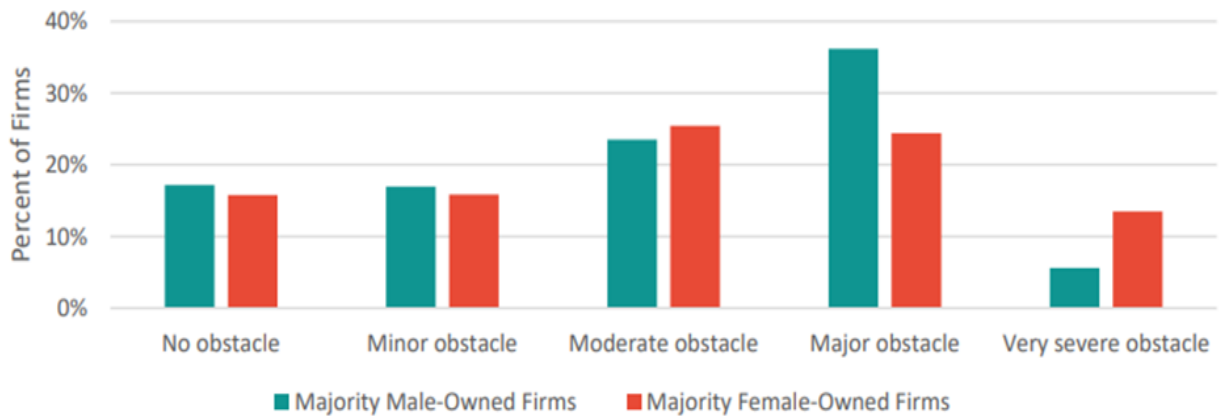


Figure 9: Corruption in Female Entrepreneurship in Kenya, Tanzania, and Uganda (World Bank, 2019).

Corruption in the procurement system makes it more challenging for female entrepreneurs to access government tenders (ICRW, 2019). A survey conducted by the World Bank (2019) in Kenya, Tanzania, and Uganda reveals that winning a government tender increases business growth by 2.2% and stimulates employment in the informal sector. Unfortunately, female entrepreneurs are less likely to access or win these tenders. As indicated by the World Bank’s study, when female entrepreneurs bid for government tenders, most of them forcefully pay above 5% of the tender value to officials (World Bank, 2019).

Firms Paying 5 Percent or More of Contract Value in Gifts

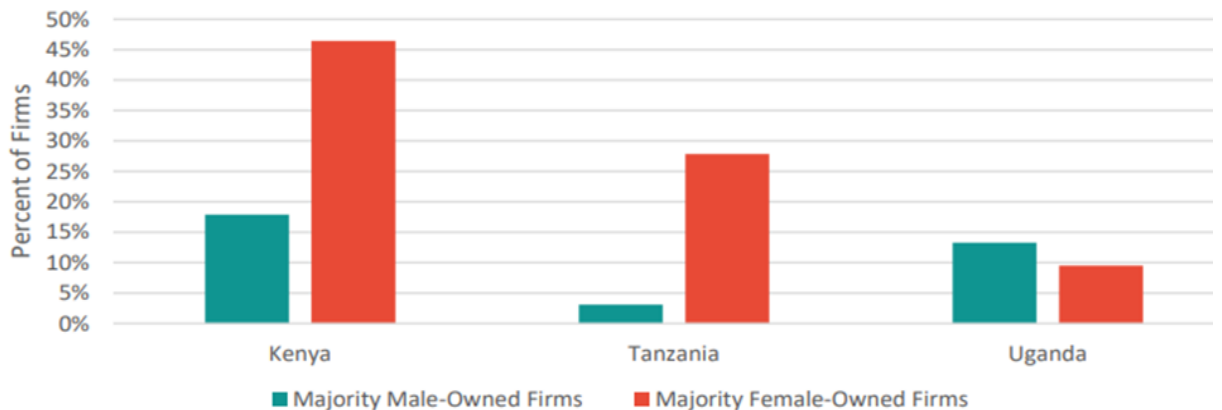


Figure 10: Percentage of Businesses Paying 5% and above to win Government Tenders in Kenya and Tanzania (World Bank, 2019).

As indicated above, in Kenya and Tanzania, female-owned businesses pay 5% or more to officials than their male counterparts in bidding and securing government tenders. In Uganda, 10% of female-owned businesses versus 15% of male-owned businesses pay 5% or more to officials to win government tenders (ICRW, 2019). The highlighted figures show how female entrepreneurs in the stated countries are vulnerable to corrupt government officials. Given this, there is an urgent need for African leaders to eradicate corruption to increase the production and resilience of female entrepreneurs. In addition, there is a need for the implementation of effective policies that simplify the business registration process for female entrepreneurs operating in informal sectors. This will assist in maximising opportunities, and regularising female-led businesses, and hindering corrupt officials from demanding bribes (World Bank, 2022).

In order to empower women and transform the status of female entrepreneurs, appropriate interventions have been implemented by development practitioners since the mid-1970s in most countries (ICRW, 2019). Some of these initiatives include empowering women through training and education and access to health services and resources. However, the most popular entrepreneurial strategy has been the involvement and participation of female entrepreneurs in micro-finance initiatives since the 1990s, to assist them develop entrepreneurship resilience skills and strategies (World Bank, 2019).

In Mauritius, various international and national entrepreneurial reports have indicated that female entrepreneurship is hindered by several obstacles (Women Enabled International [WEI], 2020). These factors include the struggle to get entrepreneurial permits, lack of market; lack of capability and skills to raise financial capital, and gender inequalities. While most of these obstacles seem to be identical across African and Asian countries, there are some which are significantly predominant in South Africa only.

Given the challenges highlighted above, it is, therefore, significant to contribute to the existing literature on women's entrepreneurship by exploring alternative approaches for improving entrepreneurship resilience among female entrepreneurs in South Africa. While various studies have investigated the constraints or challenges faced by female entrepreneurs in women-owned businesses in other African countries, this study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region of QwaQwa, in the Free

State Province of South Africa. The section below provides a detailed discussion of women's entrepreneurship in South Africa.

2.4.4. Female Entrepreneurship in a South African Context

Despite the above-mentioned development initiatives to transform the status of women, most women in South Africa have been left behind in entrepreneurship and business development processes and are still suffering from male bias (ILO, 2018; Atela et al., 2017). Also, in spite of the widely believed assumption that women entrepreneurship would contribute to the revolution of their deprived position in society, gender experts like Cartaya, McDonnell, Himunyanga-Phiri and Tembo as cited in WEI (2020) argue that business in the informal sector usually uses undervalued domestic skills. As a result, this reinforces gender inequality and makes it more challenging to transform gender relations in entrepreneurship.

As articulated by Fatoki (2018), though South Africa has been recognising the need to support women's entrepreneurship in order to create employment opportunities and boost economic growth, the existing women empowerment policy interventions and women development programmes are not contributing to employment creation and economic growth. The narrowing of the gap in women's entrepreneurship and the circumstantial reality is dependent on education, training, skills, and the eradication of gender inequality as well as the elimination of male bias. According to Branicki et al. (2017), the active voice of women in entrepreneurship must shift from the 'survivalist sector' to women-led small business ventures.

2.4.4.1. Policy Ecology of Female Entrepreneurship in South Africa

As noted by Diale and Carrim (2022), the policy ecology of female entrepreneurship in South Africa has its roots in the Small, Medium, and Micro Enterprises (SMMEs). As presented by Nieman et al. (2017), before 1994, there was no strategic framework for SMMEs development provided by the apartheid government. Thus, the new post-apartheid government prioritized the strategic framework for SMMEs development and changed the operation mechanisms of SMMEs by implementing innovative strategies for stimulating sustainable economic growth and women empowerment (Nieman et al., 2017). In March 1995, the post-apartheid government established the White Paper for the national development strategy and promotion of SMMEs. This

establishment represented the government's commitment to achieving sustainable development. Moreover, it offered a significant vehicle for addressing the socio-economic challenges encountered by people in South Africa (Diale & Carrim, 2022).

The primary goal of the national development strategy for SMMEs in the 1995 White Paper on SMMEs was to create a conducive and empowering environment for female-led enterprises and all small enterprises that have room for growth (Nieman et al., 2017). Below are some of the key objectives outlined in part three of the 1995 White Paper on SMMEs and the national development strategy for small enterprises:

- Establish an enabling and empowering environment for SMMEs.
- Empower black business.
- Support women empowerment in all business sectors and create sustainable jobs.
- Stimulate economic growth and enhance cohesion between SMMEs.
- Prepare SMMEs to comply with the economic challenges.

Nieman et al. (2017) state that in 1996, the 1995 White Paper on SMMEs was changed to a National Small Business Act which enabled the Department of Trade and Industry (DTI) to develop an enabling and empowering environment for SMMEs and tackle the challenges encountered by SMMEs in South Africa. It is important to highlight that this National Small Business Act was amended later in 2004. As an amended Act, it emphasized the constraints encountered by black entrepreneurs and female entrepreneurs who were previously disadvantaged by the apartheid system (Nieman et al., 2017). The main objectives of this amended Act are as follows:

- Develop and implement support initiatives.
- Promote basic service delivery that increases the empowerment of SMMEs to effectively contribute to economic growth, equity distribution, and job creation.
- Strengthening the capacity of:
 - a) Service providers to support SMMEs.
 - b) SMMEs to successfully compete in both international and domestic markets.

Unlike the 1995 White Paper, the 2004 National Small Business Act neglects female entrepreneurs, as about 52% of female entrepreneurs are still experiencing cultural and historical

prejudice in mobilising resources and accessing opportunities in South Africa (Molo, 2018). Female entrepreneurs encounter a multitude of vulnerabilities that also affect their entrepreneurship resilience in this nation. These vulnerabilities include a lack of access to financial resources, lack of access to the market, lack of relevant information and knowledge, lack of support and basic services, and lack of training (Molo, 2018).

In South Africa, most female entrepreneurs are, however, particularly still disadvantaged just like in the past, when they did not own any property or land that could be used as collateral on financial credits or loans (ILO, 2018). Additionally, most of the female entrepreneurs in the informal sector have no bank accounts, thus it is challenging for them to access external finance. Molo (2018) is of the view that socio-cultural norms and beliefs worsen the situation of female entrepreneurs since, traditionally, women are expected to do domestic or household responsibilities. Their businesses suffer and collapse at the expense of these sociocultural norms and traditional beliefs (WEI, 2020). All these vulnerabilities highlighted above are linked to a lack of effective policies that cater for female entrepreneurs, particularly in the marginalised informal sectors. The government needs to revise its structures and implement policies that also accommodate the needs of female entrepreneurs across the country.

In summary, one of the most critical main objectives of the 1995 White Paper was the commitment of the government to support female entrepreneurship in South Africa. As declared by Nieman et al. (2017), the government's commitment has been established in several initiatives that support female entrepreneurs in this country. As highlighted by Nieman et al. (2017), the South African government through the DTI has introduced several programmes to assist female entrepreneurs and there is a high possibility that more programmes will be implemented. Some of these programmes are discussed below.

2.4.4.1.1. *South African Women Entrepreneur's Network*

The Small Enterprise Development Agency (SEDA) (2019) articulates that the South African Women Entrepreneur's Network (SAWEN) supports and represents female entrepreneurs within the sector of SMMEs in South Africa. In 2010, the Department of Trade and Industry (DTI) established SAWEN to tackle and reduce the challenges encountered by female entrepreneurs in South Africa and assist them in running sustainable enterprises (SEDA, 2019).

SEDA (2019) describes SAWEN as an organisation that attempts to gather South Africa's female entrepreneurs and address the challenges hindering their business success. Accordingly, SAWEN also facilitates resource mobilisation, knowledge, information, and opportunity access for female entrepreneurs in South Africa, so that they can reduce their vulnerabilities, build entrepreneurship resilience and lead successful businesses. SAWEN believes that by empowering female entrepreneurs, they are also contributing towards building a sustainable economy for South Africa (SEDA, 2019). Though SAWEN is playing a pivotal role in empowering female entrepreneurs in South Africa, it is only known and accessible to female entrepreneurs in provinces like Gauteng, KZN, and Western Cape (Molefe, 2019). Most female entrepreneurs in provinces like the Limpopo, Northern Cape, North-West, Eastern Cape, and Mpumalanga have little or no information about the services offered by SAWEN. In the Free State province, for example, most female entrepreneurs who have benefited from SAWEN are based in cities like Bloemfontein. The majority of the female entrepreneurs in rural areas like QwaQwa have not benefited from SAWEN due to a lack of access to information and knowledge (Molefe, 2019).

2.4.4.1.2. *Technology for Women in Business*

Technology for Women in Business (TWIB) is also one of the programmes established by the DTI in South Africa, in an attempt to assist female entrepreneurs in easily accessing science and technology (DTI, 2019). Additionally, this programme was introduced to promote business growth and development through training, education, mentoring, and partnerships. TWIB believes that female entrepreneurs should be equipped with advanced science and technology as well as new operation methods to improve their production. Since its inception, TWIB has assisted hundreds of female entrepreneurs with technology to improve their business production and explore their maximum potential as small enterprises (DTI, 2019). When asked about TWIB, female entrepreneurs who participated in this study revealed that they had never heard of this programme. The programmes like TWIB are crucial as they offer scientific and technological support. Hence, they should be made accessible and available to all female entrepreneurs across South Africa. Having access to science and technology is significant for female entrepreneurs in marginalised regions as this increases their production and resilience to vulnerabilities.

2.4.4.1.3. *Isivande Women's Fund*

In 2010, the DTI and Old Mutual launched the Isivande Women's Fund (IWF) to provide female-owned enterprises with affordable, responsive, and usable financial resources (DTI, 2019). The IWF assists black female entrepreneurs with financial credit and loans from R30,000. 00 to R2 million (DTI, 2019). To qualify for this financial assistance, IWF requires the business to be 60% female-owned, present a long-term business registration number, and business plan, and have a two-year business activity track record (DTI, 2019). Given these requirements, most female entrepreneurs in QwaQwa are unable to access support from IWF due to their operation in the informal sector. Additionally, most of the female entrepreneurs in this study region are not registered and do not keep track records of their activities. As a result, though allowed to apply for financial support from IWF, most of the female entrepreneurs would not qualify.

2.4.4.1.4. *Bavumile Skills Development Initiative*

The Bavumile Skills Development Initiative (BSDI) was launched by the DTI in 2010 to assist home-based female entrepreneurs upgrade their entrepreneurial skills so that they can produce commercially viable, quality crafts as well as other cultural products (SEDA, 2019). According to SEDA (2019), female entrepreneurs in South Africa are gifted in crafting and designing fashionable and elegant products that portray the country's heritage and culture for both local and global markets. As an initiative of the DTI, BSDI seeks to:

- Recruit female entrepreneurs who actively own clothing and textile businesses, and possess embroidery, knitting, weaving, and beading skills,
- Provide aspiring female entrepreneurs with training and skills that will help them start their own businesses, and
- Provide training in bookkeeping, customer service, packaging, and business management (DTI, 2019).

Apart from the DTI programmes presented above, there are some institutions that provide support to female entrepreneurs in South Africa, and these are as follows:

2.4.4.1.5. *Khula Enterprise Finance Limited*

Khula Enterprise Finance Limited (KEFL) was established by in 1999 the South African government with a mission to promote the easy availability and accessibility of equity capital and loans to all SMMEs (Discala, 2015). This initiative was launched after KEFL's subordinate, Khula Institutional Services, discovered the financial challenges faced by rural female entrepreneurs. Upon the discovery of these challenges the government subsequently initiated the 'Khula Start and Micro Start' (KSMS) initiatives to ensure microcredit delivery to rural-based female entrepreneurs (Discala, 2015). These financial loans start from R300.00 to R3500.00. It should be noted that KEFL also supports male entrepreneurs from rural or marginalised regions of South Africa.

2.4.4.1.6. *Ntsika Enterprise Promotion Agency*

In 1999, the government of South Africa introduced the Ntsika Enterprise Promotion Agency (NEPA) to support all entrepreneurs in entrepreneurial services like business training, networks, and information search (DTI, 2019). Additionally, local business service centers were opened to offer business development, training, and counseling services to female entrepreneurs.

However, due to unequal distribution of resources (inequalities), poor coordination, monitoring, and evaluation of programs, and lack of service delivery, most marginalised areas like rural areas have not benefited from these programs (Nieman et al., 2017). QwaQwa is one of the areas in the Afromontane region that has been deprived of these programmes (Dube & Hlalele, 2017). If all or most of the programmes presented above were to be made available to everyone, female entrepreneurs in marginalised regions like QwaQwa would have been able to build stronger resilience to adversities and vulnerabilities.

Nieman et al. (2017) reveal that 'Section 3.5.1 of the 1995 White Paper' on SMMEs development acknowledges that SMMEs suffer from serious human and financial capital and resource constraints. This requires the government to develop and implement policies and support initiatives that suit the requirements and needs of each entrepreneur in the SMMEs sector. These entrepreneurs include the youth, black business owners, women, and people with disabilities (Nieman et al., 2017)). Section 3.5.1 of the 1995 White Paper further highlights that the government's funded support initiatives should be made accessible to every vulnerable individual

mentioned above. In relation to this study, these initiatives should support programmes for female entrepreneurs in ways that empower women to build entrepreneurship resilience for reducing vulnerabilities and coping and adapting to adversities. However, despite the government's efforts to promote female entrepreneurship, most marginalised rural communities in South Africa still experience vulnerabilities that hinder female entrepreneurs from establishing sustainable businesses and building stronger resilience.

2.4.5. Entrepreneurship Resilience

The concept of resilience has been used in various fields like engineering, ecology, psychology, sociology, disaster management, business administration, and entrepreneurship (Langroodi, 2021). In entrepreneurial studies, resilience is argued to contribute to the reduction of vulnerabilities and shocks in communities of low economies (Zehra, 2018). Though there is an increasing number of resilience studies in management and organisation research, the concept of resilience is still at its infancy stage in entrepreneurship research. According to Ducheck (2018), this is surprising because resilience is viewed as a notion that is very significant to entrepreneurs. As suggested by Korber and McNaughton (2018), resilience represents a horde of cognitive skills that are essential for the success of entrepreneurs. However, for these skills to be effective in promoting entrepreneurial success, they need to work closely with primary factors (Ungar et al., 2007). One of these primary factors is to have strong relationships or networks that provide support, motivation, guidance, knowledge, and information. Some of the factors as suggested by Henry et al. (2022) include self-efficacy, the capability to develop and implement plans, emotional intelligence, and the ability to strategise.

Throughout the literature on entrepreneurship resilience, self-efficacy appears to be one of the leading factors of resilience. Sharma and Rautela (2022), argue that self-efficacy in entrepreneurship resilience allows entrepreneurs to believe in their abilities to implement appropriate measures necessary for the survival of their businesses during adversity or challenging situations. Moreover, self-efficacy helps entrepreneurs gain self-confidence and strengthens their resilience (Korber & McNaughton, 2018).

Isichei et al. (2024) discovered that entrepreneurship resilience can be improved in various ways. These various ways include engaging in business training, participating in mentoring and

networking opportunities, and lastly seeking information and knowledge from role models and experts (Isichei et al., 2024). However, scholars like Korber and McNaughton (2018) argue that entrepreneurship resilience cannot only be enhanced through training, mentoring, and networking. They further stipulate that entrepreneurship resilience can also be enhanced through external factors like having a proper business plan, capital, and effective policies. To get deeper insights into the resilience of female entrepreneurs in QwaQwa, this study viewed entrepreneurship resilience as a dynamic complex and construct process that involves the ability of entrepreneurs to predict vulnerabilities, cope, and adapt effectively to unexpected adversity and changes. According to various scholars (Duchek, 2018; Ungar et al., 2008) this ability to predict vulnerabilities, cope and adapt depends on previous experience and is influenced by various factors indicated in Table 2.

Table 2: Factors influencing entrepreneurship resilience (Adopted from Ungar et al., 2008).

Factor	Explanation
Access to resources	Access and availability of financial, medical and educational opportunities. Access to basic resources like food, shelter and clothing.
Access to supportive networks and relationships	Strong relationships with families, peers, role models and communities.
Personal identity	Sense of purpose and ability for self-appraisal of strengths and weaknesses, aspirations, beliefs and values.
Self-efficacy	Ability to believe in yourself in effecting change in both social and physical environments in order to access resources.
Adheres to culture	Knowledge of both local and global cultural practices, values and beliefs.
Social justice experiences	Having the freedom to function in a society and acquire social equality.

Sense of cohesion with others	Balancing personal interests with a sense of responsibility. Being part of a larger community.
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Table 2 provides a clear understanding to the researcher on the factors that influence entrepreneurship resilience. The factors highlighted in Table 2 also assisted the researcher to identify key resilience factors that influence entrepreneurship resilience of female entrepreneurs in QwaQwa. Williams et al. (2017) and Isichei et al. (2024), assert that entrepreneurship resilience focuses on three aspects of possible support beneficial to entrepreneurs exposed to vulnerabilities. These aspects are as follows:

- Improve the capacity or capability to withstand vulnerabilities (considered as a vulnerability reduction factor),
- Achieve the capability to cope and adapt to disasters with vulnerability impacts (considered as vulnerability management factor); and
- Promote an adaptive attitude and the capability to adjust to any situations that may occur after a disaster impact (considered as a mitigation, management, and recovery factor).

This study identified key factors that influence vulnerability reduction and entrepreneurship resilience of female entrepreneurs in QwaQwa. The identified factors are presented in Section 4.8 and they also assisted in developing an entrepreneurship resilience and vulnerability model for female entrepreneurs in QwaQwa presented in Section 6.5.1.

2.4.6. Vulnerability Reduction

Vulnerability reduction has been identified as the best way of preventing or mitigating adversity (Palliyaguru, Amaratunga, & Baldry, 2014). As noted by Biswas and Nautiyal (2023), all resilience-building efforts are associated with the process of vulnerability reduction. In simple terms, the notion of vulnerability reduction is critical in building or enhancing resilience. Culp et al. (2017) state that vulnerability reduction plays a significant role in protecting marginalised and vulnerable communities in terms of enhancing their resilience. Moret (2014) views vulnerability reduction as one of the methods utilised by researchers and policymakers dealing with climate

change, environmental risks, and hazards as well as poverty. For vulnerability reduction to be effective, it should be achieved through mitigation, adaptation, and resilience strategies.

There are four superlative schools of thought on vulnerability reduction (McEntire et al., 2011). These schools of thought include (a) Physical science school, (b) engineering school, (c) structural school, and (d) organisational school. These four schools have their strengths and weaknesses. According to McEntire et al. (2010), the physical science school of thought focuses on exposure to risks and concentrates on living in harmless areas. This school of thought depends largely on the analysis of the physical environment (McEntire, 2011). The engineering school of thought focuses on the built environment as well as ways of increasing resilience through construction strategies (Palliyaguru et al., 2014). The structural school of thought focuses on traditional concepts of vulnerability and generally stresses vulnerability exposure based on social, economic, and human factors. This school of thought is new and states that an individual is exposed to vulnerability because of social and economic structures. The organisational school of thought focuses on resilience in terms of the effectiveness of recovery and response strategies (McEntire et al., 2011). Moreover, it highlights the significance of the ability to cope, adapt, improvise, prepare for, and manage vulnerabilities. Given all these four schools of thought, this study applied both the structural and organisational schools of thought to analyse the vulnerability reduction capacity of female entrepreneurs in QwaQwa.

Vulnerability reduction has witnessed transformations in policy framework in the past decades (Ibem, 2011). This transformation of vulnerability reduction emphasises the need to adopt vulnerability reduction and resilience strategies with the potential of reducing vulnerabilities like poverty, climate change, inequalities, poor infrastructure, and land degradation (Gupta et al., 2017). For vulnerability reduction to be effective, it should be integrated with indigenous knowledge, interdisciplinary and multi-sectoral-based approaches as well as techniques, resources, development plans, policies, and programs (Ibem, 2011; Radović-Marković, 2021). Within the indigenous knowledge context, vulnerability reduction encompasses various theories and frameworks of vulnerability preparedness, prevention, mitigation, response, and resilience systems. According to Korber and McNaughton (2018), it should be noted that through increasing prevention, response, and mitigation strategies, vulnerability reduction has given rise to various approaches of resistance and resilience. In this case, resistance is the ability to absorb effects or

impacts and continue functioning. Resilience encompasses the ability to recover from adversity or impact and maintain it (Korber & McNaughton, 2018).

Vulnerability reduction represents the phase of risk or adversity management (Culp et al., 2017). This phase attempts to prevent occurrences from presumptuous disastrous impacts and ensure proper responses are taken to reduce the effects on people (Culp et al., 2017). In line with this, Moret (2014) states that in vulnerability reduction, there are three interrelated and distinct components. The first component deals with the assessment of vulnerability and it involves identifying potential vulnerabilities. The second component is vulnerability analysis. According to Moret (2014), vulnerability analysis deals with the estimation of exposure of people to physical, social, and economic vulnerabilities. The last component is concerned with capacity building, coping, adaptation, and resilience of people to vulnerability. This study focused on all three components of vulnerability reduction. The study identified the vulnerabilities that female entrepreneurs in QwaQwa are exposed to. It also conducted a vulnerability hotspot analysis to assess the level of exposure to vulnerabilities in QwaQwa. Lastly, this study investigated and analysed the resilience capacity of female entrepreneurs in the study region. In overall, it analysed the livelihood strategies of female entrepreneurs given their high exposure to multidimensional vulnerabilities.

According to Radović-Marković (2021), for people to reduce their vulnerabilities and enhance their coping, adaptation, and resilience capacity, they need to have a supportive environment, education, land, access to knowledge and information as well as adequate resources. Given this, Muneera et al. (2022) articulate that the process of vulnerability reduction is a function of the nature of the environment, location, development pace as well as the nature of vulnerabilities people are exposed to. Given this, the study found that female entrepreneurs have a lower vulnerability reduction capacity due to the nature of their physical environment, location, lack of development, and exposure to multidimensional vulnerabilities. As confirmed by Muyambo et al. (2024b), QwaQwa as a marginalised mountain region is experiencing a lack of basic service delivery, poor infrastructure, and climate change impacts. All these challenges make it difficult for female entrepreneurs in QwaQwa to reduce their vulnerabilities and build stronger resilience.

2.4.7. Livelihood Strategies of Female Entrepreneurs in a Global Context

As stated by Hendratmi et al. (2022), livelihoods comprise the activities and capabilities required to earn a living. Livelihoods become sustainable when they can enable people to cope with, adapt to, and recover from adversities, shocks, or stresses both currently and in the future, without jeopardising the natural resources base (Hendratmi et al., 2022). In this study, the concept of sustainable livelihood was propounded by the scholars Robert Chambers and Gordon Conway in the early 1990s, who also developed the Sustainable Livelihoods Framework (SLF) in the mid-1980s to evaluate various vulnerability contexts and enhance development efficiency (Illu et al., 2021). These scholars argue that livelihoods become sustainable when they allow people to cope, adapt, and recover vulnerabilities, while at the same time providing for future generations. Given this, the SLF (see Figure 11) in this study has been adopted not as a theoretical framework but as guidance to understand the livelihood strategies of female entrepreneurs in QwaQwa. Furthermore, the SLF was used to understand how different capitals can be used to reduce the vulnerability experienced by female entrepreneurs and build entrepreneurship resilience. Livelihood strategies in this study are viewed as entrepreneurial activities undertaken by female entrepreneurs to fulfill their livelihood desires and needs. These include the entrepreneurial activities that enable them to earn a living, alleviate poverty, generate some profit, and improve the livelihoods of other people in their community through the creation of informal employment opportunities (Illu et al., 2021).

A critical influence on an individual's choice of a livelihood strategy is his or her access to capital, the policies and institutions that govern their capability to use capital to reduce vulnerabilities and lead successful businesses (Illu et al., 2021). The government is advised to use the SLF (see Figure 11) to develop and implement initiatives that empower vulnerable female entrepreneurs and enhance their vulnerability reduction and resilience strategies.

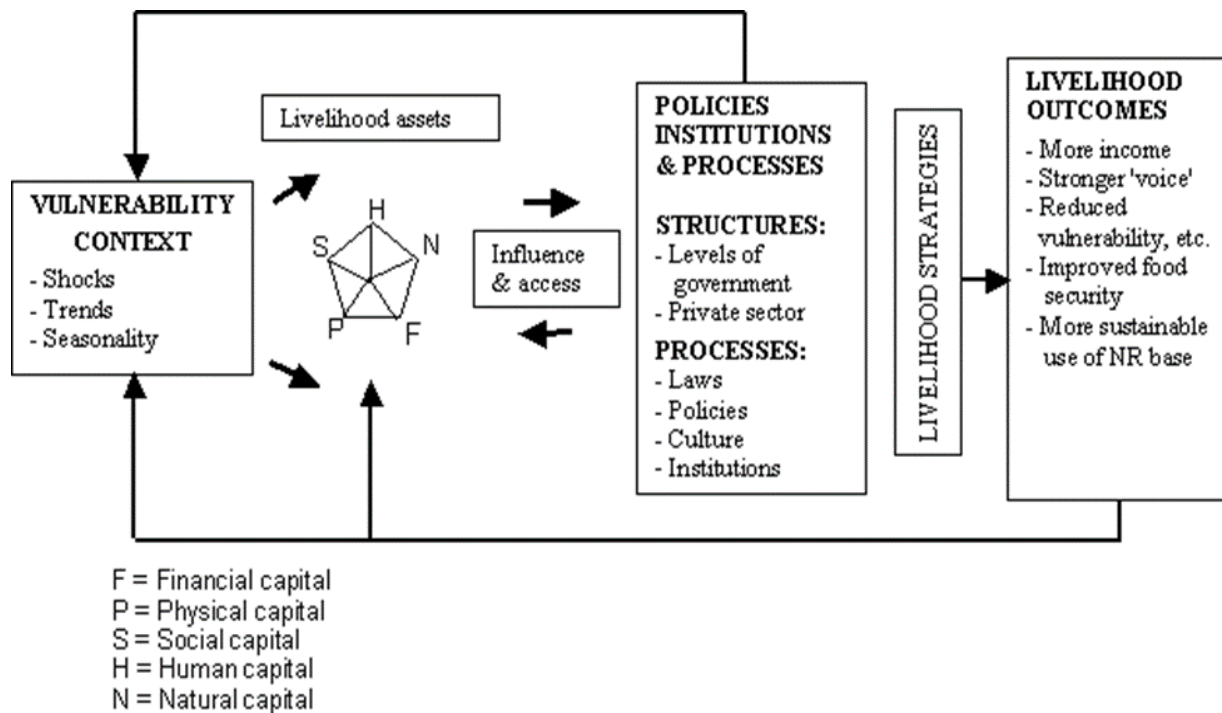


Figure 11: The Sustainable Livelihoods Framework (Illu et al., 2021).

Scholars like Hlungwani and Sayeed (2018) and Serrat (2017) argue that policies and institutions either affect or determine access to various capital types and their resilient strategies. These policies stem from multiple levels of government and have an impact on the livelihoods of the marginalised people in areas prone to vulnerabilities. As a result, there is always a need to develop livelihood strategies comprising opportunities that can be transformed into initiatives and decisions that mobilise resources and satisfy the needs of marginalised and vulnerable people (Hlungwani & Sayeed, 2018). It should be noted that the SLF also informed the conceptual framework of this study. As indicated in Figure 11, the SLF consists of Pentagon assets (capital), and this is briefly discussed in Table 3.

Table 3: The Five Capitals of the Sustainable Livelihood Framework (Serrat, 2017).

Asset	Definition
Human Capital	Refers to an individual's skills, capabilities, and knowledge that sway their ability to reflect, think, and perform creatively (Serrat, 2017). Human capital is viewed as the steering for the other four components of the Pentagon assets because it is needed to use any of those four asset types (capital).

Financial Capital	It consists of financial resources like money in the form of cash, savings, debit cards, credit, social grants, remittances, or any other lucrative assets that enable people to conduct their livelihood strategies (Serrat, 2017).
Physical Capital	This includes capital derived from economic production processes like infrastructure and technology that allow an individual to sustain their lives (Serrat, 2017). It also encompasses roads, houses, electricity, and telecommunications.
Social Capital	Sallah and Caesar (2020) define social capital as the ability of people to make informed decisions, interact with their environment, and establish businesses. Examples include networks, business associations, institutions, policies, families, and groups.
Natural Capital	It includes the natural base which enables people to conduct their livelihoods in a sustainable way (Kungwansupaphan & Leihaothabam, 2016). Examples include land, water, climate, forest, and minerals.

According to previous scholars like Kungwansupaphan and Leihaothabam (2016) and Serra (2017), the various capitals indicated above have different significant roles that they play in reducing vulnerability exposure and improving the livelihoods of female entrepreneurs. For example, female entrepreneurs can use their human capital to perform their entrepreneurial activities (Panda, 2018; WEI, 2020). In this study, for instance, female entrepreneurs can use their skills, knowledge, and capabilities to mobilise resources and acquire opportunities that can enable them to reduce their vulnerabilities and build entrepreneurship resilience. Given the above literature, this study has decided to use the SLF as a guide in understanding the livelihood strategies of female entrepreneurs in QwaQwa and understanding their vulnerability reduction and entrepreneurship resilience perspectives and experiences.

2.4.8. *Livelihood Strategies of Female Entrepreneurs in South Africa*

South Africa has a special history of suppression which began long back before apartheid (Raniga, 2017). A combination of economic and political measures purposively stripped non-white people

of access to better employment opportunities and means of production and suppressed their entrepreneurial spirit. The apartheid policies administered what black people could own, what work or entrepreneurial activities they could do, and where they could live (Raniga, 2017).

According to Kempen and Cornelissen (2022), the employment policies that were implemented during apartheid hindered black people from employing, generating profit, or raising capital from non-Africans. Moreover, oppressive policies were implemented on the types of jobs black Africans could do. During the apartheid government, black people were not allowed to save or plan for their retirements, were not given long-term employment contracts and social security, and were not compensated for their longer services (Derera et al., 2020; Kempen & Cornelissen, 2022).

Raniga (2017), states that the effects of uncontrolled migration and globalisation, combined with South Africa's history of apartheid, led to the development of the 'informal sector' and informal livelihood strategies. Due to the deprivation of better employment and entrepreneurial opportunities, black people resorted to various informal livelihood strategies. Some of these informal livelihood strategies are discussed below.

2.4.8.1. Street Traders (Street Vendors)

Street trading (street vendors) or hawkers as one would say, is one of the most dominating livelihood strategies black people in South Africa resorted to due to a lack of better employment or formal entrepreneurial activities (Gamieldien & van Niekerk, 2017). The massive increase in street trading took place at the end of apartheid when black people started to move into urban areas freely without passes. However, the local municipal 'by-laws' controlled the informal street traders and made it difficult for them to operate freely (Gamieldien & van Niekerk, 2017). Gamieldien and van Niekerk (2017) state that even today, in some parts of South Africa's cities, street trading is prohibited.

Estimates indicate that during the year 2000, there were about 500,000 street traders in South Africa (Gamieldien & van Niekerk, 2017). This accounted for above one-fifth of the total employment in the informal sector. Durban had an estimated 19,000 street traders in 1999 and Johannesburg's Central Business District (CBD) had about 3000-7000 (Gamieldien & van Niekerk, 2017). Gamieldien and van Niekerk (2017) reveal that informal female entrepreneurs

dominate in street trading as compared to informal male entrepreneurs. For example, in 2000 about 70% of these street traders were women.

In South Africa, thus, only a smaller portion of entrepreneurs engage in manufacturing services (Gamieldien & van Niekerk, 2017). The rest of the population traded processed goods like fish, cosmetics, and clothing. Most female street traders are concentrated in non-manufacturing services and the marginalised, survivalist end of the informal sector. Moreover, they deal with processed goods not produced or processed by themselves. According to Gamieldien and van Niekerk (2017), today, only 3% sell products, food, or goods produced or processed by themselves. Those who sell clothes are likely to be working for someone else, and those who sell fresh fish are nearly self-employed.

In cities like Johannesburg, women in the informal sector today sell fruits and vegetables not produced by themselves (Gamieldien & van Niekerk, 2017). In Durban, the beachfront vendors perceive selling their baskets and other goods as a sign of poverty (Gamieldien & van Niekerk, 2017). They think tourists want those colourful toys, trinkets, or carvings imported from Eastern African countries. As a result, they import wood carvings from countries like Malawi. Today people from South African Breweries who own shebeens, Unilever who own spaza shops, and Edgars in Johannesburg's CBD negotiate with street traders or vendors to sell their goods along the street pavements outside their stores (Gamieldien & Van Niekerk, 2017).

2.4.8.2. Clothing Industry

Since 1994, the clothing industry of South Africa has fundamentally changed due to the elimination of competition and trade barriers from all unlawful imports (Bello, 2019). The restructuring of the clothing industries has led to the loss of massive formal jobs and increased informal enterprises. Most of these informal enterprises sew garments and sell them locally and internationally in big retail shops (Bello, 2019). Most of these garment sewing enterprises are operated by women in residential locations. These female entrepreneurs operate their businesses in residential locations because they prefer working nearer to their households to balance both family responsibilities and businesses (Nambiar, Sutherland, & Scheepers, 2020).

2.4.8.3. Construction Industry

According to Aneke, Derera, and Mapeto (2017), construction projects are one of the common enterprises dominating the informal sector. Most of these informal enterprises are led by black male entrepreneurs. The construction industry in South Africa employs a bigger portion of the workforce, and most of its workers are informal workers with little or no skills (Aneke et al., 2017; Public Works Construction [PWC], 2016).

The PWC (2017) states the challenge facing the construction industry, especially in the informal sector is the lack of funding models. The models are strict and complex in such a way that informal construction companies find it very challenging to access or secure credit (PWC, 2017). Moreover, company owners are required to have equity of at least not less than 20%, but more than 50% of the total project cost. According to PWC (2016), with these strict policies, the construction industry is declining in development projects. These strict policies and too many costs are one of the reasons why most construction companies are dominated by men.

2.4.8.4. Spaza Shops

Spaza shops are small grocery or tuck-shops, also called convenience stores or tuck-shops in South Africa (Mukwarami, 2017). These are shops linked with the limitations imposed by apartheid on black people in entrepreneurship (Nambiar et al., 2020). The spaza shops were located within people's households during the apartheid system to elude the government authorities.

The spaza shops were operated secretly as one of the livelihood strategies and to boycott white-owned shops (Mukwarami, 2017). According to the DTI about 1.69 million people between the ages of 15 to 65 own spaza shops in South Africa (Nambiar et al., 2020). Furthermore, statistics indicate that in 2011 approximately 2.7% of retail trade was for spaza shops, which is equivalent to a value of R8 billion (Mukwarami, 2017). Spaza shops account for 6.6% of necessity-driven entrepreneurs (Nambiar et al., 2020). There are about 100,000 spaza shops in South Africa which significantly contribute to informal employment, community cohesion, and food security. Most of the spaza shops work in cash exclusively and are unregistered.

2.4.9. The Importance of Entrepreneurship in South Africa

Concerning the significance of entrepreneurship in business creation and sustainable development, this study assumes that entrepreneurship is the ‘steam engine’ for female entrepreneurs (Fatoki, 2018). This assumption is based on the claims made by GEM (2023) and supported by Fatoki (2018), who states that women in developing economies are viewed as potential enablers of job creation, innovation, and economic growth in the 21st century.

According to ILO (2018), young people in South Africa are vulnerable to social distress and poverty caused by unemployment and a lack of business opportunities. A report from Statista SA (2023) indicates that the unemployment rate of Black South African citizens in the ‘second quarter’ of 2023 was 36.8 %, and 7.4 % among White South African citizens. Furthermore, youth (ages 15-24) unemployment rate in the second quarter of 2023 in South Africa was 60.7 %. In the second quarter of 2023, more women were unemployed than men, and this has been like this since 2016, with an unemployment rate of approximately 36 % of women compared to 30 % of men (ILO, 2018; Williams, Martinez-Perez, & Kedir, 2017). Due to the higher rate of unemployment in South Africa, women in marginalised communities have resorted to informal entrepreneurship. Through informal entrepreneurship, they create job opportunities for unskilled and semi-skilled youth who do not have the required qualifications to compete in the formal job sector (Mthombeni, 2018).

According to Mthombeni (2018), the entrepreneurial ecosystem can be understood as all components (organisations, institutions, and individuals) that hinder or influence an individual to pursue entrepreneurship to be successful. Some of the components as highlighted by Saad et al. (2021) include finance, conducive culture, initiatives and enabling policies, human and socio-economic capital, infrastructure and venture-accessible product markets, and strong networks and connections. Networks embody entrepreneurship in a way that they enhance access to entrepreneurial ideas, effective strategies, support, capital, knowledge, and other resources (Halberstadt et al., 2021). Such entrepreneurship means are necessary for establishing entrepreneurship resilience among female entrepreneurs in South Africa.

Dolan and Rajak (2018), argue that for entrepreneurship to improve the livelihoods of youth and women, the government should collaboratively integrate initiatives of various ministries, for example, labour, education, youth, finance, and industry. Such integration of various initiatives

will promote the effective implementation of programmes and initiatives targeting youth and women enterprises (Ogamba, 2019). As suggested by Dolan and Rajak (2018), various intensive and robust entrepreneurial training, workshops, and programmes are effective ways of facilitating sustainable women and youth entrepreneurship resilience. In the education sector, Almahry, Sarea, and Hamdan (2018), indicate that there is a need for a paradigm shift in education, from pedagogy and philosophy to sustainable entrepreneurship resilience at both secondary and tertiary levels. This also means that entrepreneurship education should form part of basic educational modules whose aim is to provide knowledge on entrepreneurship resilience and vulnerability reduction as a professional career (Almahry et al., 2018).

In summary, over the past decades, South African female entrepreneurs have worked very hard to be recognised as equal to their male counterparts and have climbed the GEM ladder every year. However, they continue to encounter challenges and vulnerabilities in entrepreneurship due to a lack of education, resources, capabilities, skills, and connections (network). Though research has been done on female entrepreneurship resilience in South Africa, there is still a gap in studies that focus on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region. Given that, it does suffice to say that there is a need to conduct empirical research on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa and unpack the building blocks of female entrepreneurship resilience in the Afromontane region. Therefore, this study attempts to explore entrepreneurship resilience and vulnerability reduction in the Afromontane region, particularly focusing on analysing the livelihood strategies of female entrepreneurs in QwaQwa. Studying entrepreneurship resilience and vulnerability reduction of female entrepreneurs will promote a deeper understanding of how female entrepreneurs can build or enhance their resilience and vulnerability reduction strategies. This analytical process is not mounted on a particular theoretical strand but will seek the adoption of a multi-theoretical synthesis that critically analyses entrepreneurship resilience and vulnerability reduction.

2.4.10. Relationship between Women Entrepreneurship and Economic Growth

As indicated by Ganescu (2014), the ‘Europe 2020 Strategy’ considers entrepreneurship as crucial for achieving inclusive, smart, and sustainable growth. In light of this, the European Commission centers its efforts on female entrepreneurs from less privileged societies (Ganescu, 2014). As

argued by Oyelola et al. (2013), informal and micro-entrepreneurship in Africa plays a major role in boosting the economy. In countries like Ghana, for example, micro-entrepreneurs employ at least five people but account for 70% of the country's labour force (Oyelola et al., 2013). Moreover, Oyelola et al. (2013) indicate that Kenya's SMEs employ around 3.2 million people and contribute about 18% to the country's GDP. Based on the two examples given above, it is safe to say that micro-entrepreneurship contributes to economic growth and the GDP in Africa.

According to the GEM (2023), female entrepreneurship contributes to job creation, poverty alleviation and economic growth in most developing countries. Furthermore, it is now recognised as a crucial driver for economic growth and sustainable development (Dean et al., 2019). Most female entrepreneurs in various developing countries are experiencing an increase on the impact of female entrepreneurship on the national and global economic growth. According to Crane (2022), the impact of female entrepreneurship on economic growth is closely linked to the 'social returns' of education on female entrepreneurs which have rapidly increased. Relatively, Morched and Jarboui (2018) asserts that countries experiencing low rates of literacy of women also experience high rates of poverty on women. Furthermore, such countries have poor economic growth (MIWE, 2022a).

Given the literature presented above, this study presumed that if women in most vulnerable Afrimontane regions like QwaQwa are given an access to education, they can empower themselves, reduce vulnerabilities, increase entrepreneurship resilience and improve their livelihood strategies at an accelerating rate. This in its turn would increase both 'private benefits', in terms of substantial contribution to family revenue and 'economic benefits', in terms of improved GDP and economic growth.

According to Waseem (2018), an increase in educational opportunities for women would stimulate women's participation in the business world. Such participation of women in the corporate world empowers women to establish resourceful livelihood strategies which could create employment opportunities, effectively assist in alleviating poverty, increasing the economy and promoting sustainable development (Waseem, 2018). Based on this assertion, this study encourages developing countries, particularly, countries within the Afrimontane region to invest in girls' education and empower women with entrepreneurial opportunities. Such investment and empowerment will assist in creating innovative entrepreneurial opportunities that will boost the

economy, reduce poverty and promote socio-economic development in vulnerable regions like QwaQwa.

2.5. Multi-theoretical Framework

This study adopted a multi-theoretical framework to better understand how entrepreneurship resilience and vulnerability reduction are intertwined (see Figure 12). A multi-theoretical framework allows the researcher to investigate problems that cannot be solved by a single theoretical framework (Strategy & Tsang, 2021). This approach synthesises key concepts from three theoretical influences, namely: Resilience Theory, Vulnerability Theory, and Capability Theory approach. Thus these ‘theoretical mechanisms’ are applied together to explain how entrepreneurship resilience and vulnerability reduction are interrelated. The higher the level of resilience, the lower the chances of vulnerability, and vice versa. In this manner, resilience and vulnerability are viewed as ‘two ends of a spectrum’ (Organisation for Economic Co-operation and Development [OECD], 2019). This means that female entrepreneurs who are more resilient cannot be or are not readily exposed to vulnerabilities (OECD, 2019). If relating the notion of resilience to the notion of vulnerability, it can be easy to understand the nexus between entrepreneurship resilience and vulnerability reduction.

Gallardo (2018) views vulnerability reduction and resilience as topical emergence research matters that need a multi-theoretical approach to address. As a result, it is significant for this study to borrow these three theories to find ways of reducing the vulnerability of female entrepreneurs through entrepreneurship resilience. A multi-theoretical approach helps to integrate and compare different theories to enhance the explanation and authenticity of study findings (Strategy & Tsang, 2021). Moreover, a multi-theoretical framework scrutinises the integration of concepts, advances ‘social science’ research, and provides a comprehensive analysis of those concepts.

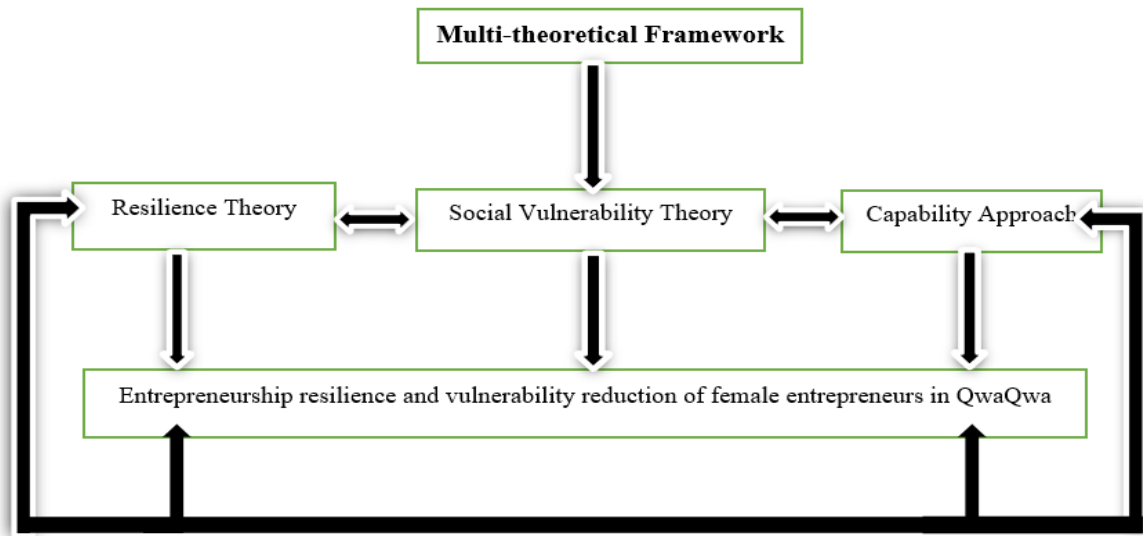


Figure 12: Multi-theoretical Framework of this Study.

Scholars like Škerlavaj and Dimovski (2007), also applied a multi-theoretical framework in their study of ‘intra-organisational learning networks’ and demonstrated that this multi-theoretical approach offers empirical evidence. This study applied a multi-theoretical framework to develop an entrepreneurship resilience and vulnerability reduction framework for female entrepreneurs in QwaQwa. The Vulnerability Theory and Capability Approach theories have been previously applied to examine how attributes of vulnerability and capabilities are interrelated in disaster and vulnerability reduction (Schismenos et al., 2021). By focusing on female entrepreneurs instead of entrepreneurs in general, this study sought to close the existing gaps created by gender inequality and male bias in entrepreneurship. This multi-theoretical framework helps to bridge the limitations emerging from previous research that focuses on either resilience or vulnerability reduction alone. Below is a discussion of the Resilience Theory, followed by Vulnerability Theory and lastly Capability Approach.

2.5.1. Resilience Theory

As indicated by Hallak et al (2018), resilience theory was initially postulated by a development psychologist ‘Norman Garnezy’ from the University of Minnesota in 1992. Limnios et al. (2014) assert that the resilience theory focuses on preventing calamities through protective factors like cognitive skills, emotional support, economic and social factors. Hallak et al. (2018) argue that resilience theory has gained credibility and has focused on various fields which include social

psychology, environmental science, economics as well as business, and entrepreneurship, to mention a few.

According to the resilience theory, various forms of resilience can be adopted by entrepreneurs to prepare themselves for unforeseen vulnerabilities and shocks (Roundy, Broskman & Bradshaw, 2017). These forms include cognitive resilience, social resilience, emotional resilience, and financial resilience (Roundy et al., 2017). Below is a discussion of each form of resilience and how it relates to this study.

2.5.1.1. Cognitive Resilience

As defined by Hayward et al. (2010) cognitive resilience is the enthusiasm rising from optimistic verdicts or innovative decisions made by female entrepreneurs regarding their venture development after experiencing challenges and shocks. Only those female entrepreneurs with adequate expertise, skills, and capabilities as well as creative and innovative entrepreneurial ideas can make optimistic decisions (Hayward et al., 2010). For example, the majority of the female entrepreneurs during COVID-19 in South Africa applied their resource mobilisation skills to mobilise resources like sanitizers and masks for their customers (Sahni, Kumari & Pachaury, 2021). Those who are involved in sewing garments indicated that during COVID-19, they shifted from sewing garments to sewing cloth masks. All this shows that these participants managed to reduce the impact of COVID-19 on their livelihoods through applying their cognitive skills, capabilities and creating innovative strategies.

2.5.1.2. Social Resilience

Social resilience entails entrepreneurs 'capability to develop and maintain networks or connections which are beneficial in building entrepreneurship resilience and reducing vulnerability (Hayward et al., 2010). According to Hedner, Abouzeedan, and Klofsten (2011) connections and networks are crucial as they help in attaining entrepreneurial support, mentorship, and guidance necessary for entrepreneurship resilience and reducing vulnerability. As suggested by Ballenger-Browning and Johnson (2010) entrepreneurial support in the form of training (education) and learning from resilient entrepreneurs 'role models' helps female entrepreneurs to develop strategies that influence resilience and reduce vulnerability. Social resilience in this study has been linked with

the social capital of the SLF and has assisted in exploring the existing networks, support groups, and business associations and their effectiveness on female entrepreneurs' livelihoods in QwaQwa. The researcher in this study assessed the effectiveness of existing networks and business associations like SEDA and many more in assisting female participants to reduce their vulnerability and build resilience. Most of the participants indicated that they were happy and satisfied with the support they were getting from these networks.

2.5.1.3. Emotional Resilience

Emotional resilience is defined as the ability of an individual to maintain psychological and emotional health during hardship or times of adversity (Sahni, Kumari, & Pachaury, 2021). Due to a lack of adequate emotional resilience, it is believed that female entrepreneurs become demotivated to continue after an unsuccessful venture. In the context of COVID-19, the researcher assessed how participants managed to return to business after the pandemic.

2.5.1.4. Financial Resilience

As articulated by Sahni et al. (2021), financial resilience is the entrepreneur's capability to mobilise for financial resources based on their previous ventures. Availability of resources like financial, educational (skills development facilities), employment, medical, housing and infrastructure, food as well as business and networking opportunities influence entrepreneurship resilience (Ungar et al., 2008). Reflectively, financial resilience in this study is closely interrelated to resourcefulness which has been discussed in the conceptual framework of this study. However, to satisfy the objectives of this study, only three forms of Resilience Theory were all adopted, and these are cognitive, social, and financial resilience (see Figure 12).

The resilience theory as argued by Zebrowski and Sage (2017), the concept of 'resilience' can be vague, and could be interpreted differently across disciplines, thus leading to discrepancies in application and assessment. For example, what constitutes resilience in psychology might be different from the way ecologists understand resilience. However, this study provided clear definitions from various scholars. In this study, the concept of resilience is understood from the context of the study. It was understood from a socio-economic perspective and in relation to entrepreneurship and vulnerability context.

The Resilience Theory often focuses on heightened events, possibly neglecting persistent issues like poverty, land degradation, war and inequalities that lead to chronic adversity (Van Breda, 2018). However, to overcome this limitation, this study applied a holistic perspective on resilience and analysed how chronic issues like climate change, poverty and gender inequality affect the livelihoods of female entrepreneurs in QwaQwa. The section below presents a discussion of the Vulnerability Theory in its relation to entrepreneurship resilience and vulnerability reduction of female entrepreneurs.

2.5.2. The Vulnerability Theory

Martha Fineman, the founder of the Vulnerability Theory, defines vulnerability as exposure to disasters and the processes that lead to this exposure. Furthermore, she states that no human being is immune to vulnerabilities (Fineman, 2024). This theory encompasses both social and technical aspects of vulnerability and in this study, it assisted in analysing the vulnerability exposure of female entrepreneurs in QwaQwa about their resilience capacity.

This theory argues that humans are constantly and universally vulnerable due to social institutions that fail to offer them resources to build resilience (Hickey, 2023). For instance, female entrepreneurs in QwaQwa where there is little to no basic service delivery, lack the necessary resources and opportunities to reduce their vulnerabilities and build stronger entrepreneurship resilience. As articulated by Rodgers (2024), human beings cannot escape vulnerabilities because they are vulnerable from birth. Also, some vulnerabilities are beyond the control of human beings, and these include natural disasters, diseases, and economic recession (Rich, 2018).

The Vulnerability Theory also states that though vulnerability is universal and constant, people's exposure to vulnerability is different (Fineman, 2015). For example, in the case of QwaQwa, female entrepreneurs who diversify their livelihood strategies, operate more than one business, and save profit are not equally vulnerable to those who operate one business without saving any profit. Hence, individuals with diversified livelihood strategies are less vulnerable to adversity and more resilient. The results of this study indicate that there are female entrepreneurs in QwaQwa who operate poultry, piggery, and community gardening. The vulnerability exposure of these female entrepreneurs is lower, and their resilience capacity is higher.

In order to assist the readers, in understanding the concept of vulnerability, this theory is categorised into five aspects. The first four aspects are critical declarations of the Vulnerability Theory which include: the denunciation of liberalism, the constancy and universality of vulnerability, the role played by institutions in reducing vulnerability as well as the movement from 'formal equality' to 'substantive equality'. The last aspect concludes the above four declarations and emphasises that the government should transform the policies to enable vulnerable populations to strive to improve their resilience.

On the other hand, this theory asserts that the capacity to reduce vulnerability and build resilience can be built, increased, and or destroyed by societal institutions (Fineman, 2015). For instance, institutions like the government play a critical role in the distribution of resources, hence they highly determine the vulnerability reduction and resilience capacity of female entrepreneurs in marginalised regions. Vulnerability Theory critically argues that institutions largely contribute to the resilience building of female entrepreneurs. According to Hickey (2023), Fineman's point of institutions is supported by Peadar Kirby identified three components that shape the resilience of people. These components include social, human, and physical aspects of resilience. The work of Kirby assists in illustrating the effectiveness of institutions in people's lives. Moreover, Kirby argues that institutions like family, healthcare, and schools contribute to the resilience of people in various ways (Hickey, 2023). In the case of QwaQwa, this study found that female entrepreneurs with no education qualifications have lower resilience capacity and are prone to more vulnerabilities than those who are educated. Additionally, female entrepreneurs with a lack of support from their families also experience high vulnerability exposure. Female entrepreneurs who were diagnosed with COVID-19 also mentioned that when they were sick during the COVID-19 pandemic, their businesses experienced some losses. Moreover, customers drifted apart and did not want to buy their products.

Furthermore, Fineman's theory argues that policy can be used to direct the institutions that bestow various levels of resilience or assets (Fineman & Spitz, 2023). For instance, the government must reform its institutions so that they can implement policies that reduce vulnerabilities and build resilience. The Vulnerability Theory views other institutions like family, schools, and healthcare as connected to government in various ways. As argued by Fineman, this implies that other

institutions correct the vulnerabilities induced by some institutions. In this case, institutions are considered as collective that can reduce vulnerabilities and build resilience.

However, the Vulnerability Theory has received some criticism, and one of the critics is that the term vulnerability is ambiguous and incorporates a variety of meanings, ranging from social to economic, and physical to emotional (Davis & Aldieri, 2021). As a result, it lacks clarity and makes it difficult to apply and understand. In order to overcome this criticism, this study integrated the vulnerability theory with the Capability Approach and Resilience Theory. This multi-theoretical framework was incorporated with the multidimensional vulnerability index to identify the specific vulnerabilities affecting the livelihoods of female entrepreneurs in QwaQwa.

As argued by Davis and Aldieri (2021), while the Vulnerability Theory accepts that individuals encounter vulnerabilities, it does not adequately emphasise the aptitude for empowerment and agency, which can lead to a one-dimensional regard of individuals as inert beneficiaries of support. However, to overcome this weakness, this study also adopted the Capability Approach, which highly emphasises agency.

As stipulated by Fineman (2024), the Vulnerability Theory provides a holistic understanding of vulnerability. This means that it allows the concept of vulnerability to be viewed and understood from various dimensions, for instance, social, economic and physical experiences. This is also confirmed by the MVI presented in Section 2.4.2.1. The insights drawn from the Vulnerability Theory can assist in informing public policy through identifying multidimensional vulnerabilities (Fineman, 2024). This can also assist in designing initiatives and interventions that address the identified vulnerabilities.

2.5.3. The Capability Approach

The Capability Approach originates in several articles, in which Amartya Sen criticises resourcism and utilitarianism (Robeyns & Byskov, 2023). Sen argues that what is missing in resourcism, and utilitarianism is an idea of the kind of activities (doings) people can perform and the types (beings) people can be (Byskov, 2017). Furthermore, Sen describes this idea as capabilities. As Robeyns and Byskov (2023) described, capabilities encompass real freedom that an individual must attain in their possible beings and doings and beings. In this case, real freedom refers to all the means female entrepreneurs require to operate their businesses, reduce vulnerabilities, and build

resilience. This also includes the freedom to access and secure substantial opportunities. The Capability Approach was taken further by a philosopher, Martha Nussbaum in 2000. As viewed by Byskov (2017), the Capability Approach has been applied in various scholarly domains like political philosophy, policy design, welfare economics, and development thinking. Additionally, this approach has also been applied to inequality and poverty evaluation as well as individual well-being assessment (Byskov, 2017). As noted by Nielsen and Axelsen (2017) the Capability Approach focuses on three core concepts, namely: (1) functionings (what people aspire to do and be), (2) capabilities (different functionings that people can achieve), and (3) agency (the freedom that people have to fulfill their capabilities).

Nielsen and Axelsen (2017) state that, Sen in the Capability Approach, postulated that an individual's quality of life must be arbitrated based on what an individual can achieve or accomplish. In simple terms, a person's ability to accomplish or achieve functionings must not be generalised but viewed individually. People need certain capabilities for them to achieve their goals. In the case of this study, this means that female entrepreneurs require certain skills, capabilities, and knowledge to build or enhance their entrepreneurship resilience. The section explains in detail the concepts of the Capability Approach, which form the basis of this study. These concepts include well-being, capabilities, resources, functionings, and agency. Below is a detailed discussion of each concept.

2.5.3.1. Wellbeing

Wellbeing can be understood as an individual's freedom to enjoy valued activities, and this implies that the paramount way of assessing wellbeing is to focus on the actual opportunities an individual must access to lead a quality life (Chatterjee et al., 2022). Additionally, the Capability Approach advocates that an individual's well-being must be measured through the level of valued capabilities and functionings. In this regard, Robeyns (2017), introduced two crucial aspects of well-being, which are the freedom to achieve well-being as well as achieved well-being. Regarding this, the well-being of female entrepreneurs is a significant aspect of 'gender equality' as both a critical component of sustainable development and human rights. However, since there is an existing gap in the literature on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region, there is also little information about the well-being of female

entrepreneurs particularly their ‘eudaimonic’ well-being (orientation or function towards growth, success, and sustainability) closely related to fulfilling their livelihoods (Chatterjee et al., 2022). Female entrepreneurs in developing countries turn to entrepreneurship not only for income generation and poverty alleviation but are also inspired by circumstances that contribute positively to their well-being (Chatterjee et al., 2022). In this study, participants also shared how entrepreneurship changed their well-being by reducing poverty and generating income.

2.5.3.2. Capabilities

According to Shir et al. (2019), capabilities are various combinations of functionings, (doings and beings) that a person may accomplish. Wiklund et al. (2018) define capabilities as real opportunities and freedom that an individual must choose between various existing lifestyles. Capability readdresses an individual’s capacity to accomplish a certain functioning. An example given by Shir et al. (2019) indicates that a person may have the capacity to elude hunger through fasting or going on a hunger strike.

Wiklund et al. (2018), articulate that there are various elementary capabilities that an individual needs to live a quality life. For example, freedom to achieve basic things like education and skills necessary for survival and eluding poverty. This study explored the female entrepreneurs’ capabilities that enable them to reduce vulnerabilities and build entrepreneurship resilience. The necessary capabilities outlined by Robeyns and Byskov (2023) included the ability to be innovative, make informed decisions, recognise opportunities, and utilise resources for entrepreneurial success and building entrepreneurship resilience. During interviews, participants were asked to share how they started their businesses and their innovative ways of reducing vulnerabilities and building resilience. They explained that they operate more than two livelihood strategies, of which the second one they consider as a safety net. Furthermore, they indicated that money generated from safety nets is invested in stokvels and loan sharking, also called shylocking.

2.5.3.3. Functionings

As defined by Robeyns (2017) functionings are the realisation of an individual’s capabilities. Further, this scholar articulates that functionings are the beings and doings that a person can achieve. In simple terms, functionings is when a person has the freedom to do things that will allow

her to achieve her well-being. For example, being educated, being skilled, and being part of a successful group or social network (Robeyns & Byskov, 2023). According to Robeyns (2017), 'doings' consist of working, selling, and participating in social. In this study, beings are understood as being empowered; and doings are understood as participating in social networks like workshops and attending skills development programmes or training. This study found that due to a lack of formal education, most female entrepreneurs are unable to access and mobilise financial resources and acquire business and financial management skills. However, they have the freedom to network with other entrepreneurs and access knowledge and information that can assist them in reducing vulnerabilities and enhancing entrepreneurship resilience.

2.5.3.4. Agency

According to Byskov (2017), agency is an individual's ability and freedom to achieve valued goals. Agency as understood by Robeyns and Byskov (2023) is a person's action to achieve set goals and ability to bring about progress. Gasper (2017) posits that agency is when an individual has the freedom to attain extra opportunities that are vital to him or her to achieve valued goals. In light of the above, it is significant to consider agency in this study as it gave a direction on how to assess the effects of empowerment of female entrepreneurs. In this study, the agency is therefore referred to as the entrepreneurial ability, self-efficiency, and confidence of female entrepreneurs to reduce vulnerabilities and build entrepreneurship resilience.

Robeyns and Byskov (2023) acknowledge the Capability Approach and view it as the best approach that can be used to address socioeconomic developmental issues. It provides direction, a stronger foundation, and a clear understanding of socio-economic development. The Capability Approach's exclusive feature is that it allows assessment of an individual's well-being as well as changes in well-being (Robeyns & Byskov, 2023). The Capability Approach in this study permitted the researcher to ask female entrepreneurs questions about their entrepreneurial activities and their capacity to reduce vulnerabilities and build entrepreneurship resilience.

This approach also resonates with the study objectives, which are to explore what capabilities female entrepreneurs possess and what opportunities, networks, and resources are available in QwaQwa that assist them in reducing vulnerabilities and building entrepreneurship resilience. The Capability Approach has been adopted because of its relevance in analysing the livelihood

strategies of female entrepreneurs in QwaQwa. Given the study's scope, it is safe to say that the capability approach has been applied in this study as a mechanism to involve female entrepreneurs and allow them to expand their abilities to critically reflect on their livelihood strategies and how they can reduce vulnerabilities and build entrepreneurship resilience.

Furthermore, the Capability Approach asserts that agency is conditioned and embedded by networks or connections that shape the livelihood experiences of individuals (Robeyn, 2017). This agency is tailored to participatory dimensions. As indicated in Section 3.4.1.1, this study followed a participatory approach in the collection of data. The participatory approach was applied in this study to allow study participants to apply their capabilities to expand their agency, think and reflect on their livelihood strategies, and express their perceptions regarding entrepreneurship resilience and vulnerability. In simple terms, this study used a participatory approach to engage with participants and listen to their livelihood experiences and perceptions of entrepreneurship resilience and vulnerability reduction in QwaQwa. This participatory approach dismisses the notion of viewing participants as objects that need to be studied (Vaughn & Jacquez, 2020). Similarly, the Capability Approach shares the same focus as it puts people's interests and values at the core of development mechanisms.

According to Arun (2018), the Capability Approach emphasises individual capabilities that can restrain the significance of collective goods and social structures. Gasper (2017) considers this a weakness as it neglects systematic issues that affect groups rather than individuals. However, this weakness has not been encountered in this study because the unity of analysis was individuals, not groups.

As argued by Gasper (2017), the Capability Approach can be critiqued for its potential to impose a Eurocentric view of what constitutes capabilities. Furthermore, this scholar articulates that different cultures prioritise different capabilities, thus leading to questioning the universality of the Capability Approach. However, as argued by Robeyns (2017), the Capability Approach can be adapted to several cultural contexts, allowing for a more 'tailored' application that recognises local priorities and values.

According to Arun (2018), while capabilities intend to capture well-being comprehensively, measuring capabilities may be complex and challenging. This study, however, did not focus on

measuring the capabilities but focused on exploring the capabilities of female entrepreneurs that influence resilience and vulnerability reduction.

As articulated by Arun (2022), the Capability Approach does not effectively address the matters of equality and justice. Instead, it focuses on capabilities, hence making it not sufficient enough to engage with equal distribution of capabilities. This study did not focus on issues of equality and justice regarding capabilities but on access to capabilities and their influence on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa.

Regardless of the weaknesses mentioned above, the Capability Approach as viewed by Robeyns (2017), offers a holistic approach to viewing well-being by considering different dimensions of livelihoods beyond economic circumstances. Furthermore, it allows for a solid understanding of people's capabilities and livelihoods. Furthermore, the Capability Approach recognises the significance of agency in accomplishing well-being, which is a crucial component of livelihoods (Robeyns, 2017). Thus, through its focus on what an individual can do or be, this approach empowers individuals to pursue their aspirations and goals. As a result, it assisted in understanding the entrepreneurial goals and aspirations of female entrepreneurs in this study, which are to empower themselves, alleviate poverty, and improve the conditions of their livelihoods.

The Capability Approach in this study offered valuable insights for developing the entrepreneurship resilience and vulnerability reduction model of this study. It assisted in designing interventions that can improve female entrepreneurs' access to opportunities and freedoms.

Though the Capability Approach has been criticised, its strengths are within its holistic perception of individual well-being. Through its focus on capabilities, the Capability Approach encourages a robust exploration of what entails meaningful livelihoods, hence making it a more valuable theoretical framework for this study.

This study was based on evidence provided by participants and sought to explore and understand the vulnerabilities encountered by female entrepreneurs in QwaQwa. Understanding these vulnerabilities enabled the participants to share strategies that can be implemented to reduce vulnerabilities and build entrepreneurship resilience. The Capability Approach thus represented a broader theory of change on how vulnerabilities are challenged. Additionally, the Capability

Approach was used to systematise data (people’s capabilities, skills, resources, networks, and opportunities) that needed to be collected and analysed.

2.5.4. Synthesising the Multi-theoretical Framework

The multi-theoretical framework of this study provides a comprehensive understating of complex vulnerabilities prone to female entrepreneurs in marginalised regions. The frameworks also offer a holistic approach that female entrepreneurs can follow in reducing their vulnerabilities and building entrepreneurship resilience. As explained above, each of these theories contributes a unique perspective, and the synthesis of these theories can improve an understanding of how female entrepreneurs in QwaQwa cope with vulnerabilities and pursue resilience. The table below shows points of integration and synthesis of the three theories.

Table 4: Synthesis of the Multi-theoretical Framework.

Theme	Description	Point of Synthesis
Resilience Theory	Focuses on the individual’s (female entrepreneurs in this case) capacity to adapt, bounce back, and prosper in the face of vulnerabilities. Recognises the role of its three forms: Cognitive resilience (skills, expertise & capabilities). Social resilience (capability to develop networks). Financial resilience (financial resources, education, infrastructure, networks, opportunities).	All three theories recognise the dynamic interrelationship between vulnerability and resilience. For example, resilience can reduce vulnerability. Also, an understanding of vulnerability can assist in informing strategies for enhancing resilience.
Vulnerability Theory	Explains the factors that make female entrepreneurs to be exposed to vulnerabilities. Considers economic, environmental, political, and social indicators that contribute to vulnerability exposure. Also explains the universality and constancy of vulnerability.	The three theories provide a contextual analysis of the vulnerability indicators and an understanding of the multidimensional vulnerability index of this study. This analysis and understating can inform strategies for reducing vulnerabilities and building resilience.
Capability Approach	Focuses on the individual’s capability to achieve functionings and well-being.	Integrate and synthesise the agency perspectives from the resilience theory to the capability approach. All three

	<p>Emphasises the significance of each individual’s capabilities and freedom to achieve well-being.</p> <p>Considers the influence of economic, political, and social structures on an individual’s capabilities.</p> <p>Capabilities and agency.</p>	<p>theories emphasise the social, economic, and cognitive capabilities of individuals in reducing vulnerabilities and building their resilience.</p>
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In addition to the table presented above, the multi-theoretical framework of this study offers a holistic approach to identifying vulnerabilities and strategies that can be implemented towards reducing vulnerabilities and building entrepreneurship resilience of female entrepreneurs in marginalised regions. The integration and synthesis of the Resilience Theory, Vulnerability Theory, and Capability Approach also indicate the importance of policy implications in reducing vulnerabilities and enhancing resilience, thereby leading to the empowerment of female entrepreneurs in QwaQwa.

Uekusa (2018), indicates that the Resilience Theory, Vulnerability Theory, and Capability Approach complement each other as they focus on key intertwined and comparable variables like inequalities, resources, capabilities, women empowerment, vulnerability, and resilience, which are fundamental to this study. According to Uekusa (2018), the three discussed theories argue that vulnerability disrupts the standard functioning of a society, in this case, the functioning of female entrepreneurs. According to Kong et al. (2022), the Resilience Theory, Vulnerability Theory, and Capability Approach have been adopted and applied in vulnerability reduction studies since 2005 in Beijing. As a result of their adoption and application, women’s involvement in entrepreneurship has gained a rapid increase and recognition (Kong et al., 2022). Furthermore, Moyo (2019), indicates that several academics (Noy & Yonson, 2018; Maanyena et al., 2019) have used the ideas from the Resilience Theory, Vulnerability Theory, and Capability Approach to study the effects of socio-economic and environmental disasters. These scholars strongly consider that these three theories share interrelated variables, hence they play a critical role in tackling vulnerability and resilience issues in marginalised societies like QwaQwa. Given this, the multi-theoretical framework in this study provided a crucial lens for investigating factors that influence entrepreneurship resilience and vulnerability reduction capacity of female entrepreneurs in QwaQwa. The application of this multi-theoretical framework in this study helped to develop a

vulnerability reduction and entrepreneurship resilience model that will be used by female entrepreneurs in QwaQwa to enhance their vulnerability reduction and resilience capacity.

Moyo (2019), advocates for the application of the Resilience Theory, Vulnerability Theory, and Capability Approach in analysing entrepreneurship resilience and vulnerability reduction as this will help in producing innovative policies that empower women and promote sustainable development. On the other hand, Kong et al. (2022), articulate those effective policies should incorporate diverse types of knowledge. These diverse knowledge types come from an interdisciplinary approach. Thus, a multi-theoretical framework has been adopted in this study to establish interdisciplinarity.

Theoretical triangulation is considered a crucial methodological research framework in this study because it offered a comprehensive understanding of the multifaceted and complex nature of vulnerability reduction and entrepreneurship resilience of female entrepreneurs in QwaQwa. Female entrepreneurs in this study region are exposed to multidimensional vulnerabilities, hence applying a multi-theoretical framework in this study allowed the researcher to understand these multidimensional vulnerabilities from different theoretical lenses.

Analysing and understanding multidimensional vulnerability from different theoretical lenses provided credibility and enhanced the trustworthiness of the study findings. Though the qualitative study does not support the generalisation of the study findings, given the nature of vulnerabilities exposed by female entrepreneurs in QwaQwa, the use of a multi-theoretical framework in this study allowed the researcher to have a clear picture of the vulnerabilities encountered by other female entrepreneurs in the Afromontane region. From the study findings, the researcher developed a vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa. Thus, the use of the multi-theoretical framework in this study provided a foundation for developing this model and recommendations for future research.

2.5.5. Preambling a New Theory of Vulnerability Reduction and Entrepreneurship Resilience

Although resilience scholars have shifted towards the use of a multi-theoretical framework, there are still shortcomings existing in understanding the external and inner capabilities of an individual in African settings. According to Schwarz (2018), missteps exist because of modern resilience conceptions which are immersed quietly in Western ideologies and normative viewpoints. As a

result, it becomes challenging to solve African problems using theories rooted in Western ideologies. Vulnerabilities differ from nation to nation. For instance, the impact and intensity of climate change in Western or developed countries are different from developing countries. Hence, female entrepreneurs in developing nations cannot rely on Western theories to cope, adapt, and build resilience to climate change. To solve this problem, this study thus borrowed relevant concepts or ideologies from the three theories, synthesised and integrated them, and developed a new theory or model (entrepreneurship resilience and vulnerability reduction model for female entrepreneurs) for enhancing entrepreneurship resilience in the Afromontane region. It should be noted that this model does not replace the previous three theories used in the multi-theoretical framework, but it offers a more complex and realistic comprehension of vulnerability, vulnerability reduction, and entrepreneurship resilience of female entrepreneurs from a holistic perspective. A detailed presentation of this model is provided in Section 6.5.1 in chapter 6.

2.6. Conclusion

This chapter presented a comprehensive literature review and the conceptual and theoretical framework of this study. A discussion of key concepts and how they are interrelated in this study was provided. This chapter also provided a discussion of how relevant literature was gathered in this study. Specific discussions on entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in South Africa were presented in this chapter. It also explored various theories that form the foundation of this study. The next chapter presents a methodology that was followed in exploring entrepreneurship resilience and vulnerability reduction as well as analysing the livelihood strategies of female entrepreneurs in QwaQwa.

CHAPTER THREE: METHODOLOGY

3.1. Introduction

This chapter presents a roadmap of the entire research process and explains how data was collected and analysed in this study. It first presents the strategy of inquiry that was employed in this study, followed by the research paradigm and research design. After discussing the research design, this chapter outlines how the participatory research approach was incorporated into the research design. The chapter also discusses the population and sampling methods that were used in selecting research participants, the data collection and analysis processes, a description of the area where data was collected, and how the trustworthiness of the research findings was established. The ethical considerations and a conclusion that provides a summary of the whole research methodology of this study are presented last. Below is a brief discussion of the research method that was employed in this study.

3.2. Research Method

According to Saunders, Lewis, and Thornhill (2019), a research method is an overall plan and process of how a study is or will be conducted. As argued by Bell and Bryman (2019), a research method is a strategy of inquiry or an overall orientation of conducting research. Hence, it provides a holistic track of the study process. Some of the common research strategies applied in Social Sciences as indicated by Saunders et al. (2019) include a qualitative research approach, a quantitative research approach, and a mixed-methods (also called a Quali-quantitative research approach). Due to the nature of the research problem and research questions of this study, the researcher in this study adopted a multimethod qualitative research approach. A multimethod qualitative study as understood by Bell and Bryman (2019), enables the qualitative researcher to study relatively complex entities or phenomena in a way that is holistic and retains meaning. A multimethod study provides broader coverage that results in a bigger picture of the phenomenon under study (Denzin & Lincoln, 2017). In essence, multimethod in this study entailed the use of multiple data collection techniques like semi-structured in-depth interviews, transect walks, focus group discussions, life history narratives, Geographic Information Systems (GIS) hotspot mapping, and imagery to collect data.

3.2.1. Qualitative Research

When conducting research, choosing an appropriate method to follow is vital. As noted by Chambers et al. (2017), a qualitative approach is followed when the researcher wants to gain a deeper understanding of a certain phenomenon. In this case, the researcher followed a qualitative approach to understand the vulnerability exposure, vulnerability reduction, and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa. The researcher also conducted a qualitative study to understand the livelihood strategies of female entrepreneurs in QwaQwa.

The qualitative approach is regarded as a relevant research method because it allows the researcher to engage with participants and ask ‘open-ended’ questions during in-depth interviews, therefore allowing an open discussion with the study participants (Tenny, Brannan, & Brannan, 2023). The researcher in this study asked open-ended questions (see attached appendices E and F) during the interviews and focus group discussions with participants. As a result of the open-ended questions, the researcher managed to get relevant and rich data.

Qualitative research is used to understand opinions, concepts, and people’s life experiences (Denzin & Lincoln, 2017). This is significant because in this study, through a qualitative approach, the participants were able to share their previous experiences of vulnerability. One example of the vulnerability experiences that were shared by participants relates to how COVID-19 affected their businesses and how the participants managed to bounce back after the pandemic. According to Neuman and Robson (2017), qualitative research enables the researcher to gather in-depth perceptions and understandings of a social or cultural phenomenon. As argued by Denzin and Lincoln (2017), the qualitative research method is used to answer research questions on lived experiences, perspectives, and meaning, from the participant’s point of view. Its data collection techniques consist of semi-structured in-depth interviews, small-group discussions, and observations. In this study, the researcher collected data through semi-structured in-depth interviews, transect walks, focus group discussions, life history narratives, GIS hotspot mapping, and imagery. These data collection tools are discussed in detail in Section 3.6.

Qualitative research is a complex research method that involves a naturalistic and interpretative approach to a phenomenon (Aspers & Corte, 2019). In light of the foregoing, Neuman and Robson (2017) argue that the complex nature of qualitative research allows the researcher to develop a

complete image of the research phenomenon or problem in question. Furthermore, these scholars argue that the goal of a qualitative study is descriptive and exploratory; and it permits the researcher to explain the participants' experiences which either confront or sustain the theoretical frameworks that are used as the foundation of the study (Neuman & Robson, 2017). Given this, the conducted study identified and studied multi-dimensional vulnerabilities experienced by female entrepreneurs in their livelihood strategies in QwaQwa. The study participants were able to share their vulnerability reduction and resilience strategies in a logical way that made it easier for the researcher to interpret and extract meaning. Aspers and Corte (2019) highlight that a researcher should adopt certain research paradigms or philosophical assumptions when conducting qualitative research. The research paradigm followed in this study is presented below.

3.3. Research Paradigm

The research paradigm refers to the logical way of understanding the worldview (Creswell & Creswell, 2018). As argued by Bonache and Festing (2020), a paradigm is a way of “describing a worldview that is informed by philosophical assumptions about the nature of social reality”. There are different research paradigms, and these include positivism, interpretivism (constructivism), critical idealism, pragmatism, and post-modernism. All these paradigms are differentiated based on assumptions or beliefs surrounding ‘what constitutes reality’, and how reality is constructed. A paradigm leads a researcher to ask questions and utilise appropriate research methods of systematic inquiry called methodology. For example, a positivist paradigm generally utilises a quantitative methodology, whilst an interpretative or a constructivist paradigm generally assumes a qualitative methodology (Bonache & Festing, 2020; Saunders et al., 2019). Since this study is qualitative, therefore adopted an interpretivism, also called constructivism research paradigm. This paradigm is briefly discussed below.

3.3.1. Interpretivism

Interpretivism refers to epistemologies of how researchers can gain knowledge about the world, which lightly depends on understanding or interpreting the meaning that people ascribe to their actions (Nickerson, 2022). Interpretivism is related to the philosophical assumption of idealism and is utilised to bring together different approaches like hermeneutics, social constructivism, and phenomenology that reject the ‘objectivist’ perception which states that meaning exists

independently, in the world of ‘consciousness’ (Saunders et al., 2019). Interpretivists are subjective and believe that it is vital for a researcher to appreciate people’s differences. In this case, the interpretivism paradigm allowed the researcher to identify vulnerabilities experienced by female entrepreneurs and explore mechanisms of reducing vulnerability and building entrepreneurship resilience.

Generally, interpretivists focus on meaning and usually employ multiple data collection methods to reflect diverse aspects of the matter under investigation (Creswell & Creswell, 2018). The researcher in this study employed multiple data collection techniques like semi-structured in-depth interviews, focus group discussions, observations, GIS hotspot mapping, transect walks, and life history narratives to explore the livelihood strategies of female entrepreneurs and their perspectives and experiences on entrepreneurship resilience and vulnerability reduction in QwaQwa. These various data collection techniques enabled the researcher to explore the lived experiences as well as perceptions of female entrepreneurs experiencing various socio-cultural, social, economic, and environmental vulnerabilities. The researcher considered that participants have different unique and valid perceptions, thus she had to apply various data collection techniques to explore and extract meaning from participants' lived experiences and perceptions. Through triangulating the data sources, the researcher managed to establish the trustworthiness, credibility, and dependability of the study findings.

Interpretivists believe that reality and truth are socially constructed and not discovered. As Guba and Lincoln (2017) state perceptions are not viewed as “passive-receptive” presentation processes but as active constructive production processes. In the context of this study, this implied that truth and reality are not empirical objects that are waiting to be uncovered, but rather ‘socially constructed’ through perceptions and interactions of female entrepreneurs in QwaQwa.

People interact with one another in society and assign names and meanings to various phenomena (Nickerson, 2022). This emphasises the significance of considering the socio-cultural context in which female entrepreneurs of QwaQwa operate. Moreover, it implied that female entrepreneurs’ experiences of vulnerability and resilience are not determined or generally defined but shaped by social interactions and meaning assigned to the phenomena within their entrepreneurial setting. Researchers who adopt an interpretivist paradigm, focus on how individuals navigate and understand their lived experiences. In this case, the researcher explored how female entrepreneurs

in QwaQwa navigate, understand, and interpret their vulnerability experiences in their entrepreneurial environment. This exploration involved analysing their livelihood strategies, vulnerability exposure and entrepreneurial resilience.

Ryan (2018) articulates that interpretivism entails that a social phenomenon should be viewed and understood through the participants' eyes rather than the eyes of the researcher. In the context of this study, the focus is on understanding the livelihood strategies of female entrepreneurs to vulnerability exposure, vulnerability reduction, and entrepreneurship resilience experiences and perceptions. Following this approach, the researcher managed to explore the female entrepreneurs' experiences and perceptions and extract the meaning that these female entrepreneurs attribute to their livelihood strategies in QwaQwa.

The approach of interpretivism to analysing data is inductive. This means that during data analysis, the researcher discovers patterns in data under themes to understand a social phenomenon and develop a theory (Ryan, 2018). As indicated in Section 6.5.1 of Chapter Six, the researcher managed to develop a vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa. Denzin and Lincoln (2017) state that the study "takes place in a natural setting where participants make their living". The research is conducted in the real-world context where female entrepreneurs operate their businesses. In this case, interviews, focus group discussions and GIS hotspot mapping were conducted together with participants in QwaQwa where they operate their businesses on daily basis. This enabled the researcher to observe and identify visible vulnerabilities within the study site.

Research paradigms that reflect the relevant philosophy of research are (a) ontology, that is, "What do we believe about the nature of reality?"; (b) epistemology, that is "ways of knowing and how do we know what we know?"; and (c) axiology, that is "ethics and value systems and what do we believe is true?" (Berryman, 2019). According to Denzin and Lincoln (2017), a researcher needs to understand and consider the ontological, epistemological, and axiological inclination within a research paradigm as they help determine the overall course of the research project. Moreover, they help in determining the beliefs and assumptions that frame the researcher's opinion of a research problem, how to investigate the problem, and which method(s) to use in answering the research question(s) (Ryan, 2018). The section below outlines this study's ontological, epistemological, and axiological positions.

3.3.1.1. Ontological Position of Interpretivism

Ontology refers to “whether we believe there is a single verifiable reality and truth, or whether there are multiple realities and truth that are socially constructed” (Bonache & Festing, 2020). In the case of this study, the researcher reflected on her biases, assumptions, and perspectives that could influence the understanding of the reality and truth presented by the participants. The researcher remained open to various participants’ perspectives.

As stated above, the researcher applied various data collection tools and a multi-theoretical framework to corroborate the study findings. Triangulation of data collection tools and theories also helped in providing a complementary understanding of participants’ experienced realities and truth. It also strengthened the trustworthiness of the study findings and reduced the influence of the researcher’s bias. To traverse the ontological aspect of reality and truth, the researcher in this study adopted a reflective practice of using a participatory approach which allowed critical engagement between the researcher and the study participants, at the same time navigating the convolutions of truth and reality and acknowledging the diversity of participants’ experiences and perceptions within the study context.

Ontology consists of the nature of knowledge or reality about the world and how this knowledge exists (Ryan, 2018). According to Ryan (2018), ontology has two dimensions, which are ‘objectivism’ and ‘subjectivism’. Objectivism postulates that reality independently exists and that reality is a product of one’s mind (Denzin & Lincoln, 2017). This implies that participants have no relation to the existing reality, the researchers ‘view of reality’ is the foundation for all other philosophical assumptions. However, the researcher in this study rejected this objective notion of viewing reality.

Contrary to objectivism, the subjective view of ontology posits that reality is ‘socially constructed’ by the participants who experience it (Berryman, 2019). This implies that subjective experiences, perceptions, and social interactions in the business environment shape female entrepreneurs’ vulnerability and resilience. Given this, the researcher in this study adopted the subjective ontological stance and this led to the researcher exploring various influences of vulnerability and resilience as shared by the female entrepreneurs in QwaQwa.

3.3.1.2. Epistemological Position of Interpretivism

Epistemology refers to the inquiry into the nature of truth and knowledge. It seeks to ask these questions: “What are the sources of truth and knowledge?”; “How reliable are these sources?”; “What can one know?”; “How does one know if something is true?” (Bonache & Festing, 2020). Regarding vulnerability reduction and entrepreneurship resilience of female entrepreneurs in QwaQwa, epistemology plays a pivotal role in providing an understanding of the nature of knowledge and truth. This position assisted in facilitating meaningful discussions during data collection with female entrepreneurs. It also allowed the researcher to select relevant participants who have valid knowledge about the vulnerabilities that affect their resilience. Epistemologically, these participants were deemed reliable because they operate their businesses in QwaQwa and they engaged face-to-face with the researcher during interviews, focus group discussions, and transect walks. Given the researcher’s interaction with the participants, it is safe to say that the knowledge provided by female entrepreneurs in QwaQwa regarding vulnerability reduction and entrepreneurship resilience is true. For the researcher to know that the experiences and perceptions shared by female entrepreneurs in QwaQwa were true, data was cross-checked. This was done by comparing data collected through interviews with data collected through other sources like focus group discussions, observations, and transect walks. The findings from all these tools remained the same.

Epistemology is what constitutes ‘acceptable, valid and legit’ knowledge and how knowledge can be transferred to other people (Saunders et al., 2019). Epistemologically, this study adopted an interpretive approach that emphasises understanding and interpretation of the subjective meaning that female entrepreneurs ascribe to their entrepreneurial livelihood experiences. This approach also acknowledges that reality varies among various individuals and entrepreneurial contexts. In the adoption of this interpretivist approach, the researcher believed that female entrepreneurs in QwaQwa shape their understanding of reality, specifically relating to their livelihood strategies, vulnerability exposure, reduction, and entrepreneurship resilience. Additionally, following this epistemological position, this study suggests that female entrepreneurs in QwaQwa can reduce their vulnerability if they can be empowered with the necessary resources, skills, and opportunities.

Chambers et al. (2017), state that most female entrepreneurship studies adopt a ‘positivistic’ epistemology that assumes critical gender differences, hence failing to consider the effects of

gender inequality on women's entrepreneurship resilience and vulnerability reduction. In addressing this knowledge gap, this study went beyond the 'positivistic' epistemological approach and adopted an 'interpretivist' approach to understanding reality. This interpretivist approach posits that reality is constructed by female entrepreneurs who are exposed to vulnerabilities and can reduce those vulnerabilities and build stronger resilience. This approach helped to shift focus from an individual female entrepreneur to understanding the vulnerabilities that affect several female entrepreneurs. As a result, this allowed a general understanding of why some female entrepreneurs are more resilient to vulnerabilities than others. Adopting an interpretivist epistemological position assisted in analysing how female entrepreneurs in QwaQwa, through their subjective perceptions, experiences, and constructed reality, navigate the vulnerabilities and work towards enhancing or building their entrepreneurship resilience.

3.3.1.3. Axiological Position of Interpretivism

Neuman and Robson (2017) define axiology as the role of ethics and values that guide the process of research. Thus, the 'axiological' skills of the researcher determine the ethics and values, which on the other hand form the foundation for making decisions about the type of research to be conducted and the area of study (Berryman, 2019). In the context of this study, the researcher's axiological skills played a pivotal role in defining the ethical values and principles that underpinned the study. Such skills included the researcher's ability to handle ethical dilemmas and make informed decisions that aligned with the objectives of the study. The ethical values and principles served as a foundation for decision-making regarding the entire research process. Moreover, they ensured that this study was conducted with honesty, adhering to ethical considerations. For instance, in Section 3.9, the researcher elaborated on how ethical standards like maintaining the confidentiality and privacy of participants, respecting all participants, and protecting the identity of participants throughout the research process were considered. This study consisted of female entrepreneurs experiencing vulnerability. Thus, the researcher ensured that the study was conducted ethically and respectfully, considering the potential effect on female entrepreneurs in QwaQwa. In summary, the study at hand is value and ethics-based, meaning that the researcher recognised the interaction of female entrepreneurs and their environment. Above all, the researcher first applied for and obtained ethics approval (UFS-HSD2022/0985/22) from

the General/Human Research Ethics Committee (GHREC) before collecting any data from participants (See attached Appendix A).

3.4. Research Design

Research design is understood as the blueprint or roadmap that the study process follows to address the research problem and achieve the study objectives (Aspers & Corte, 2019). To obtain a more holistic depth of the vulnerability and entrepreneurship resilience experiences of female entrepreneurs in QwaQwa, a phenomenological research design was used.

3.4.1. Phenomenology

A phenomenology research design examines people's lived experiences through the descriptions they provide (Tenny et al., 2023). Phenomenological studies allow participants to share their lived experiences and perceptions. In this study, the phenomenological design allowed the participants to share their experiences of the vulnerabilities they have been exposed to and the strategies they perceived were necessary for reducing vulnerabilities and building or enhancing their resilience. However, for this research design to be rigorous and critical, it embedded a participatory approach. As presented in the next section, the motive behind adopting a participatory approach was that it allowed the researcher to directly engage (Vaughn & Jacquez, 2020) with the female entrepreneurs who are actively involved in informal entrepreneurship and are or have experienced vulnerabilities in their livelihood strategies. Thus, following a participatory approach in this study aided in a comprehensive understanding and explanation of the type of vulnerabilities female entrepreneurs in QwaQwa are exposed to while running their businesses.

Additionally, the fundamental assumption in this study is that entrepreneurship resilience and vulnerability reduction of female entrepreneurs is a complex and dynamic phenomenon that requires a participatory approach. In simple terms, the study of entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa involved exploring the lived experiences and perceptions of female entrepreneurs. In this case, the relevance of applying a participatory approach was to analyse and get a holistic understanding of the female entrepreneurs' livelihood strategies.

3.4.1.1. Participatory Approach

A participatory approach is a research design that directly involves local community members in a research process (Vaughn & Jacquez, 2020). As understood by other scholars, the participatory approach is an umbrella concept for research methods, frameworks, or designs that use a systematic inquiry approach in direct engagement with the study participants affected by the matter under investigation for change or action (Abma et al., 2019; Warren & Marciano, 2018). This approach in this study enabled the researcher to identify relevant participants who were actively involved in necessity-driven entrepreneurship and had experienced vulnerabilities. Moreover, this research approach emphasises co-design research through collaborations between community members, researchers, and other experts with expert knowledge and lived experiences. In simple terms, this study views participatory research as an approach that engages study participants who are not trained necessarily in research but have the characteristics of those people who are the key focus of the study. Relevant participants of this study consisted of female entrepreneurs in QwaQwa, and these participants were actively involved in collaborative sessions and decision-making processes. The study participants were involved in defining the research goals and research questions.

The participatory approach promoted the participation of the study participants in the research process. For example, the researcher conducted a meeting with the study participants and allowed them to share their perspectives on the interview and focus group discussion questions. Another meeting was also conducted to revise the interview and focus group discussion transcripts and check if the information provided during data collection was valid. The participation of female entrepreneurs in the collection of data empowered them and allowed them to voice out the vulnerabilities they were exposed to. Through their participation in this study, the female entrepreneurs in QwaQwa viewed this as a learning and training opportunity as it helped them to share and discuss various vulnerability reduction and resilience-building strategies.

The participatory approach has a diversity of benefits which include informed research that consists of 'real-world' contexts, findings that can be translated into non-academic and community settings effectively, and quality and rigorous research (Abma et al., 2019). Increasingly, participatory approach is valued and used across disciplines as a means to solve complex issues; however, there are various frameworks of participatory research which include Action Research

(AR), Asset-Based Community Development (ABCD), Action Learning, Action Science, Citizen Science, Collaborative Change Research, Evaluation, & Design (CCRED), Community-Based Participatory Research (CBPR), Community-Engaged Research (CEnR) and many more (Vaughn & Jacquez, 2020). Given the nature of the research problem and study objectives, this study has however adopted a Community-Engaged Research (CEnR) approach, which emphasizes academic-community collaborations focused on complex issues that affect the livelihoods and well-being of the community members who are part of the study (Abma et al., 2019). In this case, this study was conducted for academic purposes, and thus the researcher engaged with female entrepreneurs from QwaQwa to explore their livelihood strategies for their vulnerability exposure, vulnerability reduction, and resilience capacity. As adopted from Vaughn and Jacquez (2020), Figure 13 below provides a clear demonstration of why a participatory approach was chosen in this study.

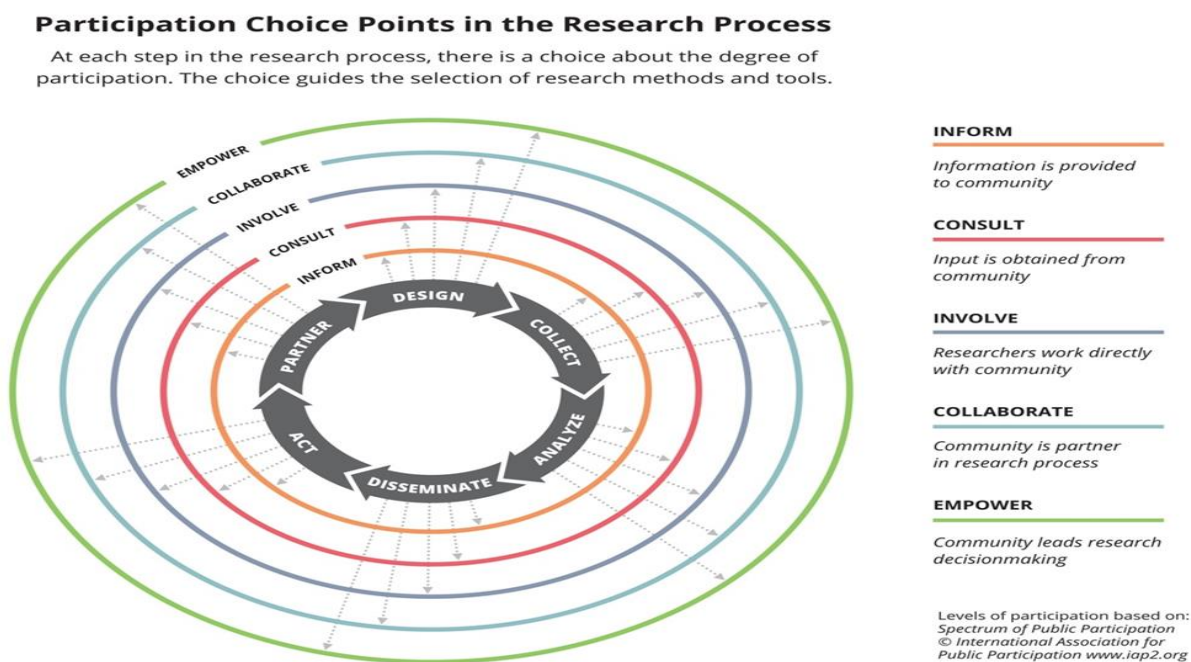


Figure 13: Participation Choice Points in the Participatory Approach Research Process (Vaughn & Jacquez, 2020).

As demonstrated above, this study considers two important factors of conceptualising ‘choice points’ in a participatory approach design, and these are as follows. Firstly, the ‘inform’ participation level can be more participatory if community gatekeepers are informed about the topic under investigation. The researcher in this study informed and consulted with the community gatekeepers in QwaQwa about conducting a study in their area. Thus, she was then approved to

conduct the study with female entrepreneurs in QwaQwa (see Appendices G and H). According to Vaughn and Jacquez (2020), community gatekeepers then operate on the ‘involve’ level, where the researcher works directly with the community. In this case, after obtaining approval from the community, the researcher engaged with the female entrepreneurs in QwaQwa and explored their livelihood strategies, vulnerability exposure, vulnerability reduction, and resilience experiences and perceptions.

At the ‘collaborate’ and ‘empower’ participation levels, a decision to work with community members would determine a choice of data collection tools and processes that accommodate equal power balances and shared co-leadership (Vaughn & Jacquez, 2020). The researcher in this study collaborated with the selected female entrepreneurs from QwaQwa and agreed that there should be a WhatsApp group that accommodates all study participants. It was agreed that this group would permit maximum discussion and also allow those female entrepreneurs who are always busy during the day to share more ideas that would lead to rich and thick data. Given this, the WhatsApp group discussion allowed female entrepreneurs to share more vulnerabilities that affect their livelihood strategies. After discussing their vulnerability exposure, the study participants collaboratively identified strategies that can be used by female entrepreneurs to reduce their vulnerabilities and build or enhance their resilience capacity. Such collaboration also yielded ideas that were later used for designing the entrepreneurship resilience and vulnerability reduction model for female entrepreneurs in QwaQwa which is presented in Chapter Six.

Secondly, although there are various tools that are participatory in nature, more conventional data collection tools use qualitative research such as FGDs and semi-structured in-depth interviews that are not off the hook (Aurini, Heath & Howells, 2021). These tools can rather be rethought and adapted in a participatory approach. Focus group discussions, for instance, can be ‘co-designed’ to meet both the participants’ needs and study objectives (Aurini et al., 2021). Scholars like Warren and Marciano (2018) have collaboratively engaged with community members in research and developed interview questions that meet the community’s needs. While the guiding questions of this study (see Appendix E) were designed to meet the objectives of this study, they also accommodated the needs of the female entrepreneurs who participated in this study. Furthermore, the participatory approach allowed the study participants to identify multidimensional vulnerabilities experienced by female entrepreneurs in QwaQwa. Building on this approach, the

researcher together with the study participants also explored the vulnerability reduction and resilience capacity of female entrepreneurs in the study region. The application of the participatory approach method allowed the study participants to share personal experiences and perspectives related to their entrepreneurial livelihood strategies, vulnerability exposure, vulnerability reduction, and resilience. The use of a participatory approach in this study empowered the study participants process through directly involving them in the research process. This allowed them to shape the research questions as well as the data collection methods used.

Following this participatory approach, the FGDs conducted in this study adopted a Community-Engaged Research (CEnR) approach that was guided by principles pronounced by Luger, Hamilton and True (2020), which are to discuss, understand, and assess strategies that can assist female entrepreneurs in QwaQwa to reduce their vulnerabilities and enhance their resilience capacity. Before the focus group discussions, the researcher together with the study participants drafted a guide for the FGDs, and each participant was allowed to contribute relevant topics and questions for discussions. This enabled participants to feel empowered and respected. Moreover, through the use of CEnR, the female entrepreneurs who participated in this study were empowered and encouraged to identify vulnerabilities affecting their livelihood strategies. This also allowed them to suggest resilience strategies that can be used to reduce their vulnerability exposure.

According to Warren and Marciano (2018), mutual learning is one of the significant aspects of a participatory approach to research as it involves the exchange of knowledge between the researcher and the community members. In this study, this reciprocal learning process enriched the research findings and allowed the researcher to learn from the study participants and gain local insights that she could not understand before the research process. In this regard, through sharing their perspectives, the female entrepreneurs who participated in this study were viewed as active co-creators or producers of knowledge. Furthermore, the study participants also learned from each other different strategies for reducing vulnerabilities and building or enhancing entrepreneurship resilience. The process of learning did not only deepen the researcher and study participants' understanding but also fostered respect and trust among the researcher and study participants.

According to Vaughn and Jacquez (2020), the co-production of knowledge in a participatory approach is closely linked to empowerment and mutual learning and refers to the collaborative effort between researcher and community members in producing knowledge. In this study, the

researcher contributed academic knowledge and methodology, while the study participants offered practical insights on entrepreneurship resilience and vulnerability reduction based on their lived livelihood experiences.

One notable achievement in the co-production of knowledge within this study is the use of digital technologies and software. For example, the researcher used her mobile cell phone with advanced applications and software to collect data easily. In using this digital tool, the researcher worked alongside with the study participants to collect rich and thick data. This approach did not only improve the quality of the study findings but also empowered the study participants on how to use their mobile cell phones to identify problems and improve their communities.

To address any issues related to power dynamics and the researcher's bias, the researcher remained vigilant throughout the research process and ensured that empowerment, mutual learning, and co-production were not just theoretical ideals. The study participants were aware of their rights and the importance of their participation in the research process. Thus, they effectively collaborated with the researcher till the end of the research process.

In summary, the use of the participatory approach in this study was necessary as it actualised the co-creation of knowledge and understanding of real-world multidimensional vulnerabilities in a multi-disciplinary and collaborative manner. Moreover, the participatory approach in this study benefited both the researcher and participants in gaining wisdom and producing meaningful findings that can be translated into action shortly, for example, the vulnerability reduction and entrepreneurship resilience model presented in Section 6.4.1 (see Appendix J).

3.5. Population and Sampling

Population is defined as the total number of potential individuals who have common attributes relevant to the study and are available for participation in the study (Bhardwaj, 2019). Generally, it is not entirely impossible or practically possible to recruit all members of a study population and have them participate in the study (Bhardwaj, 2019). Thus, the researcher must depend on a sample drawn from the study population.

The population of this study consisted of necessity-driven female entrepreneurs operating their livelihood strategies in the informal sector of QwaQwa, particularly in Bluegumbosch, Makwane,

Matsikeng and Monontsha. Subedi (2021) advises that in selecting a sample, researchers should exercise great caution as they hope to gain access to a population portion that looks like or is a representative of the entire study population. Concerning this, the researcher only selected female entrepreneurs who are actively involved in entrepreneurship. Furthermore, female entrepreneurs who started their livelihood after the COVID-19 pandemic were not considered in this study because they did not have relevant information relating to the effects of COVID-19 on informal businesses. A study conducted by ‘Professor Pierre Azoulay’ on the top 0.1% of business start-ups found that on average, female entrepreneurs started their businesses at the age of 30 years old (Singh, 2022). These findings are extensively relevant to entrepreneurial hubs, and successful-technology sectors. However, because most people finish their tertiary education at the average age of 25 and spend up to 5 years looking for employment, this study included participants from the age of 30 to 60 years old who have been in entrepreneurship for a period of 0 to 30 years. In this study, as presented in Table 6 of Section 4.3, the majority of the study participants are between 30 to 58 years old.

This study only considered female entrepreneurs rather than male entrepreneurs based on the claims made by Oxfam, as cited in a critical review analysis conducted by Franzke, Wu, Froese, and Chan (2022), which are as follows:

“Disasters exacerbate pre-existing barriers and inequalities for women, exposing them to even greater risk in their multiple roles as food producers and providers, street vendors, economic actors, and family caregivers. Across the world, women tend to hold less negotiating power and control over resources than men, which feeds into the lack of access to decision-making processes and consistently renders them more vulnerable to vulnerabilities than men” (Franzke et al., 2022).

3.5.1. Sampling

Sampling is the process of selecting study participants from the entire population (Akkaş & Meydan, 2024). According to Akkaş and Meydan (2024), a sample is a relatively smaller group of ‘cases’ from the study population. Below is a presentation of the study participants and a discussion of how they were selected to participate in this study.

3.5.1.1. Sampling Technique

Since this study is qualitative, thus it adopted non-probability sampling. Non-probability sampling as defined by (Campbell et al., 2020) is a sampling technique that is used to select participants from unknown population parameters using non-random selection techniques. This sampling technique is applied when money and time are limited. The researcher used this sampling technique because, hence it would allow her to complete fieldwork before the ethical clearance certificate expires. Non-probability sampling consists of various sampling methods like snowball sampling, purposive or judgmental sampling, convenience sampling, volunteer or self-selection sampling, and quota sampling. (Sim et al., 2018). For this study, the researcher employed a snowball sampling method to select the study participants. Below is a detailed discussion of how participants were selected through snowball sampling.

3.5.1.1.1. *Snowball Sampling*

As described by Dudovskiy (2022), snowball sampling is a referral sampling technique by which the research participants suggest others who they know also fit the study population parameters and can willingly provide relevant information. This sampling method is usually used when the researcher is encountering difficulties in locating members of the study population and is also called chain-referral sampling (Dudovskiy, 2022). As articulated by Dudovskiy (2022), there are three types of snowball sampling, and these are as follows:

3.5.1.1.1.1. Linear snowball sampling

In this type of snowball sampling, the creation of a sample group only starts with one participant who provides or refers another participant (Dudovskiy, 2022). The referred participant is recruited into the sample group and then he or she also provides another participant. This referral pattern is continued until a sample group is fully created (see Figure 14).



Figure 14: *Linear Snowball Sampling* (Dudovskiy, 2022).

3.5.1.1.1.2. Exponential non-discriminative snowball sampling

Dudovskiy (2022) states that in this type of snowball sampling, the first participant recruited to the sample group refers to or provides participants. Each new participant is explored until data saturation is reached.

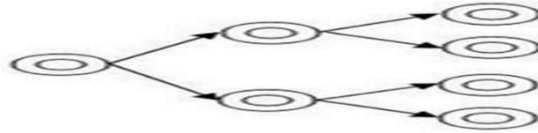


Figure 15: Exponential Non-discriminative Snowball Sampling (Dudovskiy, 2022).

3.5.1.1.1.3. Exponential discriminative snowball sampling

Participants in this type of snowball sampling refer to multiple participants (Dudovskiy, 2022). However, only one new participant is selected among them. The choice of selecting a new participant is guided by the study's aim and objectives.

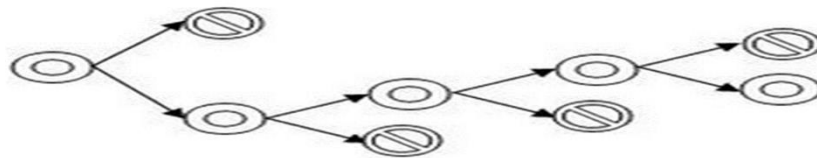


Figure 16: Exponential Discriminative Snowball Sampling (Dudovskiy, 2022).

Given the above three types of snowball sampling, this study thus adopted the exponential non-discriminative snowball sampling whereby participants were selected continuously until data saturation was obtained.

3.5.1.1.2. Advantages of snowball sampling

The strengths of snowball sampling as outlined by Dudovskiy (2022) are as follows:

- It is best at recruiting hidden populations.
- Primary data collection is cost-effective when using snowball sampling.
- The data collection process can be completed in a short period.
- There is little planning that is required to arrange and start the data collection process.

QwaQwa is made up of different villages and some of these villages are located on the mountain ranges. Their location makes it difficult to access the entrepreneurs in those villages. However, following an exponential non-discriminative snowball sampling technique made it easier for the researcher to locate the participants who are actively involved in entrepreneurship in villages like Makwane, Monontsha, Matsikeng, and Bluegumbosch.

3.5.1.1.3. *Disadvantages of snowball sampling*

Dudovskiy (2022) outlines the following weaknesses of snowball sampling:

- If not carefully followed, oversampling of participants can occur and this can lead to information bias.
- Participants may be hesitant to refer other participants and forcing them to do so may cause ethical issues.

The researcher in this study was aware of the weaknesses highlighted above, thus, to avoid oversampling, she followed an exponential non-discriminative snowball sampling, which allowed her to collect data until saturation was reached. In this manner, the sample size was determined by data saturation. Additionally, the study participants were provided with an informed consent form which provided them with an explanation of the benefits and procedures of participating in this study. Explaining the benefits and procedures of participation helped to attract participants to participate in this study at their own will without forcing them (Adams et al., 2021).

3.5.1.2. Sample Size

Accordingly, this study was guided by the findings of Campbell et al. (2020); Fusch and Ness (2015) and Sim et al (2018) and recruited up to 20 participants. Relatively, an analysis of 560 PhD qualitative studies which was conducted by Campbell et al. (2020), discovered that the most common sample size was between 15 to 50 participants, with 20 participants being the average sample size. Given the comprehensive research design, which included the triangulation of the data collection methods, the researcher in this study believed that 27 participants would enable her to collect rich and thick data. The decision to select 27 participants was also supported by Kim et al. (2017), who in her review of 55 qualitative studies, found sample sizes of 8 to 32 participants, (with approximately 75% of the studies having sample sizes of 29 or less), and (60% of studies

having 20 or fewer participants). A key distinction between the studies conducted by Kim et al. (2017) is that the data collection methods for the 20 participants or less included semi-structured open-ended interviews and focus group discussions, while the ones with 29 or fewer sample sizes used data collection methods like survey instruments and written responses. In relation to this, a total of 20 participants participated in the semi-structured face-to-face in-depth interviews. The other seven participants did not consent to participate in the semi-structured face-to-face in-depth interviews due to personal reasons. However, these participants consented to participate in the focus group discussions, which then led to a total of 27 participants in this study.

Sim et al. (2018) however argue that regardless of the approach, the actual sample size in a qualitative study cannot be determined; rather, it is dependent on the nature of the study and the adaptive requirements to the emerging themes. For purposes of this study, the researcher continuously collected data until saturation was reached. The researcher could not therefore preempt the point of saturation and thus, conducted the study within the bounds of qualitative research practice and as advised by the literature.

Tracy (2019) also argues that research that incorporates semi-structured open-ended interviews and focus group discussions as main data collection techniques achieves data saturation with fewer participants than research that solely relies upon written responses from participants and survey instruments. Though seven participants of this study did not participate in the semi-structured face-to-face in-depth interviews, the researcher managed to reach data saturation with 20 participants who participated in the semi-structured face-to-face in-depth interviews. It should be noted that the seven participants who did not participate in the semi-structured face-to-face in-depth interviews did not also participate in transect walks and life history narratives. However, they shared their historical knowledge and experiences during the focus group discussions.

3.6. Data Collection

This study used qualitative participatory data collection techniques to collect contextual information. These techniques included transect walks, life history narratives, GIS hotspot mapping, focus group discussions, semi-structured in-depth interviews, and imagery. Qualitative participatory data collection tools were considered appropriate for this study as they enabled the researcher to creatively apply multiple techniques to explore the perceptions and experiences of

female entrepreneurs on entrepreneurship resilience and vulnerability reduction in QwaQwa. These techniques transcend disciplines and spatiality, especially given the fact that the Afromontane is a differently endowed space characterised by mountains. It is therefore important to outline the locations and spaces that the female entrepreneurs operate from. Below is a detailed discussion of how data was collected using each of the data collection tools mentioned above in this section.

3.6.1. Transect Walks

As described by Ajaz and Zakir (2022), transect walks are a participatory technique, where research participants from the community and the researcher walk around various areas of the community. In this study, during the transect walks, the study participants shared with the researcher, their lived experiences regarding entrepreneurship and vulnerability exposure. Moreover, the study participants assisted the researcher to identify and capture physical vulnerabilities and identify entrepreneurship hotspots that were later captured during the GIS hotspot mapping process. Furthermore, Ajaz and Zakir (2022), states that the research team conducts transect walks to obtain an overview of the community's condition, main variables, and setup. The aim is to gather more information about the built environment. For instance, areas that are prone to vulnerabilities, roads, access to market and water sources, slopes that are easily prone to floods, and other major issues (West, Nomedji, & Rojas, 2021). In this case, transect walks were conducted by the researcher together with the study participants in the selected four villages of QwaQwa between January and February 2023. During the transect walks, the researcher managed to observe areas of interest that were to be later mapped for entrepreneurship and vulnerability hotspot analysis using GIS. The researcher also managed to observe variables like physical infrastructure, landscape, different types of entrepreneurship livelihood strategies, and water sources, among others. Engaging with participants during transect walks in natural a setting allowed the collection of data that explained and illuminated the participants' vulnerabilities in a less premeditated manner. Images were also taken during transect walks and these were analysed later during the hotspot analysis.

Furthermore, during the transect walks, participants mapped areas and assets that were particularly vulnerable to climate change-related risks like flooding, water scarcity, weeds, pests, and increased temperatures. For example, participants identified houses and livelihood strategies that were most

vulnerable to flooding, sun scorching due to increased temperatures, diseases due to weeds and pests, and dryness due to water scarcity.

The researcher conducted 20 transect walks with 20 study participants who participated in the semi-structured in-depth interviews. Each walk with each participant lasted for about 15 minutes. Transect walks were done during the first phase of semi-structured in-depth interviews and more details are also discussed in the interview section. During the walk, participants shared their current and historical entrepreneurial experiences. They also identified physical vulnerabilities that hinder them from building stronger entrepreneurship resilience. The researcher also observed various entrepreneurial activities in the study region. West et al. (2021), highlight that transect walks enable access to people's knowledge, attitudes, and values about their community. They also consider walking as an intimate way for a researcher to engage with the area of study and a participatory technique that provides an understanding of the setup of a study area. Relatively, Ajaz and Zakir (2022), articulate that, in most cases, it is crucial to see, touch, hear, feel, or smell a place to understand and make sense of it. For this reason, the researcher in this study decided to explore transect walks during fieldwork. Mulopo, Mbereko and Chambari(2020) also indicate that transect walks allow the researcher to walk and talk with participants in their community, hence producing valuable data. In this study, what the researcher and participants spoke about during transect walks unfolded prompts for focus group discussions and triggered some insights and conversations unnoticed during semi-structured in-depth interviews.

As per the participants' consent, entrepreneurial-related images were captured during transect walks, and these images were later discussed with participants during the focus group discussions. Conducting the transect walks generated localised knowledge of participants' lived experiences and perceptions of central entrepreneurial issues existing in their community. West et al. (2021), further argue that transect walks are credited for their ability to put study participants in charge of the study process, effectively empowering them. Some participants highlighted that it was their first time to participate in a study that concerns their livelihoods. The outcomes of transect walks were used as additional inputs for focus group discussions and life history narratives.

3.6.2. Life History Narratives

The life history narratives present an opportunity for an in-depth understanding of participants' historical experiences (O' Toole, 2018). In this study, life history narratives were used to collect historical data on participants' livelihoods in relation to entrepreneurship and vulnerability exposure. Through these narratives, participants also shared data on the history of QwaQwa particularly the issue of customary land tenure. Data obtained through life history narratives was then taken further to focus group discussions and interviews whereby the study participants co-constructed their historical entrepreneurial stories with the researcher through engaging in hotspot map analysis and interpretation.

The life history narratives allow a researcher to approach research or a study from a 'subjective' point of view, hence allowing the study participants to become part of the study, and not objects to be studied (O' Toole, 2018). Contributions from Lager et al. (2015) and Alarasi et al. (2015) assisted in establishing a new 'ontology' by determining means of reality construction, in which 'subjectivity' is necessary for understanding. In this study, the researcher assumed that participants' livelihood experiences are communicated and shared as stories in which both the researcher and participants attach meaning to life history narratives. Thus, during the life history narratives, participants shared their lived experiences about entrepreneurship and identified physical vulnerabilities that affect their resilience. A detailed discussion of participants' lived experiences and vulnerabilities encountered was conducted through focus group discussions. Life history narratives also gave pointers for interviews.

O' Toole (2018), analyses the life history narratives and indicates key aspects that characterise the narrative turn, and these are as follows:

- Participants are not considered study subjects or objects. Besides, they are conceptualised as individuals who are knowledge producers or creators. The story, thus, is a joint factor between the participants and the researcher, which needs to be analysed to identify any ways that may have happened during the research (Denzin & Lincoln, 2017).
- Life history narratives allow the participants to express their thoughts, interpretations, and emotions, thereby emphasising the uniqueness of the narrated story or event.

During the life history narratives exercise, participants in this study provided historical narratives regarding past events. For example, they shared their knowledge and experiences regarding historical weather events like droughts and floods that occurred in their region. Furthermore, they explained how their livelihoods were affected by the 2014-2016 droughts and floods in 2021. This helped identify vulnerability trends and how these were related to the specific locations. Moreover, they shared their knowledge regarding the history of QwaQwa, historical land distribution and ownership, and historical livelihood strategies. Talking about the vulnerability trends assisted in understanding how some areas became hotspots while others encountered little vulnerability exposure. It also helped in gathering historical resilience-building strategies that were adopted. Understanding previous resilience-building strategies helped to explore possibilities of reducing vulnerabilities and building resilience currently.

3.6.3. Focus Group Discussions (FGDs)

A Focus Group Discussion (FGD) can be viewed as a type of group interview whereby data is generated through communication among participants (Brennen, 2021). Focus group discussions aim to promote debate explore participants' thoughts, and extract meaning from what they think. The researcher in this study conducted three focus group discussions which included two face-to-face focus group discussions and a WhatsApp group discussion with the study participants (see Figure 17). The first face-to-face FGD consisted of 12 participants from Monontsha and Bluegumbosch and was conducted in Monontsha on one of the farms owned by some of the participants who are also involved in an entrepreneurial project. This FGD was conducted to gather relevant information on the vulnerabilities experienced by the participants in their farming project. Furthermore, it allowed the researcher to explore broader perspectives, ideas, and experiences of vulnerability reduction and entrepreneurship resilience that might have been missed in other interviews and the other FGDs. This FGD fostered collaboration, built rapport and trust, and enhanced capacity building and empowerment of participants. In acknowledgment, the participants involved in this FGD reported that they felt empowered by being involved in this discussion. Furthermore, they explained that it was a wonderful opportunity for them to voice out the vulnerabilities that hinder their livelihood strategies from growing. Through this FGD the participants were able to share their collective ideas on how to reduce their vulnerabilities and build robust resilience.

The second face-to-face FGD consisted of 15 participants from Bluegumbosch, Makwane and Matsikeng, and was conducted in Makwane at the AGAPE Foundation. Allocating participants in these two groups served the researcher both time and money.

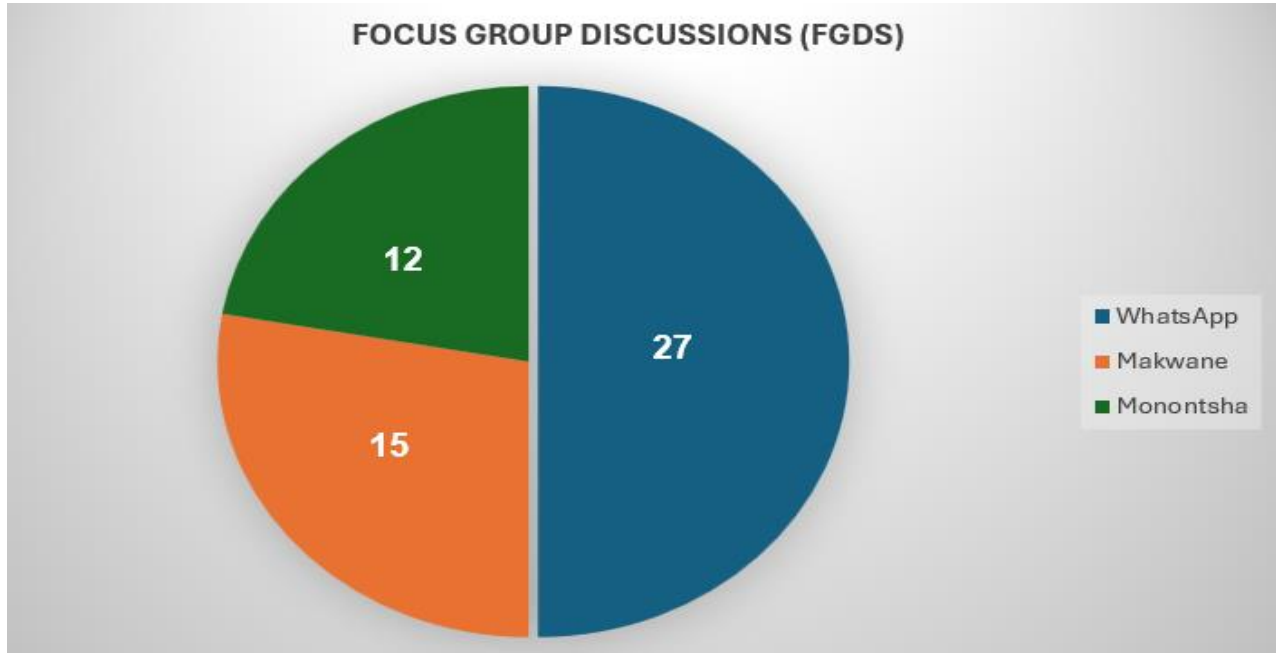


Figure 17: Number of Participants in each FGD (Researcher's Work, 2023).

As presented in Figure 17, all study participants participated in a WhatsApp FGD that was conducted in this study. The first face-to-face FGD that was hosted in Makwane consisted of a total of 15 participants. Among these 15 participants, seven were from Makwane village, five were from Bluegumbosch, and three were from Matsikeng. The second face-to-face FGD that was conducted in Monontsha consisted of 12 participants. Among these participants, 10 were from Monontsha and two were from Bluegumbosch (Figure 17).

During the FGDs, the participants discussed and shared their livelihood experiences on entrepreneurship resilience and vulnerability reduction until they reached data saturation. Each FGD did not exceed two hours since participants were expected to return to their businesses. The researcher used a semi-structured FGD guide with a set of questions that were in line with the study objectives, research questions, and research problem (see Appendix F). Some of the topics that were discussed during FGDs emanated from the transect walks that occurred in the previous two months.

The FGDs were conducted in March 2023, and it took two weeks to conduct the two face-to-face focus group discussions. The study participants shared and discussed their views till data saturation was reached around the first week of April 2023. Both face-to-face FGDs started with an ‘icebreaker’ game, to enable comfortability and easiness of participants. According to Saunders et al (2019), icebreakers during FGDs encourage openness and a will to talk. Openness and willingness to talk are key drivers of a successful FGD (Saunders et al., 2019). Icebreaker game also helps in mitigating the research-participant power imbalances (Hickey, Richards, & Sheehy, 2018).

As articulated by Brennen (2021), FGDs can result in obtaining understandings and knowledge that is unlikely to have been obtained during face-to-face interviews. Saunders et al. (2019) further assert that FGDs lead to a synergistic effect by encouraging participants to respond and probing each participant’s response. Thus, in this study, the FGDs allowed the participant to share and discuss the vulnerabilities that hinder them from achieving their entrepreneurial goals. The study participants also shared different strategies that they have used to reduce their vulnerabilities and build their entrepreneurship resilience. Additionally, the study participants discussed the images that were taken during transect walks and extracted meaning from them. Discussing these images helped participants to reflect on and elaborate on their entrepreneurial journey and entrepreneurship resilience experiences.

As argued by Denzin and Lincoln (2017), FGDs tend to lead to biased information as some participants talk more and dominate the discussion. The researcher was aware of this weakness and thus made sure that all participants were given equal time to express their views and perceptions during the discussions. Brennen (2021) also argued that focus group discussions can be time-consuming. However, in this study, the FGDs did not go beyond two hours. Before participating, the study participants agreed to attend the FGDs as they considered these discussions as a learning opportunity for them.

The study participants also asked if they could extend their discussions to an online platform, that is a monitored private WhatsApp FGD. To allow collaboration and maximum participation of the study participants, a private WhatsApp group was created. For the sake of establishing the privacy and confidentiality of the study participants, this group was administered by the researcher. It should be noted that the WhatsApp FGD was an arrangement made by all the study participants to

share more views of the vulnerabilities they are exposed to, their current resilience strategies, and potential strategies for reducing vulnerabilities and building resilience. The WhatsApp FGD took place only after business hours when all participants were free from 18:00hrs till 20:00hrs on Sunday the 2nd of April 2023.

According to Hickey et al. (2018), FGDs have a weakness of researcher-participant power imbalances, which also affects the reliability of participants' responses. Thus, to mitigate the researcher-participant power imbalances and ensure the reliability of participant responses, the researcher in this study established closeness to the participants by participating in the icebreaker game at the beginning of the focus group discussions. As explained by Green and Johns (2019), establishing close relationships with participants enhances the researcher's sense of rapport with the study participants and helps in generating rich data (Hickey et al., 2018). Moreover, it promotes open discussions and effective communication which helps in generating valid and rich data. Lastly, the researcher also remained neutral during discussions and resisted sharing her personal experiences. Maintaining a neutral position enabled the researcher to avoid biases in the participants' responses.

3.6.4. GIS Hotspot Mapping

The use of GIS mapping in social science research can assist in creating a better analysis of the problem under investigation (Bell et al., 2015). Maps supplement ethnographical approaches and provide robust data analysis. Furthermore, GIS helps a researcher to cross disciplinary boundaries especially when researching an interdisciplinary phenomenon. In the context of this study, entrepreneurship resilience and vulnerability reduction are contested concepts that need to be explored from an interdisciplinary approach. In this study, adopting GIS hotspot mapping assisted in identifying entrepreneurship hotspots in QwaQwa.

The researcher first collected coordinates from all four villages (Makwane, Matsikeng, Bluegumbosch, and Monontsha) of QwaQwa using the Global Positioning System (GPS) Status installed on her mobile cellphone. The global positioning system as described by Ali (2020), is a satellite-navigated system that was created by the United States Department of Defense to give details about time and geo-location information for military purposes. It has 24 satellites that measure distance and identify geographical locations on the Earth. GPS Status allows the user to

create or record locations from the earth and assist them navigate (Ali, 2020). In this case, the researcher used the GPS Status to collect and record location coordinates as well as physical images of vulnerabilities encountered by the female entrepreneurs in these four villages of QwaQwa (see Figure 18).

The image shows two screenshots of an ODK data collection interface. The top screenshot displays a table with the following columns: ID, Submitted by, start, end, Date, Address, Activities in the Area, and What vulnerabilities are. The bottom screenshot displays a table with the following columns: ID, Others please specify, Pictures 1, Picture 2, Picture 3, Picture 4, Picture 5, and GPS location.

ID	Submitted by	start	end	Date	Address	Activities in the Area	What vulnerabilities are
114071...	dubej	2023-05-18T12:52:07.855+02:00	2023-05-18T12:53:34.164+02:00	2023-05-18	Bluegumbosch Seotlong	Street Vendors	Temperature, Electricity
114071...	dubej	2023-05-18T12:39:09.295+02:00	2023-05-18T12:40:18.894+02:00	2023-05-18	Bluegumbosch	Poultry and gardening	Poor roads, Poor
114071...	dubej	2023-05-18T12:33:53.018+02:00	2023-05-18T12:35:38.436+02:00	2023-05-18	Bluegumbosch Area	Settlement	High elevation
114071...	dubej	2023-05-18T12:18:04.945+02:00	2023-05-18T12:21:44.300+02:00	2023-05-18	Bluegumbosch Sotlong	Gardening	Poor soils, Lack of
114071...	dubej	2023-05-18T12:15:58.491+02:00	2023-05-18T12:17:20.404+02:00	2023-05-18	Bluegumbosch Sotlong	Recycling	High elevation, Tr
114071...	dubej	2023-05-18T12:12:34.124+02:00	2023-05-18T12:15:48.665+02:00	2023-05-18	Bluegumbosch Sotlong	Traditional Poultry	High elevation, La
114071...	dubej	2023-05-18T12:10:40.723+02:00	2023-05-18T12:12:14.099+02:00	2023-05-18	Bluegumbosch Sotlong	Pigery	Rainfall, Electricity
114071...	dubej	2023-05-18T11:48:03.714+02:00	2023-05-18T11:51:53.290+02:00	2023-05-18	Bluegumbosch	Mobile kitchen	Electricity, load, Is
114071...	dubej	2023-05-18T11:37:49.961+02:00	2023-05-18T11:39:17.524+02:00	2023-05-18	Matsikeng	Salone	Lack of water, E

ID	Others please specify	Picture 1	Picture 2	Picture 3	Picture 4	Picture 5	GPS location
114071...	Infrastructure						-28.4630567 28.8534167 1696.0 1.36
114071...	rtation						-28.46633 28.86032 1741.2 1.5
114071...	null						-28.4664717 28.8607567 1741.6000000000001 1.466
114071...	Pests and insects						-28.4663714 28.8605548 1741.7 1.58
114071...	null						-28.4663266 28.8608058 1745.4 1.52
114071...	Infrastructure						-28.466485 28.8608817 1744.2 1.483
114071...	Floods						-28.4664217 28.8610067 1740.8000000000002 1.4
114071...	null						-28.4830467 28.8468633 1708.7 1.54
114071...	Infrastructure						-28.5099783 28.8520633 1788.9 1.4
114071...	Infrastructure						-28.5210367 28.8633383 1826.4 0.916
114071...	null						-28.521085 28.86316 1829.5 1.06
114071...	null						-28.5212383 28.870355 1846.0 1.34

Figure 18: ONA Data - Entrepreneurship Hotspot Analysis Project (Researcher's work, 2023).

After collecting the coordinates, images, name of the location, and physical entrepreneurial activities were collected through a software called Open Data Kit (ODK). ODK as defined by Brunette and Hartung (2023) is an open-source program software in which programmed forms are installed on mobile smartphones. It was developed by a group called Change from the University of Washington, which explored the use of technology in enhancing people's livelihoods in developing countries (Brunette & Hartung, 2023). The ODK forms are developed in XML format and can either be generated automatically or developed manually using an internet interface. The

ODK software also supports incorporating GPS location coordinates, videos, images, and bar codes as the basis of the forms (see Figure 19).

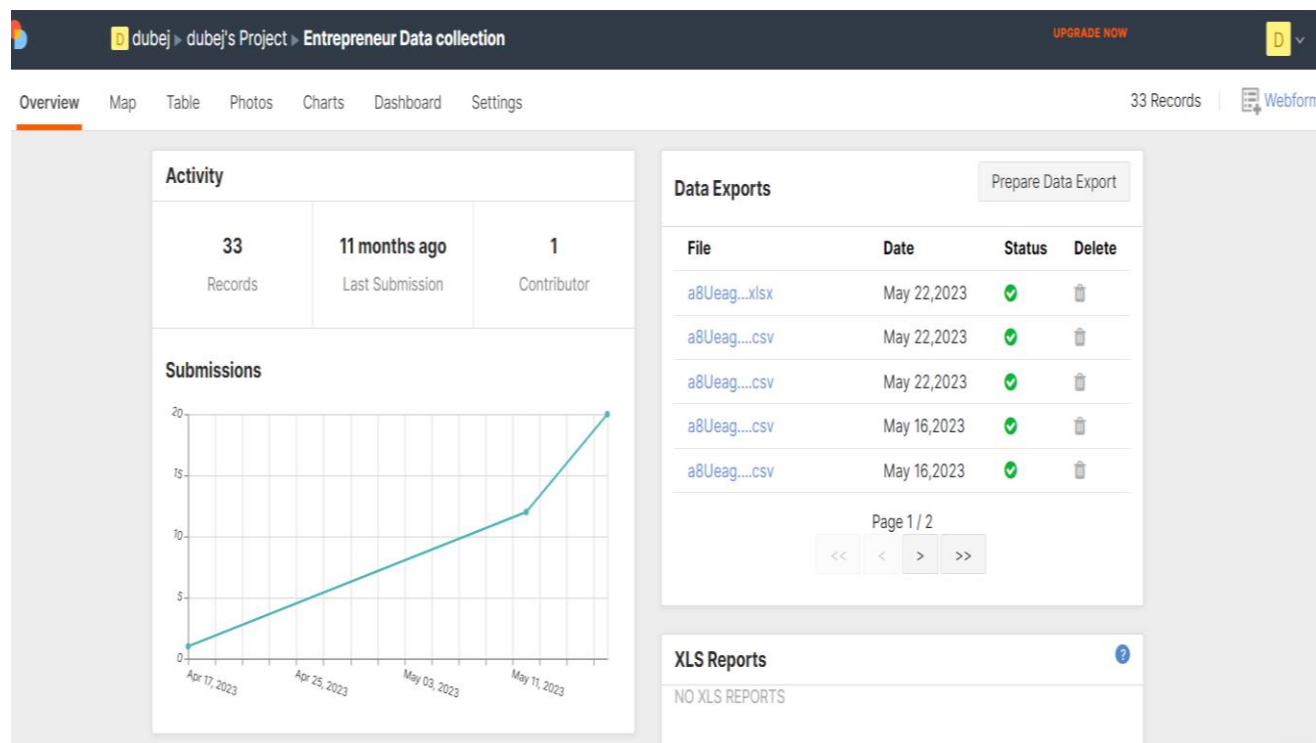


Figure 19: Overview of the ONA Data - Entrepreneurship Hotspot Analysis Project (Researcher's work, 2023).

The forms are transferred from the phone wirelessly to ONA Data, which is a server hosting ODK's Aggregate tools (Brunette & Hartung, 2023). ONA data is a tool designed to work with ODK to collect data and create forms that capture GPS data. In this study, the researcher soon after transferring the data forms to ONA, pulled an Excel report that was then interpolated into ArcMap GIS for the creation of entrepreneurship and vulnerability hotspot maps. A broader discussion of GPS Status, ODK, and ONA data is provided in the data analysis section. Below is a brief discussion of how the entrepreneurship and vulnerability hotspot maps were created.

The entrepreneurship and vulnerability hotspot mapping were run over four weeks as indicated in Figure 20. During the first week of May 2023, the researcher was introduced to the GPS Status, ODK, and Ona Data theoretical sessions by one of the GIS experts at the Geography Department at the University of the Free State (UFS), QwaQwa Campus. The researcher then spent two weeks (from the 7th of May 2023 till the 21st of May 2023), conducting the vulnerability and entrepreneurship hotspot mapping. This mapping was done in all four villages in QwaQwa

whereby location coordinates of each female-owned enterprise and physical environmental vulnerabilities encountered by each female entrepreneur were captured and recorded through a GPS status. A form containing these location coordinates and vulnerabilities was immediately sent to ONA Data soon after data capturing. During the last week of May 2023, the researcher started to create the hotspot maps and conduct the entrepreneurship resilience and vulnerability hotspot analysis presented in Section 4.7 of the next chapter.

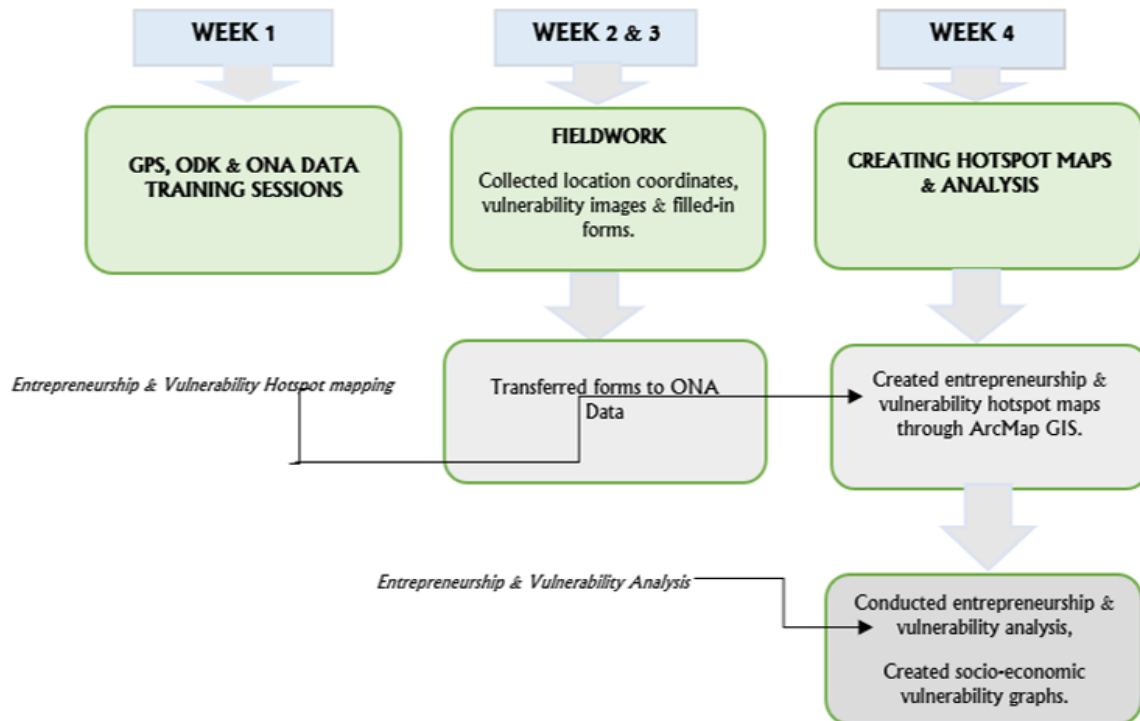


Figure 20: Entrepreneurship and Vulnerability Hotspot Mapping in QwaQwa.

The purpose of GIS hotspot mapping was to complement the mapping exercise that was done during transect walks. This process enabled the assessment of the spatial aspect of vulnerability. Moreover, it involved identifying places where vulnerability exposure was more frequent or stronger (vulnerability hotspots), mapping specific locations of entrepreneurship livelihood strategies (entrepreneurship hotspots), and assessing the spatial vulnerabilities and entrepreneurship resilience related to the female entrepreneurs' livelihoods. Understanding the vulnerability spatial dimension concerning entrepreneurship livelihood strategies is important in this study. Some female entrepreneurs might rely on limited resources to build their resilience, and thus, understanding how these resources are affected by different types of vulnerabilities is

significant. For example, participants involved in rain-fed agriculture or farming largely depend on water sources. In that case, aspects such as physical vulnerabilities that indicate water scarcity were mapped.

GIS hotspot mapping generated data that was used to conduct entrepreneurship resilience and vulnerability analysis and create hotspot maps and socio-economic vulnerability graphs. Such data also provided insights on specific strategies that respond to the needs of female entrepreneurs while bringing awareness about entrepreneurship resilience, vulnerability trends, and possibilities of reducing these vulnerabilities and building entrepreneurship resilience of female entrepreneurs in QwaQwa.

3.6.5. Semi-structured Face-to-face In-depth Interviews

The study used semi-structured face-to-face in-depth interviews to collect data. Belina (2023) highlights that semi-structured in-depth interviews are a technique used to conduct open-ended interviews, within a certain direction and guidelines addressing important issues of the research. The semi-structured in-depth interviews in this study were aimed at generating individual experiences on livelihood strategies and perceptions of entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa. The researcher followed an interview guide (see Appendix E) that has a set of semi-structured open-ended questions. Probing was also applied to get rich and thick data.

Semi-structured in-depth interviews were conducted for three months (December 2022, February 2023, and March 2023) in Makwane, Matsikeng, Bluegumbosch, and Monontsha in QwaQwa. These villages include Makwane, Bluegumbosch, Monontsa, and Matsikeng. During interviews, the researcher first introduced herself and the research topic. This helped in building a conducive welcoming environment for participants (Belina, 2023). Data collected through semi-structured in-depth interviews were stored in a secure password-protected database on the researcher's personal computer.

However, before conducting the semi-structured face-to-face in-depth interviews, the researcher telephonically contacted participants to arrange interview dates, times, and places. About 20 participants were invited to participate in the semi-structured in-depth interviews, and they all agreed to participate. A total of 20 semi-structured face-to-face in-depth interviews were

conducted. Before participating in the study, participants were given an informed consent form to read, understand, and sign (see Appendix C). The informed consent form stated that participation in the study was voluntary. It also stated that participants were going to be audio-tap recorded during interviews as per their consent. Participants were recorded so that the researcher could not forget or lose any information provided by participants during interviews (Belina, 2023). The audio recordings were later transcribed into written notes. All verbatim was noted during data transcribing.

In conducting the semi-structured in-depth interviews, the researcher applied a three-series interview model to each participant (see Figure 21). According to Seidman (2019), a three-series interview model is understood as a phenomenological, in-depth interviewing process that involves conducting three separate series of interviews with each study participant. This model helps to explore the meaning of the participant's lived experiences and allows the researcher and participant to align the experiences and place them in context (Seidman, 2019). In a three-series interview process, the first interview focuses on the participants' lived experiences. The second interview permits participants to reconstruct details of their lived experiences within the context in which they occur. The last interview encourages participants to reflect and reproduce the meaning of their lived experiences (Seidman, 2019).

3.6.5.1. Three Series Interview Model

During the first phase of the interview with each participant in this study, the researcher interviewed the study participants about their background information related to entrepreneurship as well as the previous and current vulnerabilities they are exposed to. During this first interview, the study participants undertook transect walks with the researcher in the vicinity of their entrepreneurship location. The transect walks allowed the participants to share entrepreneurial background information like the type of business they operate, the number of years in that particular business, their educational levels, and age. Participants also shared their historical stories and experiences related to entrepreneurship. For example, historical livelihood strategies, how the land was allocated before apartheid, and livelihood strategies after apartheid and de-industrialisation in QwaQwa. Lastly, participants also identified visible and invisible vulnerabilities that exist in their communities and hinder them from building stronger resilience to

adversities. The study participants together with the researcher walked for about 15 minutes while being interviewed.

During the second phase of the interview, the researcher gathered information about the participants' livelihood strategies as well as their vulnerability and resilience experiences. This interview occurred where participants operated their business, and each interview lasted for about 30 minutes. Participants were also asked to share their entrepreneurial activities and how they operate their businesses. They were also asked to share their perceptions and experiences regarding entrepreneurship resilience and vulnerability reduction in QwaQwa.

In the third and final interview phase, the researcher reflected on the information shared by participants during phase one and phase two. This reflection allowed the researcher to ask probing questions. Participants also reflected on what they had shared previously. The researcher managed to observe and confirm whether participants maintained what they had shared before. Reflection in this case enabled the researcher to establish accuracy in the results and eliminate any biased information. Each interview lasted for about 15 minutes.

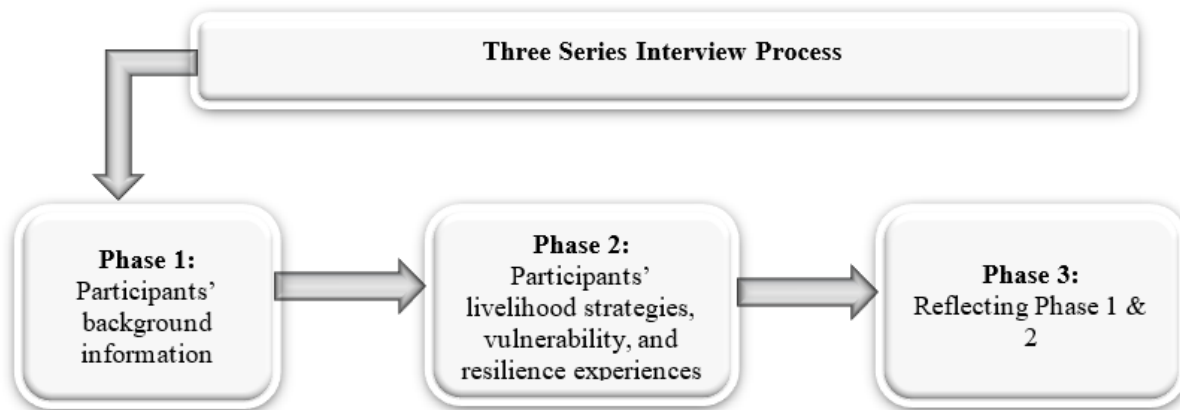


Figure 21: A Three Series Interview Process that was Conducted in this Study (adopted from Seidman, 2019).

It should be noted that all participants went through a three-series interview to strengthen the trustworthiness and credibility of the study findings. In total, each participant was interviewed for about 60 minutes.

This study was inspired to apply semi-structured in-depth interviews by the works of Schultz, Ebewo and Mmako (2024), who also used semi-structured in-depth interviews in their study on

‘the perceived future of female entrepreneurs in South Africa’. These scholars found that semi-structured in-depth interviews help the researcher to understand the participants’ experiences and perspectives about vulnerabilities affecting female entrepreneurs (Schultz et al., 2024).

Several scholars argued that semi-structured in-depth interviews are associated with some challenges (Scanlan, 2020; Adeoye-Olatunde & Olenik, 2021). The language ambiguity when a researcher asks questions during an interview is one of the challenges highlighted by these scholars. Chances are there that some participants may not understand the researcher due to language barriers and lack of understanding and this can lead to the distortion of information (Scanlan, 2020). As viewed by scholars like Adeoye-Olatunde and Olenik (2021), distorted information may lead to bias and irrelevant information. However, other scholars argue that information distortion and bias can be overcome in various ways (Brennen, 2021). For instance, to overcome language ambiguity, interview questions can be asked in both English and the local language easily understood by participants. In this study, the researcher asked questions in English and translated them into Zulu and Sotho as she is fluent in all three languages which are considered local languages in QwaQwa.

3.7. Data Analysis

According to Bazeley (2018), to be considered and acknowledged as trustworthy and dependable, qualitative researchers and scholars must prove that data has been analysed in a consistent, rigorous, exhaustive, and precise manner. This should be done by systematising, recording, and revealing the analysis methods with sufficient detail to allow readers to determine the credibility of the whole research process (Bazeley, 2018). According to Braun et al. (2018), data analysis involves sorting and interpreting data collected through logical and analytical reasoning to determine trends, patterns, and relationships. Data analysis done through systematic methods can be communicated to other people (Bazeley, 2018). Though there are various examples of conducting data analysis in qualitative research, the researcher in this study analysed collected data through thematic analysis in an ATLAS.ti software (version 23).

3.7.1. Thematic Analysis

As defined by Braun et al. (2018), thematic analysis is a way of identifying, analysing, organising, describing, and reporting themes that emerge in a data set. Although thematic analysis has not been properly branded, it has been extensively used and acknowledged in qualitative research (Braun et al., 2018). As argued by the above-cited scholars, thematic analysis should be used as a foundation for analysing qualitative data as it offers core skills necessary for analysing data using other forms of qualitative data analysis. Braun et al. (2018) also provide six phases that are very useful for guiding the process of conducting thematic analysis. These phases are as follows:

- Step 1: Familiarising yourself with data,
- Step 2: Generating initial codes,
- Step 3: Searching for themes,
- Step 4: Reviewing themes,
- Step 5: Defining themes,
- Step 6: Producing a report (Report write-up).

A rigorously conducted thematic analysis produces insightful and trustworthy results (Braun et al., 2018). As stated earlier, this study thematically analysed collected data using ATLAS.ti software. Below is a detailed discussion of ATLAS.ti software and how this software was used during data analysis in this study.

3.7.1.1. ATLAS.ti Software

As described by Soratto, Denise and Susanne (2020), ATLAS.ti is a computerised, qualitative research analysis tool that is used for coding and analysing transcripts and field notes, creating literature reviews, producing network diagrams, and data visualisation. It is mainly used for analysing qualitative data, whereby scholars apply codes to groups of ‘unstructured’ text. Since this analysis software accepts an extensive diversity of data sets, it allows the illustration of qualitative analytical networks between various materials (Soratto et al., 2020). It also saves related codes, memos and comments under one project package. Moreover, it allows the researcher to export data visualisations, reports, and other analyses as well as the entire project file in several formats (Soratto et al., 2020).

Soratto et al. (2020), argued that through ATLAS.ti provides various data analysis options, it is unintuitive for first-time users. However, the latest versions of ATLAS.ti (version 23) is more ‘user-friendly’ than the previous versions. The researcher of this study is not a first-time user, and she has the latest version (version 23) of ATLAS.ti. Thus, the researcher did not encounter challenges when analysing data using this software. The section below provides a brief indication of how thematic analysis was conducted in this study using ATLAS ti software (version 23).

3.7.1.1.1. *Conducting thematic analysis in Atlas.ti software*

In phase one (familiarising with data) of analysing data, qualitative researchers triangulate diverse data collection tools to increase the credibility of the study findings and their interpretations (Nowell et al., 2017). Regardless of the type of data collection tool, filing all records of raw data offers a benchmark and an ‘audit trail’ against which data analysis and interpretations can be later confirmed for appropriateness (Nowell et al., 2017). Braun and Clarke (2019), reveal that if data was collected through collaborating tools, a researcher analyses with some knowledge, analytical thoughts, and interpretations of the data. Braun et al. (2018), highlight that it is significant for researchers to personally immerse data and familiarise themselves with the breadth and depth of the content. Thus, in this study, the researcher sorted the collected qualitative data and saved it as files under documents. Such data consisted of interview transcriptions, notes from FGDs, images from transect walks, life history narratives, and field notes taken during hotspot mapping. Data was saved separately, and each file was given a unique identifier, for example, interview data, FGD data, fieldwork images, life history narratives, transect walks data, and Arc GIS data. All these files were saved under one folder named Fieldwork Raw Data.

The second phase, ‘generating initial codes’, commences once the researcher has read and familiarised with data (Braun & Clarke, 2019). This phase includes the initial creation of codes from data. According to Braun et al. (2018), this is a theorising activity that needs the researcher to keep on revisiting data. Coding is understood as a reflection process and a way of thinking and interacting with data (Soratto et al., 2020). This process permits the researcher to focus and specify specific data characteristics. It also allows the researcher to shift from ‘unstructured’ data to the creation of ideas and interpretations of data (Nowell et al., 2017). During the coding process, the researcher in this study identified vital text sections and assigned labels to file them as they are related to themes in the data.

The third phase (searching for themes) starts when all data has been ‘initially coded and collated’ and a list of identified various codes has been created (Nowell et al., 2017). According to Braun and Clarke (2019), this phase includes arranging and organising all possibly valid coded data ‘extracts’ into key themes. During this phase, initial codes develop into key themes, and subthemes also emerge. Braun and Clarke (2019), indicate that codes that do not fit anywhere also emerge in this phase and these are called miscellaneous themes.

Braun and Clarke (2019), state that the fourth phase called ‘reviewing themes’, starts once different themes have been developed and are only left with refinement. During phase four, the researcher reviews the coded data ‘extracts’ for each theme to determine whether these themes form a clear pattern. The validity of each theme determines whether all themes truly reflect the meaning evident in the entire data set (Braun & Clarke, 2019). All shortfalls in initial coding and developed themes are exposed and may need several changes (Nowell et al., 2017). During this phase, the researcher in this study followed all provided procedures and reviewed the ‘coded data extracts’ for each subtheme to check or determine if there was an apparent coherent pattern.

Nowell et al. (2017), state that during phase five (defining and naming themes), the researcher determines what data aspect is captured by each theme and identifies any interests about them. Braun and Clarke (2019), indicate that for each theme, the researcher needs to conduct and produce a comprehensive analysis and write a story told by each theme. Braun and Clarke (2019), suggest that names assigned to themes need to be brief, and directly provide the reader with a logic of what each theme is all about. Multiple themes may contain data sections with some overlapping between the themes (Denscombe, 2014). Braun and Clarke (2019), highlight that during this phase, the researcher may need to determine how each theme belongs to the general story of the whole data set related to the research questions. In this study, during this phase, a detailed analysis for each theme was written and this showed how the developed themes connect to the research aim, objectives, and questions. Figure 22 shows how a thematic analysis was conducted through ATLAS.ti in this study. Furthermore, it shows how data was coded, and how themes were developed.

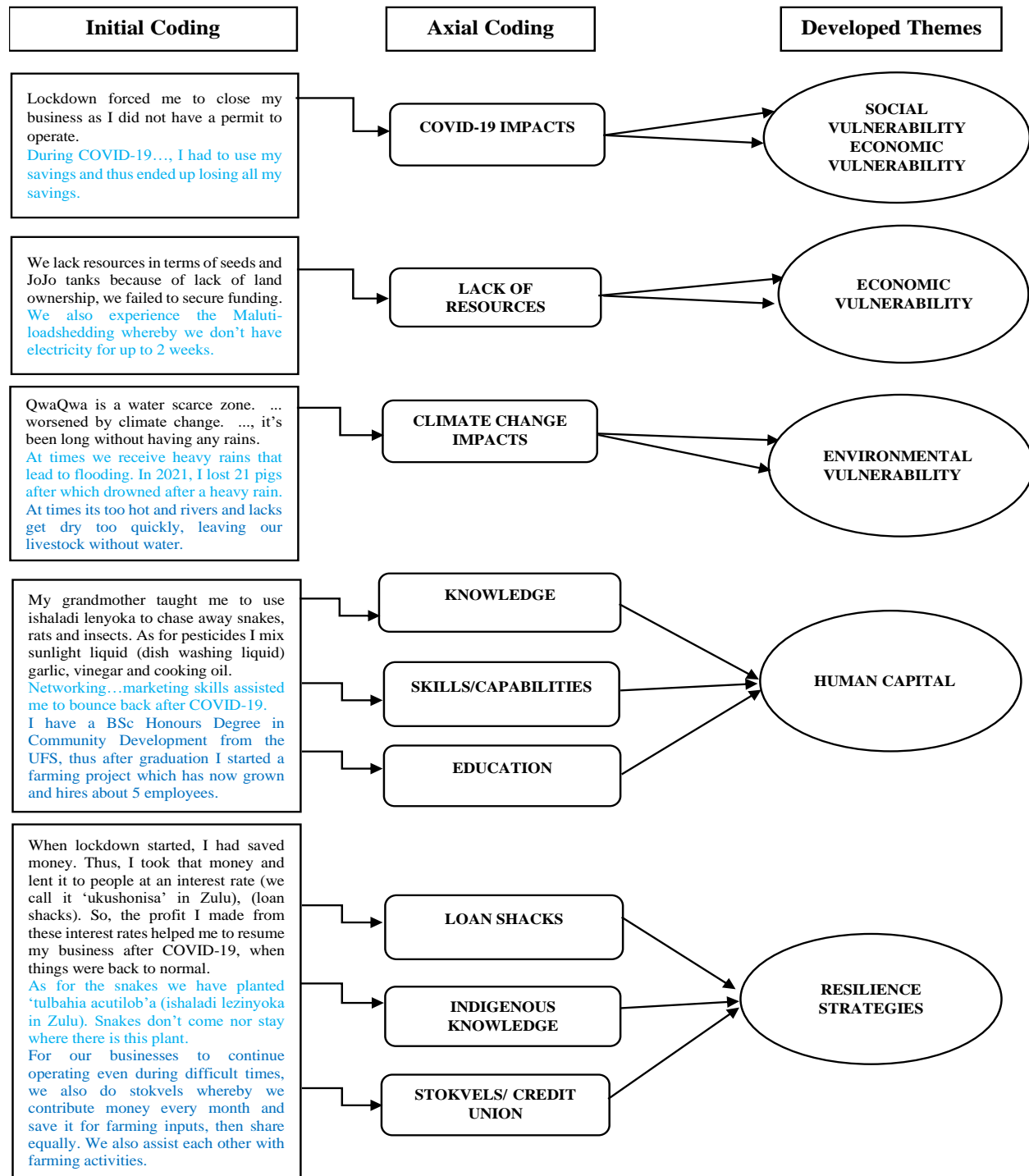


Figure 22: Thematic Analysis Conducted Through ATLAS.ti in this Study (Researcher's work).

The last phase starts after the researcher has established the different themes fully and is ready to conduct the ultimate analysis and report write-up (Nowell et al., 2017). According to Braun and Clarke (2019), a 'write-up' of a thematic analysis report must provide a brief, logical, coherent,

interesting, and nonrepetitive data account across and within themes. Roberts, Dowell, and Nie (2019) suggest that direct participants' quotes are a crucial element of the final analysis report. Short quotations may be used to aid understanding of specific interpretation points and demonstrate the prevalence of themes (Nowell et al., 2017).

Researchers are encouraged by Roberts et al. (2019) to communicate clearly and logically the processes by which results were developed to establish the credibility and authenticity of the study findings. Regarding this, Figure 22 shows that the primary open coding process was conducted till code saturation was reached. During this stage, the researcher identified and created codes from both interview and focus group discussion transcriptions. The codes were developed from participants' direct quotes and then later a comparison between the developed codes was done. This process of comparing codes led the researcher to conduct several iterations until she reached a total of 40 iterated inductive codes. During the coding stage, the researcher identified similar codes from the primary inductive codes and merged them. A total of 15 axial or related codes were developed. The developed codes were reviewed and from these codes, major patterns emerged. The patterns were thoroughly reviewed to check the relationships between patterns. The researcher discarded patterns that did not have consensus in interpretation. It should be noted that Figure 22 does not include all 40 iterated inductive codes and 15 axial codes. Only, a few have been selected to show how codes and themes were developed.

The final stage of the thematic analysis involved developing themes from the related patterns. During this stage, the researcher identified and created major themes that were in alignment with the study objectives. A total of four major themes were developed. These include livelihood strategies, vulnerabilities encountered by female entrepreneurs, vulnerability reduction, and entrepreneurship resilience strategies. There are also sub-themes which were created from the major themes. Some of the sub-themes were also developed for a vulnerability reduction and entrepreneurship resilience model presented in Section 6.5.1. However, it should be noted that it was necessary for the researcher to triangulate data sources as this corroborated data and provided a higher level of credibility and trustworthiness of the study findings.

3.7.2. *Entrepreneurship Resilience and Vulnerability Hotspots Analysis.*

Table 5 presents the Applications and software that were used to collect coordinates, and the software used to create and analyse entrepreneurship hotspot maps in QwaQwa.

Table 5: Tools and Software Used in Collection of Coordinates and Creation of Maps.

Application	Software	Function
Global Positioning System (GPS) Status		A satellite navigation system, that provides users with accurate position and time information. It calculates the location (latitude, longitude, height) of a place. GPS is thus a significant Application for telling a mobile device its current location (El-Naggar, 2011)
Open Data Kit (ODK)		Collects data using an Android mobile device and submits data to an online server (Bokonda, Ouazzani-Touhami & Souissi, 2020a).
Organisational Network Analysis (ONA) Data		This is a mobile data collection application designed for fieldwork. It is ODK-based, meaning that it is integrated with the ODK toolkit (Ebelle-Ebanda & Trustsphere, 2018).
	ArcMap 10.7.1	Application for creation and edition of datasets and maps

3.7.2.1. Global Positioning System (GPS) Status

As defined by El-Naggar (2011), a GPS (Global Positioning System) is a satellite-based navigation tool that allows devices to pinpoint people’s precise location anywhere on the globe and at any time. Furthermore, El-Naggar (2011) states that the operation system of a GPS Status entails the measurement of signals and data transmitted from the satellite to the GPS Status receiver. Essentially, there are two signal types, and these are the ‘coarse/acquisition’ (C/A) as well as the ‘precession’ (P) codes (El-Naggar, 2011). Technically, these codes provide information on the time of signal transmission and the satellite's location. Once the GPS receives these

coarse/acquisition and precession data from the satellites, it immediately processes it to acquire the location of its user (El-Naggar., 2011). As stated previously, the researcher in this study collected the participants' business locations (coordinates) using a GPS Status installed in her mobile cellphone. After collecting the coordinates, the researcher incorporated the coordinates into the Open Data Kit (ODK), also installed on her mobile cellphone.

3.7.2.2. Open Data Kit (ODK)

As described by Bokonda et al. (2020), an ODK is an open-source software application for collecting data, developed by the University of Washington. Furthermore, these scholars indicate that an ODK works together with GPS Status and ArcMap software when creating and analysing the GIS hotspot maps (Bokonda et al., 2020b). In this study, the researcher gathered data from the four villages using ODK. The data was collected through built-in 'webforms'. Collected data included images confirming the livelihood strategies of female entrepreneurs in QwaQwa as well as the physical or environmental vulnerabilities they are exposed to. This data was then transferred to an ONA data where it was saved under a unique project on the ONA dashboard.

The project created contained all the authored data forms and project collaborators like project description, location, and category. The researcher also authored forms which were then automatically converted to an Excel survey into an Excel XLS form. After that, the researcher uploaded the XLS Form to a project in her Ona account to make it available for download and interpolation into ArcMap.

3.7.2.3. Organisational Network Analysis (ONA) Data

According to Ebelle-Ebanda and Trustsphere (2018), an ONA Data is a mobile software application for collecting data, designed to work with ODK software. ONA data is a software used by researchers globally in data collection or fieldwork projects (Ebelle-Ebanda & Trustsphere, 2018). In addition, ONA data allows users to author or create forms that capture GPS and ODK data (Ebelle-Ebanda & Trustsphere, 2018). Figure 23 indicates how the processes of an ONA data is conducted



Figure 23: Illustration of ONA Data (ONA Data, 2020).

In order to use ONA in this study, the researcher first created an account and signed in. After signing in, the researcher created a project, and uploaded forms and data transferred through ODK (see Figure 3.5 & Figure 3.6). After creating the forms on ONA data, the researcher downloaded the Excel forms containing collected information, that is coordinates, images, and vulnerabilities encountered by female entrepreneurs in the four villages that were involved in this study. The downloaded forms were then interpolated into ArcMap GIS for hotspot analysis and the creation of hotspot maps.

3.7.2.4. ArcMap GIS

Scholars like Mechler and Bouwer (2014) define ArcMap GIS as an application for creating and editing datasets and maps. It can also be used to assess spatial vulnerability. For example, ArcMap GIS can be used to assess spatial vulnerability and understand vulnerability patterns and climate change risk at multiple scales (Turco et al., 2015). In this study, the study participants indicated that they are vulnerable to the impacts of climate change. Thus, ArcMap GIS was used to perform a spatial vulnerability analysis and create vulnerability hotspot maps for female entrepreneurs in QwaQwa.

GIS hotspot mapping was useful in this study because it allowed the researcher to differentiate vulnerability variability and extremes, sensitivity to vulnerabilities, and entrepreneurship resilience capacities (Turco et al., 2015). Typically, the assessment of spatial vulnerability encompasses data integration in which ‘geo-referenced biophysical and socio-economic data collected through GPS Status, ODK, and ONA Data, were combined with climate change data collected through interviews and FGDs to understand vulnerability patterns and, in turn, advise where entrepreneurship resilience is required. ArcMap GIS has also been adopted as a useful tool in this study because according to Preston et al. (2011), maps have proven to be convenient boundary objects in providing a universal discussion basis and for discussions over adaptation and resilience deliberations. Detailed information about how entrepreneurship hotspot maps were created and analysed is provided in the next chapter in Section 4.7.

3.8. Establishing Trustworthiness of the Study Findings

As highlighted by Yin (2018), it is vital that research is recognised as familiar and, understood as authentic by other researchers, policymakers, practitioners as well as the public. Thus, trustworthiness is the only way researchers in a qualitative study can convince themselves and the readers that their study findings are worthy of their attention (Morse, 2018). Furthermore, Morse (2018), refined trustworthiness by introducing the standards of “credibility, transferability, dependability, and confirmability”, to correspond to the ‘conventional’ quantitative evaluation standards of “validity and reliability”. This study adopted the original, extensively acknowledged, and accepted standards to establish the trustworthiness of the study findings. These standards are briefly explained below in their respective order.

3.8.1. Credibility

Credibility essentially requires researchers to link the study’s findings clearly with reality to establish the trustworthiness of the research findings (Morse, 2018). Credibility as indicated by Gill et al. (2018), has the most practices for establishing trustworthiness. These include prolonged engagement with participants, determined observation, and triangulation. According to Nowell et al. (2017), triangulation includes applying multiple data collection methods, theories, and sources to gain a comprehensive understanding of the phenomenon under investigation. In this case, a participatory approach which allowed the use of multiple data collection tools was used. A multi-

theoretical framework was also adopted to understand the multidimensional vulnerabilities of female entrepreneurs in QwaQwa as well as their vulnerability reduction and entrepreneurship resilience experiences and capacity. Adopting a participatory approach and triangulation of data collection tools and theories enabled the researcher to produce rich, comprehensive, well-developed, and robust findings. The collected data was analysed rigorously and thematically through ATLAS.ti software. According to Gill et al. (2018), credibility can be operationalised through member checking to assess the study findings and interpretations together with the study participants. This process allows participants to explain their intentions, correct mistakes, and provide any additional data relevant to the study.

3.8.2. Transferability

Transferability is the extent to which the study findings can be applied or transferred beyond the project boundaries (Gill et al., 2018). Transferability suggests that the study findings can apply to other individuals or similar circumstances. Transferability, unlike ‘generalisability’, excludes extensive claims or generalisations, but allows research readers to create relations between research elements and their personal experiences (Gill et al., 2018). According to Korstjens and Moser (2018), it is the responsibility of the researcher to provide thick and rich descriptions so that readers can transfer the research results and judge the transferability. Thus, in this study, the researcher managed to create relations between participants and their personal experiences concerning the vulnerabilities they have been exposed to and how their livelihood strategies were affected by the identified vulnerabilities. The researcher also provided thick and rich descriptions that make the study findings to be easily transferred by any reader.

3.8.3. Dependability

As stipulated Korstjens and Moser (2018), to establish dependability, the researcher must ensure that there is logic in the entire research process and that all documents are recorded and traceable. Dependability is understood as the ‘consistency and reliability’ of the study results and the extent to which all research processes are documented, permitting readers to trace, critique, and audit the study process (Korstjens & Moser, 2018). When readers can assess the research procedure, it means they can judge the dependability of the study. To satisfy this, all interviews and FGDs were recorded and saved in a password-protected device. Additionally, in Figure 1 of Section 1.10, the

researcher presented a roadmap of the entire study showing all the necessary steps and activities that were done.

3.8.4. Confirmability

According to Gill et al. (2018), confirmability consists of the degree of confidence that the study results are grounded on the participants' perceptions and narratives rather than the researcher's biases. Furthermore, these scholars indicate that confirmability means the level to which the study results could be corroborated or confirmed by readers or other people (Gill et al., 2018). As the last standard of trustworthiness in a qualitative study, confirmability is achieved after all the trustworthiness criteria have been established. The various methods for establishing confirmability include documenting all procedures to check and recheck data during the whole study (Korstjens & Moser, 2018). All necessary documents like the ethical clearance approval, interview, FGD guides, explanatory statement, and informed consent form are presented under the appendices of this dissertation. Data transcriptions, recorded interviews, and FGDs have been shared with the research supervisor before being stored in a password-protected device only accessible to the researcher.

3.9. Ethical Considerations

Ethics in research include informed consent, voluntary participation, avoiding harm, and dealing with participants' confidentiality and respect for the study participants (Du Plooy-Cilliers et al., 2014). In this study, the researcher applied for ethics approval from the UFS General/Human Research Ethics Committee through the Research Information Management System (RIMS) in June 2022. The ethics approval was granted in October 2023, Thus, the researcher collected data after obtaining an Ethics Clearance Certificate from the UFS General/Human Research Ethics Committee (See Appendix A). The section below presents the ethical issues that were considered in this study.

3.9.1. Voluntary Participation and Informed Consent

In research, voluntary participation entails that the study participants can participate voluntarily without being coerced or forced (Arifin, 2018). In this study, the participants were informed that they had a right to withdraw their participation from the study at any time without feeling pressured

to continue. They were also told that their participation was voluntary and that they needed to sign an informed consent form. After offering their voluntary participation, the study participants were provided with an informed consent form to sign before any data collection process (see Appendix C). The informed consent form highlighted the purpose of the study, how information was going to be gathered from them, and all the procedures that were involved during the process of data collection (Denzin & Lincoln, 2017). It also informed them that they were audio-recorded during interviews. Participants were also informed about their withdrawal from the study in case they felt uncomfortable. In addition to an informed consent form, participants were also given an explanatory statement illustrating a brief background about the study (see Appendix B).

The literature points out that negotiations for access and consent are a continuous ethical behavior in which the researcher has to earn collaboration from gatekeepers including traditional leaders and the research participants themselves before collecting any data (Kara, 2016). Thus, on behalf of the QwaQwa community, permission to conduct research in QwaQwa was granted by Mr Mongezi Malaoane, who is a Ward 31 councilor (See Appendix G). Further approval was granted by the Director of Local Economic Development Tourism, SMME, Agriculture and Rural Development in Maluti-A-Phofung Municipality (See Appendix H). The researcher was sensitive to the possibility of multiple community gatekeepers and thus she constantly engaged with various stage-related negotiations for access as the research progressed.

3.9.2. Confidentiality and Anonymity

Confidentiality in research is an obligation of the researcher to prevent unauthorised access to participants' data (Pietilä et al., 2020). It encompasses protecting participants' data from disclosure to any unauthorised individual or people. In this study, no one else besides the researcher and the research supervisor had access to data collected from the study participants. Anonymity as stated by Arifin (2018) means that the researcher does not collect any information that links the participants to their data. In this study, to guarantee anonymity, the researcher did not collect participants' names, phone numbers, home addresses, email addresses, videos, or photos revealing the identity of participants. Instead, the researcher used pseudo-names like Participant A, B, or C to identify participants.

In order to respect participants and protect the data collected from them, the researcher implemented tight data security measures for the storage and handling of data. Such measures included encryption and password-protected device. Participants' recorded data was transferred from the audio recorder to the researcher's encrypted and password-protected device. The audio recorder containing the participants' recorded interviews was formatted after the transfer of data.

The Protection of Personal Information Act (POPIA), which came into effect on the 1st of July 2021 has serious implications for all research activities that encompass the collection, processing, and storage of personal information (Adams et al., 2021). POPIA Act provides specific requirements for the protection of personal information considered 'high risk'. Though this study is considered a 'low risk' study, the researcher here views risk as any threats to the rights of participants, including but not limited to participants' right to privacy and confidentiality. Some of these privacy-related risks include participant identification and unconsented identification of participants. At the onset of the study, the researcher explained to participants the terms of the informed consent form and POPIA code of conduct for public universities in South Africa as developed by the Universities South Africa (see www.usaf.ac.za and Appendix D). As part of this code of conduct, the personal information of participants (that is contact details and any other information that can be used to identify a person) was not shared with anyone. In addition to protecting the personal information of participants, the researcher did not film or take photographs of participants showing their faces or any features that can make them easily identifiable. The researcher obtained full consent from participants to use some of their entrepreneurial images (the products they sell).

3.9.3. Potential for Harm or Risk

When conducting research with humans, there is a need for a researcher to consider all potential sources of harm or risk to participants (Arifin, 2018). The researcher in this study considered all the various forms of harm which include psychological or emotional harm, social harm, physical harm, and legal harm (Pietilä et al., 2020). To avoid causing any of these various forms of harm to the participants, the researcher in this study did not ask sensitive questions that could trigger harmful emotions like anxiety or shame to the participants. Furthermore, the researcher respected all participants and did not embarrass or stigmatise the study participants. Throughout the study

process, no participant was injured. The researcher did not report any sensitive data that could lead to a breach of participants' privacy or any legal risks.

This study was conducted when COVID-19 regulations were still active. Thus, during fieldwork, the researcher in this study adhered to all COVID-19 regulations. Regulations like wearing a mask, sanitizing hands, and maintaining social distancing were observed always when interacting with the study participants. The researcher also produced her COVID-19 vaccination certificate (See Appendix I) to the participants so that they could feel comfortable during interviews and focus group discussions.

3.10. Conclusion

This qualitative study explored entrepreneurship resilience, vulnerability reduction, and livelihood strategies of female entrepreneurs in QwaQwa. This study explored the livelihood experiences of female entrepreneurs through interviews, focus group discussions, transect walks, life history narratives, and observations. It also explored the vulnerabilities and vulnerability hotspots in QwaQwa through ArcMap GIS. The chapter also presented how collected data was thematically analysed through ATLAS.ti software. Moreover, it presented a discussion of the study area and the vulnerability hotspot maps that were created through Arc GIS. This chapter also discussed how trustworthiness was established in this study. The next chapter presents the findings of this study.

CHAPTER FOUR: FINDINGS

4.1. Introduction

This chapter presents the findings of this study as set in the study objectives. This study aimed to explore entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane, focusing more on analysing the livelihood strategies of female entrepreneurs in QwaQwa. The findings presented in this chapter are aligned with the study objectives presented below:

- To explore the livelihood strategies of female entrepreneurs in QwaQwa.
- To identify the vulnerabilities encountered by female entrepreneurs in QwaQwa.
- To investigate the vulnerability reduction and entrepreneurship resilience strategies of female entrepreneurs in QwaQwa
- To identify and map entrepreneurship hotspots for female entrepreneurs in QwaQwa.
- To develop a vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa.

However, before presenting the study findings, the following section presents findings on the study site, the background of the study participants, and their entrepreneurship livelihood strategies. Below is a brief description of the study site.

4.2. Description of the Study Site

Data was collected in four villages of QwaQwa, which are Makwane, Matsikeng, Bluegumbosch, and Monontsha. The study participants through life history narratives confirmed that QwaQwa is a former homeland of the BaSotho people (Southern Sotho) located in the eastern part of the Free State province of South Africa, bordering Lesotho. The participants said that QwaQwa, which means 'whiter than white', was named by the San after the frequent snow on the peaks of the Drakensberg Mountain. According to the study participants, previously, QwaQwa was known as 'Witsieshoek and Basuto-Baborwa' and it was occupied by the Bakwena in 1867 and the Batlokwa in 1873. The following sections present the study findings about on the topography and socio-economic status of QwaQwa and how they shape the livelihood strategies operated by female entrepreneurs in this study region.

4.2.1. Topography

QwaQwa has a mountainous landscape, high population, and livestock density. As articulated by the study participants, only a small portion of land in QwaQwa is available for agriculture or farming activities. Most of the land is either allocated for human or village settlements or its steep mountainous topography (see Figure 24).



Figure 24: Topography of QwaQwa (Fieldwork Images, 2023).

4.2.2. Socio-economic Status of QwaQwa

Given the poor socio-economic standards of QwaQwa as an African mountain community, this study found that the majority of the employed population provides semi-skilled labour within the informal sector. However, due to unemployment, many people are living in poverty. Thus, most people, particularly women, have resorted to informal entrepreneurship to alleviate poverty and sustain their livelihoods. The female entrepreneurs who participated in this study are regarded as necessity-driven entrepreneurs who resorted to entrepreneurship to alleviate poverty and empower themselves and the few people around them by providing informal job opportunities. When asked about what motivated them to engage in entrepreneurship, some of the study participants said:

“I started this business to change my situation and the situation at home.....I needed something that assisted me to put food on the table, pay schools for my children, and take of them”

(Participant G).

“I failed to find to secure a job soon after graduating. Thus, I had to start this farming project together and recruit my project members so that we could at least generate income, hire my community members, and assist them in earning a living” (Participant S).

Figure 4.2 presents a map of QwaQwa, showing all four villages where data was collected.

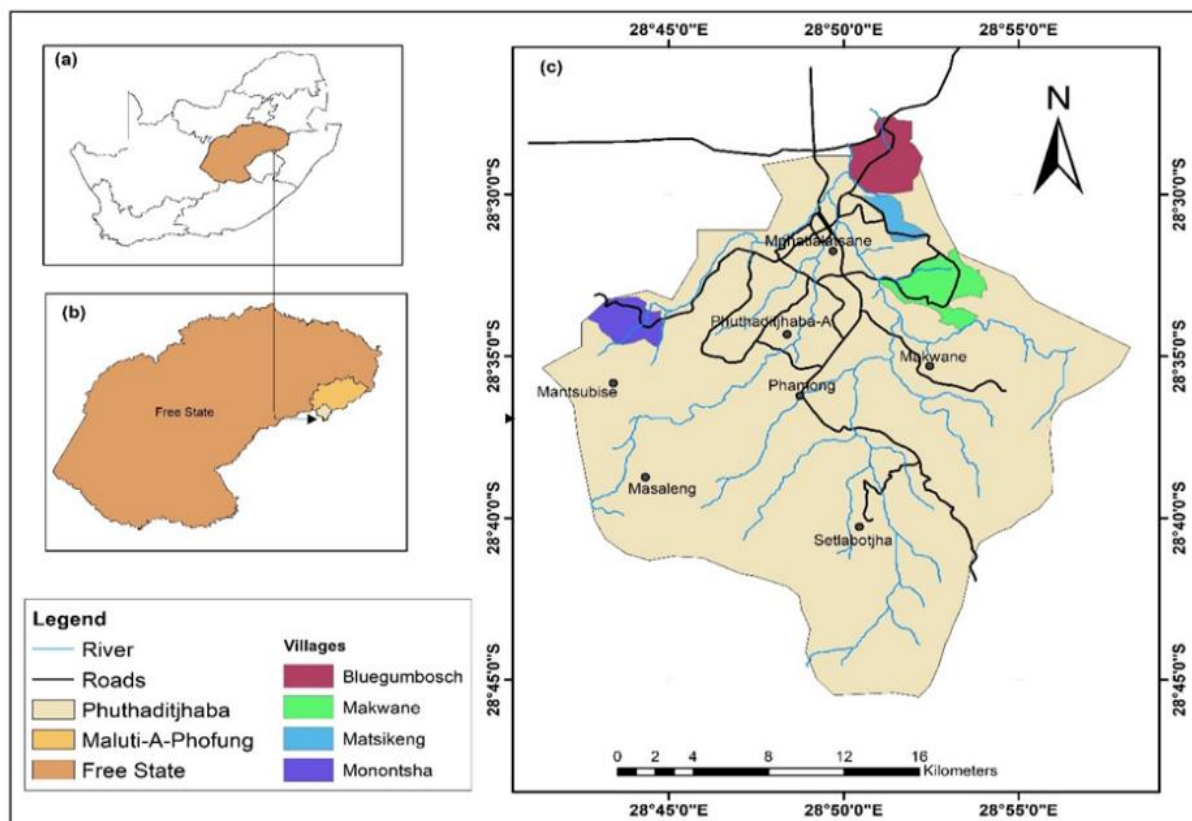


Figure 25: Map of QwaQwa Showing the Four Villages where the Study was Conducted (Researcher’s work, 2023).

As indicated in the map above, Bluegumbosch is presented in Maroon, Makwane in Green, Matsikeng in Cyan, and Monontsha in Indigo. These villages all fall under Maluti-A-Phofung municipality, and their nearest town is Phuthaditjhaba.

4.3. Background of the female entrepreneurs in QwaQwa

Data on the background of the study participants was collected through semi-structured face-to-face in-depth interviews. Table 6 provides detailed information about the study participants’ location, livelihood strategies, age, and highest level of education.

Table 6: Demographic Profile of the Study Participants.

Location	Livelihood Strategy	Age	Highest Level of Education
Makwane			
Participant A	Farmer (selling chickens (poultry) and jam)	26	National Diploma in Tourism
Participant B	Tailor and Selling Firewood	67	Standard 6
Participant G	Early Childhood Development (ECD) Owner	49	Higher Certificate in Hospitality (L4) and Level 1 First Aid certificate
Participant I	Hairdresser	28	National Diploma in Marketing
Participant J	Farmer (Poultry Keeping)	38	Matric
Participant K	Farmer (Poultry Keeping)	38	Matric
Participant H	Tailor	40	Matric
Monontsha			
Participant F	After Care and Farmer	46	National Higher Certificate in Public Management in Radio (N5) and a National Diploma in ECD (N6 ECD)
Participant R	Farmer (Crops & Vegetables)	37	Bachelor of Social Science (BSc)
Participant S	Farmer (Crops & Vegetables)	23	BSc Honours Degree
Participant U	Farmer (Livestock)	49	Standard 9
Participant V	Farmer (Poultry)	37	Matric
Participant W	Farmer (Beans)	40	Grade 10
Participant X	Farmer (Beans & Potatoes)	40	Matric
Participant Y	Farmer (Poultry Keeping)	41	Matric
Participant Z	Farmer (Piggery, vegetables & crops)	51	Standard 8
Participant Z2	Farmer & Hairdresser	30	National Higher Certificate
Matsikeng			
Participant E	Street Vendor & Mobile Kitchen	50	Standard 9
Participant L	Meat Dealer	28	Bachelor of Arts (BA) Degree
Participant M	After Care & Mobile Kitchen	45	Matric
Bluegumbosch			
Participant C	Tuck-shop and Poultry	31	Matric
Participant D	Farmer	35	Basic Ambulance Attendant (BAA) Paramedic and Structural Fire Fighting Occupational Health and Safety Certificate.
Participant N	Farmer	58	Matric
Participant O	Boutique	30	Higher Education in Certificate
Participant P	Street Vendor	51	Standard 6

Participant Q	Street Vendor	50	Standard 9
Participant T	Farmer and Recycler	53	Standard 8

The findings presented in Table 6 indicate that female entrepreneurs in QwaQwa enter entrepreneurship at a later age. Regarding the age group of the study participants who are involved in entrepreneurship, the majority of the female entrepreneurs are in their 50s. This needs to be investigated further and find the push factors of necessity-driven female entrepreneurship in marginalised Afromontane regions. The lowest age group of female entrepreneurs in this study ranges between 23 and 30. Female entrepreneurs within this age group as indicated in Table 6 have either a Bachelors’ Degree or a Higher Certificate. Figure 26 presents the findings on the study participants’ highest education levels.

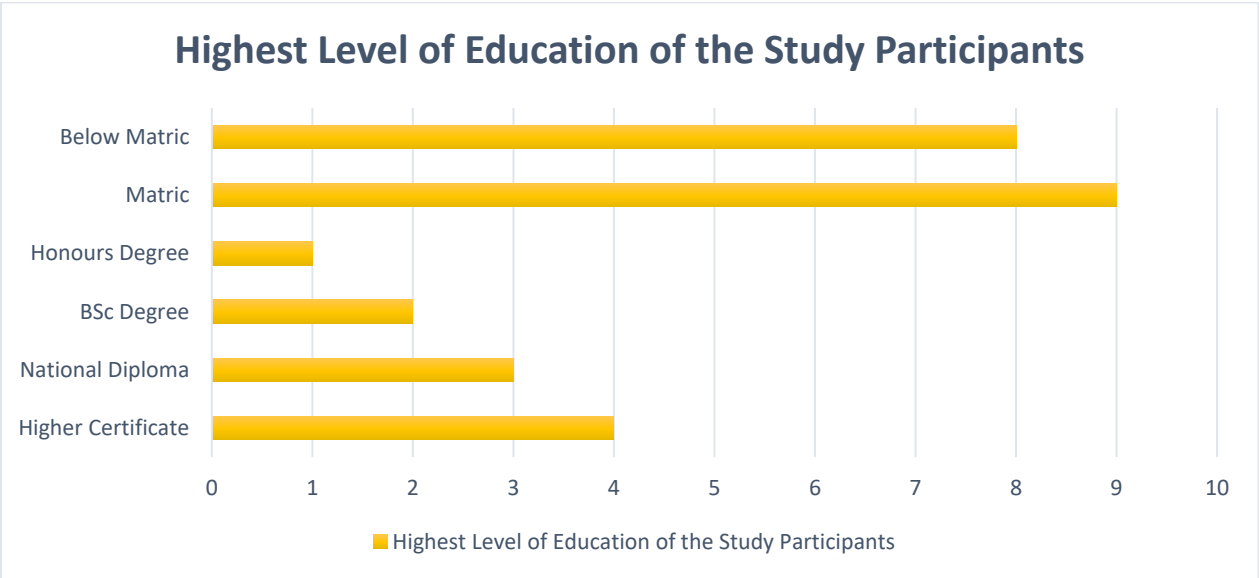


Figure 26: Highest Level of Education of the Study Participants (Researcher’s Findings).

As presented in Figure 26, only one female entrepreneur who participated in this study possesses a Bachelor of Social Science (BSc) Honours Degree, followed by two participants who hold Bachelors Degrees. Three of the study participants hold National Diplomas. The other four participants hold Higher Education Certificates. About nine of the study participants have Matric Certificates. Lastly, eight of the study participants do not have formal education and hence do not have Matric Certificates. The data presented in Figure 4.3 confirms the assertions made by various scholars (Fairlie & Fossen, 2019; Muyambo et al., 2024; Nikiforou et al., 2019) in Section 1.2 that unemployment is one of the push factors of necessity-driven entrepreneurship. As found by this

study, due to unemployment, most women in QwaQwa have resorted to entrepreneurship in order to generate income, alleviate poverty, and improve their livelihoods. Moreover, as indicated by the ADB (2017) in Section 2.2.6, lack of education affects the livelihoods of most female entrepreneurs in marginalised regions. This also contributes to the lack of skills that are required in the job sector. Thus, without the necessary skills, most people who are uneducated end up starting their businesses to survive and sustain their livelihoods. This is confirmed by Figure 26 which shows that eight female entrepreneurs who do not have formal education. Most people struggle to find employment soon after completing their Matric studies and thus end up starting their own. The findings presented in Figure 26 indicate a need for research on the nexus between education, unemployment, and entrepreneurship in QwaQwa. Given the findings highlighted in Figure 4, this study found that the nature of the livelihood strategies operated by the female entrepreneurs in QwaQwa is also shaped by their level of education. The next section presents findings on the livelihood strategies of female entrepreneurs in QwaQwa.

4.4. Livelihood Strategies of Female Entrepreneurs in QwaQwa

According to the study participants and supported by the World Bank (2022), traditionally and culturally, the Basotho are not agriculturists. They rely mostly on livestock farming, which also forms a fundamental part of their religious and cultural ceremonies. However, given the rapid increase in population, shortage of resources and grazing land as well as the impacts of climate change, the Basotho now engage in entrepreneurship to sustain their livelihoods. During their life history narratives, the study participants revealed that historically most of the Basotho people were involved in farming livelihood strategies whereby they farm crops like maize, potatoes, and green beans as well as vegetables like cabbages, spinach, tomatoes, beetroot, onion and green pepper. they also rear livestock like sheep, pigs, cattle, and chickens (poultry). Thus, in today's life, most of the Basotho entrepreneurs in QwaQwa engage in the same livelihood strategies. The participants confirmed that poverty pushes most women in QwaQwa into entrepreneurship. As per the findings of this study, the common entrepreneurship livelihood strategies of female entrepreneurs include farming, street trading (street vendors), operating daycare centers, mobile kitchens, tuck shops or spaza shops, salons, and boutiques (tailoring). The section below provides a brief presentation of the livelihood strategies operated by female entrepreneurs in QwaQwa.

4.4.1. Tuck Shop (Spaza Shop)

A tuck shop, popularly known as a spaza-shop in South Africa are home-based small retail shops that sell essential goods like groceries, stationery, and cigarettes (Mukwarami, 2017). According to this scholar, tuck shops or spaza shops are commonly found in informal settlements in the backyard. In addition to this, most of the tuck shop owners encounter various vulnerabilities that limit their ability to be successful and profitable (Mukwarami, 2017). In this study, Participant C who operates a tuck-shop in Bluegumbosch (see Figure 27), highlighted that she got funding for a start-up from her family, and also used the Child Social Grant for her two children to establish this business. Furthermore, she indicated that she bakes fat cooks also called 'amagwinya' in Zulu and 'magwenya' in Sotho. She sells these fat cooks together with slices of polonies and atchar. Participant C highlighted some challenges that affect her livelihood strategy. One of these challenges is the lack of electricity caused by either the national load-shedding or Maluti-load-shedding. She explained how the lack of electricity affects her business and said:

“One of the major challenges I am facing is electricity. Due to load-shedding, I find it very difficult to bake my fat cooks. Gas is very expensive as well to use when there is no electricity”.

Besides the issue of electricity, Participant C also highlighted a lack of business registration as a challenge that affects her livelihood strategy. She mentioned that the majority of tuck shops in the villages of QwaQwa are not registered, and hence they operate without trading licenses. As a result, they fail to make a profit and save money that can be used in the future when faced with problems. In view of this, she said:

“If not all of them, most of our spaza shops here are not registered...As you can see, I am operating from my home and obviously, there is no profit. I don't have trading licenses and because of that ..mmmh my sister!!! I struggle to access resources like funding!!

Figure 27 below shows a tuck shop operated by Participant C. It should be noted that the researcher was given consent by Participant C to capture this image as additional data.



Figure 27: Participant C's Tuck shop (Fieldwork Images, 2023).

4.4.2. Mobile Kitchen

As indicated in Table 6, two of the study participants operate mobile kitchens. They prepare traditional food and sell it to people within the community. Participant E who is one of the mobile kitchen owners is also a street vendor. She operates her mobile kitchen and street vendor enterprises along the main road in Matsikeng. Some of the food that she sells include fat cooks, fried fish, and beef stew served with rice and pap (a stiff porridge made from maize meal).

“I sell fish, traditional food like likahare (tripe) papa le meroho le nama (pap, spinach, and meat), magwinya (fat cooks), fruits, drinks, and snacks along the main road near Nelson Mandela Park shopping center. Before COVID-19, I had 2 employees and was making more profit” (Participant E).

The other mobile kitchen owner is also from Matsikeng. However, this one operates her mobile kitchen at her home, where she also runs a daycare center. According to this participant, she also feeds orphans for free. This participant further elaborated that she uses the money that she generates from the daycare center to buy groceries for her mobile kitchen. She mentioned that the motive behind the establishment of a daycare center was to help children between the ages of 10 to 18, to stay away from drug abuse and other forms of violence that are prevalent in Matsikeng.

“I run a Childcare Level 4 center which accommodates school children from Grade 1 to Grade 12. I also own a soup kitchen where I feed orphans for free. The money I get from the Childcare

center helps me to meet kitchen soup needs. I also do farming on the side and plant spinach, cabbage, potatoes, and green beans. The reason I started this Childcare, sort of an After Care program, was to help these children stay out of drug abuse and other forms of violence that are happening in our community and destroying our children's future” (Participant M).

Both participants also complained about the issue of lack of electricity as a major setback to their livelihood strategies. Regarding this, these participants said:

“Eish electricity mo QwaQwa is a huge problem ngwanesu, ..ehh!!! For someone like me who relies on selling food, it's affecting me a lot..... At times we spend days or even weeks without electricity in QwaQwa. Haa!! just imagine going for days without electricity!!.. It means I cannot cook, the food in the fridge also goes bad....I always encounter losses when there is no electricity” (Participant E).

“In winter mostly, we don't have electricity in QwaQwa and if there is no electricity pupils at the daycare center cannot study till late. Some do not even come and because I charge them for aftercare as well, I lose money. Also in the soup kitchen, it becomes a problem to cook when there is no electricity. I tend to lose customers due to the issue of electricity” (Participant M).

Besides the issue of electricity, both participants E and M also mentioned the issue of water scarcity as one of the vulnerabilities they are exposed to. Concerning water scarcity, these participants indicated that sometimes they spend more than two weeks without piped water. In explanation, they said:

“Even water is a challenge. We don't have water in most cases. At times our taps are dry for a week or two weeks. Just like electricity, water scarcity affects both childcare and soup kitchen. If there is no water, then it means I cannot cook. For the sake of the hygiene of the pupils, the daycare center does not operate when there is no water for a week or more” (Participant M).

“In QwaQwa, at times there is no water for two good weeks... I don't know if it's the pipes or the engine that pumps water that has a fault. But what I can say is..ehh!! without water we cannot do anything at all, I cannot sell fruits because they need to be washed first. Also cooking needs clean water, hence I close the kitchen when there is no water and this affects my business” (Participant E).

4.4.3. Tailor and Boutiques

This study found that about three female entrepreneurs who participated in this research are involved in tailor or boutique livelihood strategies. One of the participants mentioned that she originates from Lesotho and came to South Africa to look for greener pastures. However, due to unemployment in South Africa, she had to use her skills and talent to generate income through operating a tailoring business (see quote below).

“I am 40 years old. Originally, I am from Lesotho, and I came here to look for a job. Unfortunately, I failed to find a job thus I decided to start my own business of making traditional attire, fitted sheets, curtains, uniforms, and tracksuits” (Participant H).

Figure 28 shows some of Participant H’s tailoring work. It should be noted that the participant gave the researcher permission to use this image to support the data she shared about her livelihood strategy.



Figure 28: Participant H's Sewing Machines and Garments for her Clients (Fieldwork Images, 2023).

Another participant reported the issue of electricity as a main challenge that affects the resilience of her business. In support of this, she said:

“Electricity is a big problem. At times it cuts off for two weeks. When it’s off, I cannot use this machine because it only uses electricity. At times when it’s off during the day, I am forced to work at night though I will be risking because this area is not safe, and I stay in a shack. Robbers can easily break in” (Participant B).

The other two participants mentioned that they stock clothes from Johannesburg and Durban and sell them to people in QwaQwa. All three participants mentioned that they operate their businesses from home, and they social media to advertise their businesses and access the market.

“People send me the designs of the attires they want on WhatsApp then I make them”
(Participant B).

“After COVID-19, I advertised the little stock that I had on Facebook and WhatsApp. People bought and I used that money to order new stock” (Participant O).

4.4.4. Selling Firewood

As per the study findings, Participant B from Makwane is a tailor who has a boutique and also sells firewood (see quote below).

“I am 67 years old, and I survive on making and selling clothes, and firewood as well. I stay with my husband who is unemployed and my grandchildren who are orphans” (Participant B).

Participant B highlighted several challenges that affect her firewood business. She mentioned that she is struggling to commit to her businesses due to cultural and family expectations. In view of this, she said:

“I am failing to balance time for my business and family. Culturally, as a wife, I am supposed to take care of my family, cook for them, and do other household chores. At times I fail to get time to go and fetch firewood” (Participant B).

Besides the cultural expectations which are a constraint to her livelihood strategies, Participant B also mentioned that due to lack of support from both her husband and the government, she does not have enough funds to grow her firewood business. Furthermore, she indicated that she collects firewood from the plots, which are a bit far from Makwane, and she hires people to go and fetch firewood for her whenever she is busy at home. She mentioned that the people she hires charge her a lot of money.

“The firewood I sell, I get it from the plots, about 10km away far from here. I hire people to go and fetch firewood for me and they charge me R550 per load. Eyy mma!!This is a lot of money considering that I do not receive any financial support from my husband and the government. I

am struggling to save and grow my firewood business because of the little profit that I generate, I use it to take care of my orphans who lost their mother” (Participant B).

Another challenge highlighted by Participant B is the issue of poor roads. In view of this, she mentioned that during the rainy season, her firewood business suffers especially when there is heavy rainfall. In explanation, she said:

“As you can see here we have poor dusty roads...so when it's raining heavily it becomes difficult for the car to go to the plots as the roads will be muddy and slippery.” (Participant B).

Besides the challenges highlighted above, Participant B also mentioned the issue of lack of formal education as a major vulnerability that affects her livelihood strategies and resilience. She mentioned that due to a lack of formal education, she cannot speak English that is used in most trainings and workshops. As a result, this participant reported that she is always missing important information about funding, resources, and opportunities available for female entrepreneurs in QwaQwa. In explanation of this, she was quoted saying:

“Another challenge is that I am not educated, the only language I speak officially and clearly is SeSotho. I cannot speak English. Most trainings I conducted in English, even if I attend them, I miss a lot of information. I cannot also apply for funding as I am unable to read nor write”
(Participant B).

However, this participant did not only report on the challenges she is encountering. She mentioned that though there are challenges that affect her livelihood strategies, she makes a profit from her firewood business in winter when there is load-shedding or electricity cut-off.

“I only make a profit in winter during load-shedding because when there is no electricity most people rely on fire to cook and warm up themselves. As a result, they come and buy firewood from me” (Participant B).

Figure 29 below shows the firewood stockpiles shared by Participant B to support the findings highlighted above.



Figure 29: Firewood for Sale Piled in Participant B's Homestead (Fieldwork Images, 2023).

4.4.5. Waste Pickers (Recycling)

This livelihood strategy is operated by one of the farmers in Bluegumbosch. This woman shared that she gets up everyday morning and walks into people' homes in search of plastic bottles for recycling purposes (see Figure 30). She mentioned that her recycling business which she views as a safety net, assists her in buying inputs for her farming project which involves piggery, poultry, and market gardening.

“I am also a recycler, I collect plastic bottles, di cans, lema plastic paper and sell them to the recyclers in Phuthaditjhaba...The little money I get from recycling, I use it to buy feed for my chickens and pigs” (Participant T).



Figure 30: Recycling in Bluegumbosch (Fieldwork Images, 2023).

However, Participant T mentioned that it is not easy to operate a recycling business as it involves dealing with people who always treat you badly as if you are poor. She also highlighted some challenges that affect her business and health well-being (see quote below).

“The recyclers take time to come and collect the material...Ehh!! Also, it is tiring to go up the mountain carrying these plastic cans. Going door to door asking for containers is not easy as well. Some people treat you badly as if you are poor or something;

Oh Yeah eish!!..watsiba,.I also get injured when searching for containers in people’s bins because I don’t have PPE like gloves and safety boots. At times when it's too hot I get sick (headache) and when it's too cold I get sick from flue....its a lot watsiba musu (you know)!!

(Participant T).

4.4.6. Street Vendors

Three street vendors were interviewed, and they all indicated that they are single parents. One of them sells fat cooks, fried fish, sweets, and snacks along the main road in Matsikeng. She operates at an open spacer under an umbrella. Two of these street vendors are located in Bluegumbosch and they both sell cool drinks, fruits, biscuits, sweets, snacks, peanuts, and cigarettes here along this main road (see Figure 31). Their stands are located in front of a high school gate, and most of their

customers are students, teachers, taxi drivers, and passengers who wait for transport from Phuthaditjhaba (Sietsing) to Harrismith, Khalanyoni, Tsiamé or vice-versa.



Figure 31: One of the Street Vendor Enterprises in Bluegumbosch (Fieldwork Images, 2023).

As indicated in Figure 31, these street vendors have no proper infrastructure, thus during the rainy season they are forced to stay at home. Participant P identified various vulnerabilities that affect her business and said:

“As you can see, I don’t have a proper shade or umbrella. So eishh!!, when it’s raining, I am forced to go back home or hide under this school’s veranda, if schools are closed. When it’s too hot, I get sick (headache) and things like sweets and peanuts change the taste. During winter it’s too cold and I also get sick now and then.” (Participant P).

Furthermore, she said:

“There is also a problem of wind and dust, especially in July and August. People don’t buy when there is a lot of dust on food. Selling at an open space is never easy bathong!!! At times we don’t have water here in Bluegumbosch and it becomes a challenge because fruits like apples, mangoes, and pears need to be washed before selling to a customer. Also because of dust, I am forced to wash them now and then, and I need to have plenty of water” (Participant P).

In relation to Participant Q also shared the same vulnerabilities of lack of proper shelter and sicknesses induced by extreme temperatures (heatwave) and said:

“It’s hot during summer and I am always sick and tired because of the heatwave. I don’t have a tent as you can see ehh!! I sell on an open space..... I don’t have a table all of my things I sell them from boxes and plastics.....I cannot afford to build a proper shelter or buy a table because my customers are school children ehhh!! school children you know buy with small money like R1, R2, and R5. So! the profit I am making is less” (Participant Q).

4.4.7. Farming

This study found that in QwaQwa, the majority of the female entrepreneurs are farmers, and thus, rain-fed agriculture is a source of income and a mainstay for most of these entrepreneurs’ livelihoods. The study found that there are a lot of farming-related livelihood practices that are operated by female entrepreneurs in QwaQwa. These include poultry, piggery, dairy, market gardens, and projects. Below is a presentation of the findings of the poultry livelihood strategy in QwaQwa.

4.4.7.1. Poultry

This study found that most of the female entrepreneurs involved in poultry, keep free-range (traditional) chickens (see quotes below).

“...I am passionate about chickens. People used to give chickens as ‘umshebo (relish)’, that is for consumption, but instead of slaughtering those chickens, I would keep and raise them. That’s how I started my business. As it is, I have 45 big chickens ready to be sold, 26 chicks, 10 free-range of medium size. All of them are traditional ones that feed on anything even grass around the yard. Some of them are layers, they lay eggs that I then sell to local creches and to ‘abo my friend’ (as the Ethiopians who own local tuck-shops), and some I let them hatch so that I can raise the chicks and sell them as old chickens” (Participant J).

She also mentioned that free-range chickens (Figure 32) are easy to keep, maintain and sell. They do not require light and special food for them to grow healthy (see quote below).

“The free-range chickens feed on grass and because of that, I am forced to let them go out during the day where they can easily eat grass (around the yard). Grass increases their egg production. They lay eggs anywhere under the grass” (Participant J).

Only a few of the participants in this study deal with broiler chickens which require adequate light, special feed, tender care, and maintenance. Participants involved in broiler chickens (Figure 33), mentioned that they prefer them because they grow quickly as compared to free-range chickens.



Figure 32: Free Range Chicken in one of the Participants' Farms in Bluegumbosch (Fieldwork Images, 2023).



Figure 33: Broiler Chickens for one of the Participants in Makwane (Fieldwork Images, 2023).

Some participants highlighted the electricity cut-off as a major vulnerability that hinders them from establishing resilience and running successful businesses. For example, participant A said:

“Yooo!!! Tse ngata (they are many). As I said, I slaughter my chicken and keep some in the fridge, I am facing the challenges of electricity... My chickens go bad because at times we don't have electricity for 5 days or even weeks. Also, you know these are broiler chickens that need light at night. So, if there is no light my chickens don't grow properly and some even die”.

Other participants involved in poultry keeping also complained about electricity issues and they said:

“Also, chickens need light, so if there is no electricity, then there is a lack of light which affects their growth” (Participant C).

“When there is no electricity, the water pumps fail to pump water into our houses. Eishh!! there is a high rate of electricity cable theft in QwaQwa, so yeah!! at times we don't have electricity for 1 to 2 weeks. This then means we don't have water as well. Eyy!! So!! it becomes difficult because the chicks and chickens need water for drinking on a daily basis” (Participant J).

Besides the issue of electricity and water scarcity, these participants highlighted some vulnerabilities which include lack of proper shelter for chickens and flooding. For instance, Participant J said:

“Since my chickens feed on the grass outside, ehh!! They lay eggs on grass and sometimes I don't see those eggs, up until they are affected by rain and they go bad....Also, when there are heavy rains, there is flooding which then leads to excessive water flowing into the chickens' coups and some killing chickens, especially at night”.

“mhhh!! I don't have enough money to build a proper shelter for my chickens. So yeah! at times the chickens are washed away by floods since we do receive heavy rainfall now and then here” (Participant A).

4.4.7.2. Piggery

This study found that two of the participants are involved in piggery businesses. One of these participants is also involved in poultry, recycling, and market gardening. The other participant located in Matsikeng mentioned that during COVID-19, she was almost kicked out of the community because people were accusing her pigs of spreading COVID-19. She also mentioned

that some people invaded her pigsty and destroyed it. Thus, the pigs went out and vandalised people's gardens.

Both participants indicated that they are vulnerable to thieves who steal their pigs at night. Participant T from Bluegumbosch said:

"We have a problem of thieves. Since there is no security, they come here whenever they see that there is no one they break in and steal pigs. Last year they stole 5 of my pigs at night when were not at the plot" (Participant T).

Still on thieves, a participant from Bluegumbosch, who is involved in farming (sheep and livestock rearing) also said:

"Fifthly, there is a problem of thieves. Heelang mma wee!!! People invade our farms and steal cattle and sheep. In 2019, I lost 70 sheep and never recovered them..... but you know these policemen are not helpful. They failed to track and catch these thieves" (Participant N).

Some of the vulnerabilities these participants highlighted include water scarcity, lack of funding, and market problems. Concerning climate change, a participant from Bluegumbosch said:

"...because at times we receive heavy rains that lead to flooding, mmhh!! In 2021, I lost 21 pigs which drowned after a heavy rain. Excessive water flowed into the pigsty and my pigs drowned" (Participant T).

Both participants highlighted electricity cut-offs (load-shedding) as another vulnerability they are exposed to. They mentioned that when there is no electricity, they encounter challenges in communicating with their customers who are all over QwaQwa (see quote below).

"We also have a problem with electricity here in the mountains. We don't have electricity here to charge our phones or to at least plug fridges because after slaughtering we keep some of the pork in the fridge. Also, when it is load-shedding, the mobile network cuts off and it becomes difficult for us to communicate with people at home or our customers" (Participant T).

Participant T's farm where she operates all her livelihood strategies is located at the piedmont of the mountain due to lack of land. As a result of their location, this participant highlighted that they are vulnerable to snakes which at times bite chickens and pigs (see quote below).

“Since our plot is located around the mountain, we are vulnerable to snakes. At times they bite chicken and pigs. Even us as in me and my husband are not safe from snakes” (Participant T).

However, to resolve the issue of snakes, she planted wild garlic (ishaladi lezinyoka in Zulu), which is a snake repellent. As a way of dealing with thieves, she bought two dogs to guard the farm. Water scarcity is also one of the vulnerabilities affecting both participants. As for Participant T, she highlighted that she fetches water from the well on top of the mountain. Sometimes, she buys water and refills her jojo tank on the farm. She also practices rainwater harvesting, where she collects rainwater from the roof into small buckets. The images in Figure 34 were taken from Participant T’s farm. All these strategies are discussed further in the next chapter.



Figure 34: Piggery in Bluegumbosch (Fieldwork Images, 2023).

As shown in the images above, the walls of the pigsty are built of large stones and corrugated iron. Participant T mentioned that she used stones to mitigate flooding. Due to a lack of finance and funding, she thus decided to use the readily available local resources like stones and poles. She bought corrugated iron from the scrap yard to roof her pigsty. However, because she used old, corrugated iron, rainwater leaks into the pigsty, hence leading to either flooding or drowning of the pigs, especially during heavy rains.

4.4.7.3. Dairy

This study found that one of the study participants is involved in livestock rearing for dairy production. Participant N from Bluegumbosch said:

“I am a farm owner. I am 58 years old. I own 30 cows which produce milk and about 100 sheep. I also sell milk to people around QwaQwa and Harrismith.....ehhh!! I have five permanent employees who look after the cows and milk them.... I Litre fresh milk costs R12, then 2 Litres cost R24 then 5 Litres cost R40. As for sugar beans, I don't sell them in small quantities. My customers buy in large quantities” (Participant N).

As a safety net, she also grows sugar beans that she sells in large quantities (about 50kgs) to Indians in Durban. This participant mentioned that sometimes she hires part-time or casual workers during the harvesting of sugar beans.

However, this farmer highlighted various vulnerabilities that she is exposed to, and these include electricity, climate change, man-made fires, and thieves. Regarding electricity, she said:

“I have a problem with electricity whereby when there is load-shedding or when there is no electricity as it always does for 2 or more weeks, I fail to collect more milk. My milking machines use electricity. So, when there is no electricity, I am forced to use my hands, and it is painful and time-consuming to milk 30 cows. Also, milk goes bad quickly during load-shedding. Recently I lost a lot of milk because we did not have electricity for days and had to throw it away”
(Participant N).

In accordance with climate change, Participant N revealed that during heavy rains, it is difficult for the headmen to follow up on the cows. At times they end up getting lost because thieves usually steal cows during rainy days when they know that no one is heading them. Moreover, given the issue of global warming, the local rivers and lacks get dry too quickly, leaving the livestock, especially cows vulnerable to a lack of drinking water. Some of the vulnerabilities highlighted by this farmer are as follows:

“Also, climate change related, there is the issue of water scarcity. We all know that QwaQwa is a water-scarce zone. This is worsened by climate change. As you can see now, it's been long without receiving any rain. This affects both our cows and the sugar beans project;

Thirdly, there is the challenge of poor roads. Our roads from Harrismith to QwaQwa and around QwaQwa are full of potholes. I transport milk daily from Harrismith to QwaQwa. I also transport water from here to the farm from time to time, so the roads are not user-friendly for someone who travels on daily basis. It's also difficult to travel on these roads during heavy rains because we are scared of hitting potholes and either causing accidents or damaging car tyres;

Fourthly, I have a challenge of fires. You know people burn grass around farms and along the main road when the grass is dry and long. We are always losing property due to these fires. Last time my jojo tank at the farm got burnt by these random fires;




Lastly, as local farmers, I would say we lack support from the government. Support in terms of funding, resources, large market, boreholes, windmill or piped water at the farms, proper houses for employees at the farms and proper roads” (Participant N).







In order to resolve the issue of water scarcity, Participant N bought large water tanks and a trailer. Thus, she fills those tanks at home and transports them to the farm to water the cows and sugar beans. She also buys water from the municipality because she does not have piped water at her farm. As for controlling thieves and people who start fires near the farm, together with other local farmers, they formed a collaboration and hired a private security guard to patrol and watch over the farms.

4.4.7.4. Market or Community Gardens

This study found that the majority of the female entrepreneurs in QwaQwa who are involved in farming are focusing more on vegetable and small-scale crop planting. These small-scale farmers have market gardens, also called community gardens at the back of their yards. Only two of these participants have small plots that are located a few kilometers away from their homes. As indicated in Table 7 below, participants involved in vegetable and crop gardening plant vegetables like spinach, cabbages, carrots, beetroots, onions, and tomatoes. Additionally, they plant crops like maize, green beans, and potatoes. It should be noted that the researcher was given consent by the participants to take images of their various livelihood strategies.

Table 7: Various Types of Vegetables and Crops Cultivated in QwaQwa (Fieldwork Images, 2023).

Vegetable/Crop Type	Images
<p>Cabbages</p>	
<p>Spinach</p>	
<p>Carrots</p>	

Tomatoes		
Onions		
Green Beans		

Maize



Potatoes



Pumpkin & Other



<p>Green Pepper</p>	
<p>Beetroots</p>	

As indicated in Table 7, participants outlined their reasons for focusing on vegetable and small-scale crop planting. All participants engaged in farming indicated that farming or agricultural livelihood strategies are pivotal in alleviating poverty, achieving food security, and creating employment opportunities in their villages. During a WhatsApp FGD, one of the study participants indicated that farming-related livelihood strategies contribute positively towards reducing unemployment in QwaQwa (see the quotes below).

“I have five permanent employees who look after the cows, milk them and also assist in the planting of beans. I also hire part-time workers during the harvest of sugar beans, especially women and the youth” (Participant N).

Similarly, during a FGD with participants who are involved in farming Project X, all participants shared the same view of employment creation and they all agreed that their project generates

employment for both men and women. For instance, one of the project members said: One of the project members said:

“The motive for this project was to create employment opportunities and income using the local resources like fertile soil and underground water. So far, we have hired about four people from the community to assist us during the planting, weeding, and harvesting season” (Participant S).

4.4.7.5. Project X

As indicated in Section 3.6.3, an FGD was conducted with 10 participants from Monontsha who are involved in Project X and two participants from Bluegumbosch who are not involved in Project X. This project is located in Monontsha village and consists of 10 female members who are also involved in entrepreneurship. The name Project X has been used as a pseudo-name to protect the identity of the participants involved in this project. The study participants indicated that they launched their project in 2021. During the launch, the project had 25 members. Unfortunately, later on, 10 members left the project because there was no stipend given to them at that time. They also indicated that they started this project so that they could generate employment opportunities and income using local resources like fertile soil and underground water. Recently, the project hired 4 people from the community to assist them with farming, weeding and harvesting. Participants mentioned that they plant vegetables like spinach, green beans, onion, pumpkin, tomatoes, beetroots, carrots, cabbage, and crops like maize, potatoes and green beans. They use organic matter like animal manure from the community to supplement the soil nutrients. Because of that, they produce fresh non-organic vegetables. They sell their farm produce to local people, clinics, schools, and in town. They also harvest some for family consumption.

In 2021, Project X received funding from the Department of Social Development (DSD) in the form of seeds and training. In late 2022, the project received financial funding from Qhola-Qhwe Creche that will run for 5 months, which began in January 2023. The project members are given a stipend of R2000.00 each, per month (for five months). The participants mentioned that since they are given this stipend for survival purposes, they save the money they are generating from selling their farm products. Every time after sell, they deposit all of the money to the project bank account. In 2023, during fieldwork, the project had applied for financial funding and was still waiting for a response from the Department of Social Development.

4.4.7.5.1. *Vulnerabilities encountered by Project X*

When asked about the vulnerabilities they are exposed to in their farming project, participants shared a variety of the vulnerabilities. These vulnerabilities are as follows:

4.4.7.5.1.1. Climate change

Participants indicated that due to climate change, they experience challenges of water scarcity. The images below showing dry soils were taken on the farm where participants cultivate their vegetables and crops.



Figure 35: Dry Soils due to Water Scarcity in Monontsha (Fieldwork Images, 2023).

As indicated in Figure 35, the soils during fieldwork were too dry due to a lack of water. Monontsha is one of the areas that are prone to unpredictable rainfall patterns. Participants indicated that it takes time for rain to fall and whenever it falls, the soil would be too dry. Thus, due to dryness, water would quickly infiltrate. Most water is lost from infiltration and evaporation that is caused by the abnormal temperatures in this area. Participants also indicated that when the rain comes, it falls with heavy downpours (hailstorms), raining non-stop for a week or two. This then leads to excessive run-off and flooding which washes away plants and soil nutrients. Moreover, these heavy rains lead to the quick growth of weeds, pests, and diseases which affect farmers' crops and vegetables. Water scarcity is not the only climate change-induced vulnerability encountered by Project X farmers. They mentioned that they also experience abnormal temperatures that lead to evaporation, heatwave, and sun scorching of plants.

4.4.7.5.1.2. Lack of infrastructure

As seen in Figure 36, the participants from Project X indicated that though they have a greenhouse structure, they do not have the nets to cover the structure.



Figure 36: Greenhouse Structure for Project X in Monontsha (Fieldwork Images, 2023).

They also mentioned that they have one tap only on their farm. They used to have an electricity water pump and two jojo tanks. Unfortunately, the water pump and jojo tanks were destroyed by the fire that was burning from nearby households (Figure 37).



Figure 37: Project X's Water Pump and Jojo Tanks that were Destroyed by the Fire in Monontsha (Fieldwork Images, 2023).

Apart from the vulnerabilities highlighted above, participants during an FGD indicated that there is also a lack of transport due to poor roads. The road to the farm is a dusty road and the roads from Monontsha to Phuthaditjhaba (Sietsing, which is their nearest town) are full of potholes. Due to the poor transport system, participants reported that it is difficult for them as farmers to access the market and their customers. In view of this, some of the FGD participants said:

“As you can see, the road from Sietsing to Monontsha is full of potholes, then from that main road to our farm it’s an unpaved dust road.....there are no cars that come up to this side due to these poor roads” (Participant X).

“Given this poor road, we struggle to get transport whenever we want to go and buy inputs or whenever we want to go and deliver vegetables to our customers outside Monontsha”
(Participant Z).

Due to potholes, participants stated that they also experience delays when delivering produces to their customers. As a result, some of their customers end up buying elsewhere. In light of this, one of the FGD participants said:

“At times we end up losing money because due to delays our customers end up buying from the nearby street vendors or Participants also complained of expensive transport costs....some even cancel the orders when we are still on our way” (Participant U).

During a focus group discussion with participants from Project X, the study participants mentioned that it is very expensive to hire a private transport when transporting our farm produces or when transporting manure to the farm.

4.4.7.5.1.3. Electricity cut-offs or power-outage

During a focus group discussion, the study participants from Project X indicated that they experience electricity problems because of the national load-shedding, Maluti-load-shedding, and electric cable theft. They highlighted electricity as a challenge because when there is no electricity, they experience a shortage of water. The water pump uses electricity to pump water into the community water tank and their taps. One of the FGD participants said:

“As we experience load-shedding almost every day, we also fail to access water....the water pumps cannot run when there is no electricity....then it means we cannot water our vegetables and crops” (Participant V).

When there is no electricity, the mobile network cuts off as well. Due to mobile network problems, the study participants indicated that they failed to communicate with their customers and funders. They mentioned that at times they miss orders because they will be unreachable. In support of this, one of the FGD participants said:

“Have you ever noticed that during load-shedding, the network be it MTN, Vodacom or Cell C also goes off? When there is no network coverage, we cannot call our customers and they cannot call us as well. We end up missing orders and this becomes a loss to us” (Participant Z²).

4.4.7.5.1.4. Poor management

The study participants from Project X discussed that though they receive training on farming, they never receive training or workshops on business management. Due to a lack of business management training, they have poor work ethics and at times they fail to share responsibilities and resolve conflicts. Some of the FGD said:

“We have poor business management because we never get trained on how to manage our businesses and because of this we are always having misunderstandings” (Participant W).

“Some of our project members do not understand what teamwork is...at times they do not come to the farm and they will tell you that they were tired.....; Others at times they forget to go after those customers who buy on credit” (Participant Y).

4.4.7.5.1.5. Lack of security

The study participants shared that they do not have security to guard their farm. As a result, they lost their water pump and two jojo tanks because of the fire which invaded their farm in 2022 (See Figure 37). Furthermore, the study participants indicated that up to now, they do not know the person or people who started the fire. They only know that someone was burning grass outside the farm and the fire spread to their farm. The loss of jojo tanks affected the participants' farming project drastically. In relation to this, one of the FGD participants said:

“We no longer have excess water because we lost our jojo tanks.....during the days when there is no water in our community, most of our vegetables and crops wilt and die because we do not have water” (Participant U).

Another challenge highlighted by the participants during a focus group discussion with Project X is the issue of insufficient tools. The study participants mentioned that they did not have enough tools like tractors, wheelbarrows, shovels, hoes, and garden forks. Additionally, they do not have a borehole, windmill, or solar panels to pump water from underground. They do not have any irrigation equipment; thus, they use watering cans, hosepipe, and buckets to water the plants. Some of these FGD participants were quoted saying:

“Ahh!!!..we would have been more productive if we had sufficient tools like tractors, wheelbarrows, and other farming tools.because we do not have a tractor, we are forced to use hand hoes to till the land, and we do not have enough of these hand hoes” (Participant Z²).

“At times we are forced to hire a tractor....but it is costly because we hire it from Makwane and on top of that we buy diesel” (Participant V).

4.4.7.5.2. Vulnerability reduction and resilience strategies implemented by Project X

When asked about their vulnerability reduction and resilience strategies to the vulnerabilities indicated above, participants from Project X discussed the following strategies:

“When there is no water in the tap, we fetch water from the community jojo tank, which is about a kilometer away. We use a wheelbarrow and buckets to collect water from the community jojo tank to the farm. At times we ask for water from our neighbors who have a solar water pump”

(Participant F).

In addition to the above strategy, the study participants indicated that they do mulching (Figure 38) to control weeds (grass). They also use a hand hoe or hand-pick to remove weeds from the plant beds.



Figure 38: Mulching to Reduce Evaporation in Project X's Farm in Monontsha (Fieldwork Images, 2023).

The study participants also discussed that they use home-made chemicals to kill pests and insects. In illustration, one of the focus group participants from Project X said:

“We mix sunlight liquid (dishwashing liquid) with vinegar and wild garlic also called tulbaghia to make a pesticide called aphrodisiac ... We crush its leaves to produce a strong smell that discourages moles and pests from eating the vegetables and crops” (Participant R).

According to Aremu and Van Staden (2013), Tulbaghia is an African native wild garlic which is a category of ‘monocotyledonous herbaceous perennial bulbs.

In order to resolve conflicts among project members, the study participants indicated that they involved a third party from the DSD. Furthermore, they conduct weekly and monthly meetings to resolve all issues that affect them. Concerning transport issues, one of the participants said:

“At times we contribute R5 each to top-up money for transport.... Others pledge and contribute more than R20 for transport” (Participant S).

In order to improve security on their farm, the study participants indicated that they had asked one of their project members to stay at the farm permanently. They also bought two dogs to guard the farm at night.

The study participants shared some of the factors that enhance their vulnerability reduction and entrepreneurship resilience capacity. These factors are as follows:

- Good communication skills
- Dedication
- Passion
- Hard work
- Commitment
- Capabilities and skills to mobilise resources
- Access to funding, knowledge, and information
- Attending trainings and workshops
- Teamwork
- Mutual trust and understanding
- Collaborations and partnerships

In summary, it should be noted that this study found that some of the female entrepreneurs who participated in this study operate more than one livelihood strategy. They mentioned that they consider the second or third livelihood strategy as a safety net that safeguards them in the amid of the identified vulnerabilities. A detailed discussion of these livelihood strategies is provided in the next chapter. From the presented livelihood strategies, it does suffice to say the majority of the female entrepreneurs in QwaQwa operate their enterprises on a full-time basis. Given the size and

nature of their businesses as well as the vulnerabilities they encounter, these female entrepreneurs hire not more than five people as casual workers. The section below presents the findings on the other vulnerabilities that female entrepreneurs in QwaQwa are exposed to.

4.5. Other Vulnerabilities Encountered by Female Entrepreneurs in QwaQwa

The vulnerabilities presented in this section were collected from the study participants through semi-structured face-to-face in-depth interviews, FGD conducted in Makwane, and the WhatsApp FGD. Through face-to-face interviews, this study found that female entrepreneurs in QwaQwa face a multi-dimensional vulnerability, including deep-rooted poverty which affects their livelihoods and entrepreneurship resilience. As guided by the MVI presented in Section 2.4.2.1, the vulnerabilities encountered by female entrepreneurs in QwaQwa are divided into four categories and these are environmental vulnerabilities, natural vulnerabilities, economic vulnerabilities, and socio-cultural vulnerabilities. The next section presents the environmental vulnerabilities encountered by female entrepreneurs in QwaQwa as per the study findings.

4.5.1. COVID-19 Pandemic

This study found that during the COVID-19 pandemic, female entrepreneurs' inability to mobilise resources and prepare for any adversities imposed by the pandemic increased their susceptibility. The COVID-19 pandemic increased the vulnerability of female entrepreneurs in QwaQwa. During the interviews, most of these entrepreneurs indicated that COVID-19 forced them to close their businesses. Due to the national lockdown and interprovincial travel restrictions, they failed to keep their businesses open. Some participants indicated that they could not afford to obtain business operating permits during COVID-19 since their businesses are informal and not registered. Figure 39 indicates how female entrepreneurs in QwaQwa were vulnerable to COVID-19.

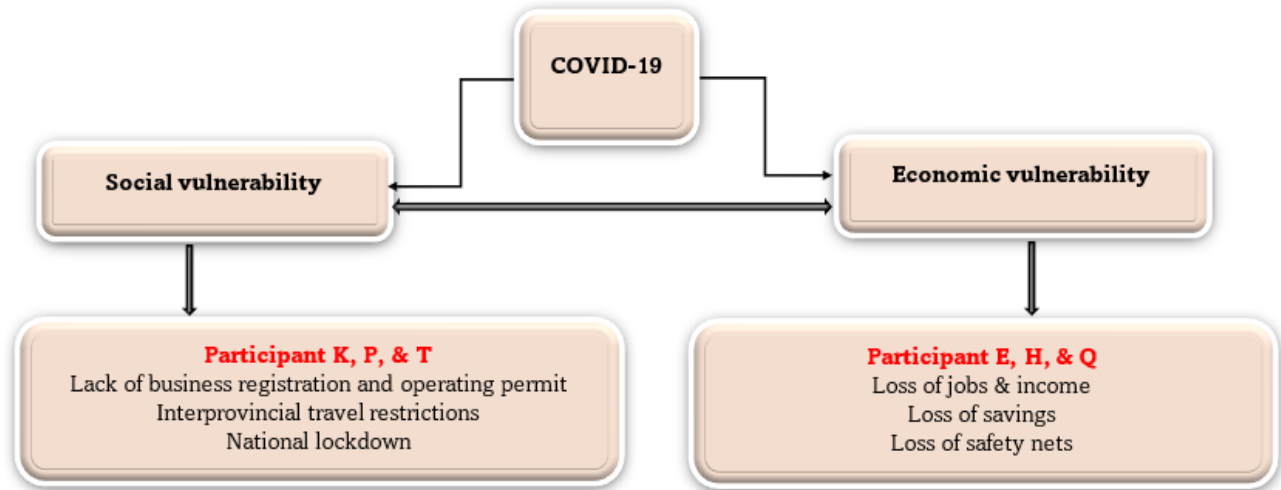


Figure 39: Vulnerabilities Encountered by Female Entrepreneurs in QwaQwa during COVID-19.

As indicated in Figure 39 above, some female entrepreneurs in QwaQwa were exposed to social vulnerability during the COVID-19 era. Given the nature of her business (informal necessity-driven), Participant K mentioned that her business was not registered during COVID-19. Thus, this hindered her from accessing a business permit to operate during COVID-19. She was quoted saying:

“Because my business is not registered due to it being informal, I failed to access a business permit, and because of that I had to stop operating for a longer period” (Participant K).

Participant P also shared her social vulnerability and reported that during COVID-19 there were interprovincial restrictions that hindered people from traveling from one province to another in a way to stop the spread of COVID-19. Only those with traveling permits were allowed to cross to the other province. However, as stated by this participant, it was not easy to access traveling permits. As a result, she failed to travel from QwaQwa (Free State) to either Durban in KwaZulu-Natal (KZN) or Johannesburg in Gauteng to buy stock for her business. Given such hindrances, Participant P was forced to stop operating her business until all the COVID-19 restrictions were lifted. Below is a direct quote of what she said during the interview, expressing the experiences she encountered during the COVID-19 pandemic.

“Due to travel restrictions, I could not travel to Joburg or Durban to buy stock....Also, I did not have the required documents to apply for a travel permit. They also told me that my reason was

not critical and valid for me to be granted a traveling permit. Due to lack of stock, I decided to close my business and wait for the travel restrictions to be removed” (Participant P).

Another participant mentioned that during COVID-19, all businesses were closed due to a national lockdown that was declared by President Cyril Ramaphosa on the 23rd of March 2020 as a way to halt the spreading of the COVID-19 virus. Only emergency workers like the army, police, health personnel, and workers involved in registered large food production were exempted from the national lockdown. As a result, all other businesses were forced to close and stop operation until further notice. One of the participants shared how the national lockdown affected her business and said:

“Lockdown forced me to close my business as it did not fall under emergency services. To make matters worse, I did not have a permit to operate even after the lockdown. Thus, I was forced to close and because of this I lost my customers and the little money that I had saved before the pandemic” (Participant T).

This study also found that lockdown exposed the female entrepreneurs in QwaQwa to other economic vulnerabilities that affected the operation of their livelihood strategies. Some of the female entrepreneurs shared their economic vulnerabilities and said:

“My customers lost their jobs and could not afford to buy my products, thus I also lost income” (Participant E).

“During COVID-19, due to business closure, I had to use my savings and thus ended up losing all my savings” (Participant H).

As presented in Figure 4.16, the social and economic vulnerabilities experienced by female entrepreneurs in QwaQwa are interrelated. For instance, due to challenges like the closure of businesses due to national lockdown and lack of operating permits, most people lost their jobs. This then affected the female entrepreneurs in the informal sector as most of their customers lost income due to the loss of jobs. Also, due to the closure of businesses, female entrepreneurs explained that they lost their savings as they ended up using them to sustain their livelihoods during the COVID-19 era. Furthermore, these female entrepreneurs explained that due to loss of savings, they ended up closing the other livelihood strategies that they considered as safety nets. For example, one of the participants said:

“During COVID-19, I closed my other businesses like the one for selling clothes because I did not have much money to order stock for two businesses. I considered selling clothes as a side hustle (safety net), but yooo!! unfortunately, COVID-19 robbed me” (Participant Q).

As indicated above, due to business closure, most of these female entrepreneurs lost income and ended up using the profits they had saved. They also lost income because their customers also lost their jobs, hence they did not have money to buy. Entrepreneurs dealing with food services experienced a double loss as they lost both income and their products. For example, the street vendors reported that they had to throw away all their perishable fruits and vegetables a few days after the national lockdown had commenced. One of them openly said:

“Yooo!! That one thlee, I cleared all my stock and gave some to people on credit. During COVID-19 people lost their business, and this affected my customers as they did not have any source of income and it affected my income too. Also, my neighbours did not want my pigs as they believed that pigs also contribute to spreading Corona Virus” (Participant E).

Most of the participants who are above 50 years old reported that they got sick soon after taking the COVID-19 vaccination. Furthermore, they reported that ever since they got vaccinated, they are no longer fit as compared to before taking vaccination. In support of this, one of these participants said:

“Eish! I got terrible headaches and dizziness after taking the COVID-19 vaccination, and since then I am no longer that strong. I am always sick from nowhere...” Participant (N).

Another participant said:

“I got diagnosed with COVID-19 in 2019, then after recovering, I got vaccinated in 2020 after lockdown when everyone was required to vaccinate. Funny part!/, instead of fully recovering, I got sick again and this time it was worse. I was bedridden for three weeks and had no one to run my business while I was sick....eish, I lost my customers...income and had to use my savings to buy food and medication” (Participant E).

Due to the loss of savings and income, this study found that it was difficult for most of these entrepreneurs to bounce back after the national lockdown had been lifted. While some of these entrepreneurs indicated that they managed to bounce back because of the financial support they

got from their families, others reported that they had to borrow money from the loan sharks (omashonisa in Zulu) to resume their businesses. Below is a direct quote from Participant T about how she borrowed money from the loan sharks.

“Mhh!! You know mashonisa akere?..I had to borrow money from them and return it with interest. Kene kesena boikhetelo kaha kene kebatla hokhutlela khoebong. Though it took me time to finish paying them, I am glad hore keba fele chelate eabona arohana lebona hosina mathatha” (Participant T).

In explanation, Participant T above indicated that she had to borrow money from the loan sharks which comes with an interest fee. She indicated that she did not have a choice but to borrow money and return to business. She also mentioned that though it took her time to pay them back, she is glad that she managed to pay them fully without having any problems or conflicts with them. Above all, she managed to bounce back to business.

Given the above findings, it can be agreed that the situation of female entrepreneurs appears to be grim during the COVID-19 aftermath. However, most of these entrepreneurs experienced COVID-19-induced vulnerabilities because of various challenges. As reported by participants, these challenges include lack of finance, lack of resources, corruption, inequalities, and lack of knowledge and information. As reported by the participants, the above-mentioned challenges also hinder female entrepreneurs from building resilience to adversities.

4.5.2. Lack of Resources

This study found that female entrepreneurs' access to resources for reducing vulnerability and building entrepreneurship resilience in QwaQwa is socially constrained at community and household levels. During interviews and FGDs, the study participants mentioned that they lacked resources like funding (finance) infrastructure like farming tools jojo tanks, land, seeds, fertilisers, and fence (see Figure 40). The issue of lack of resources as highlighted by the study participants hinders most female entrepreneurs from reducing their vulnerabilities and building or enhancing entrepreneurship resilience capacity. As indicated in Figure 40, the vulnerabilities encountered by female entrepreneurs in QwaQwa are interrelated. For example, most participants indicated that they find it difficult to access financial credit, form partnerships with larger enterprises, and create market relations due to the lack of land ownership.

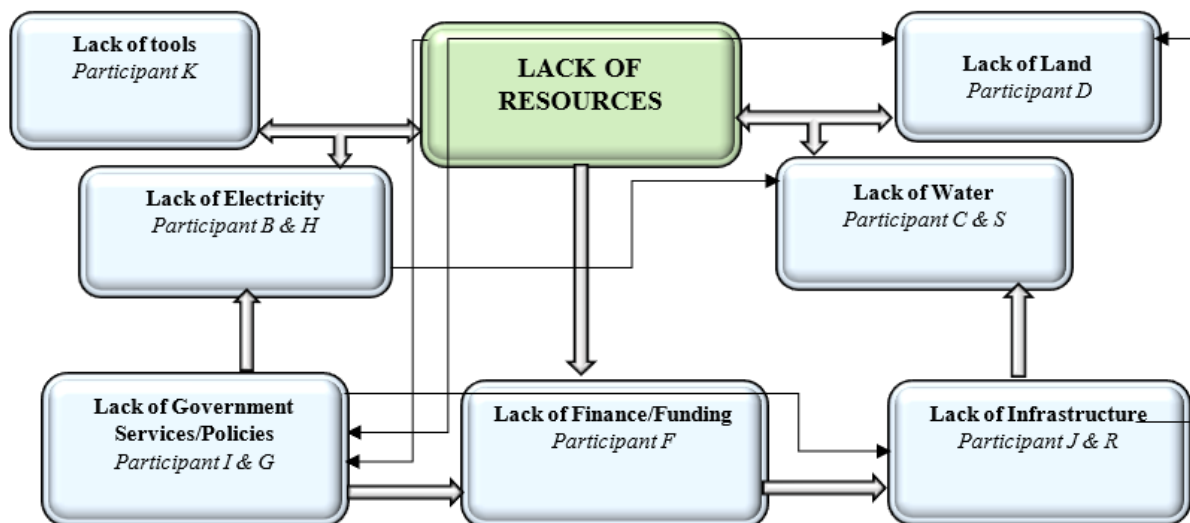


Figure 40: Lack of Resources as per the Study Participants' Perspectives.

As illustrated in Figure 40, the female entrepreneurs reported that they are vulnerable to a lack of electricity (power outage) and water supply. A lack of electricity is reported to be either a national load-shedding or a Maluti-load shedding. Due to power outage, female entrepreneurs encounter mobile network problems, which then makes it difficult for them to access their local market and communicate with their suppliers and customers. Participants B and H explained how electricity is affecting their livelihood strategies and respectively said:

“At times electricity goes off for days or weeks, and when it's off, I cannot sew. We always have load-shedding and electric cable theft here in QwaQwa, and this really affects our business operation” (Participant B).

“We also experience the Maluti-loadshedding whereby we don't have electricity for up to two weeks. If there is no electricity, there is no water as well because the pumps that pump water from the municipal reservoir to our houses use electricity” (Participant H).

As indicated in Figure 40 and highlighted previously in this section, female entrepreneurs in QwaQwa have a higher vulnerability exposure and lower resilience capacity due to a lack of land ownership caused by the customary land tenure system. In relation to this, Participants D and E indicated that due to the nature of the customary land tenure system in QwaQwa, most women do not own land, and the majority of the land is owned by men. Customarily, the land is owned and controlled by the chiefs who traditionally favour men over women. Only a few rich women in

QwaQwa own land in QwaQwa. Since these female entrepreneurs are necessity-driven, they cannot afford the higher prices charged by the chiefs, thus they remain landless. Due to the lack of land ownership, female entrepreneurs in this study region are exposed to other vulnerabilities like lack of access to collateral and funding (see quotes below).

“The land that we occupy is small and it is land that we have rented from either the chiefs or the rich. In this community is not easy for a poor person like me to afford to buy land.....Chiefs charge us ridiculous prices like R50 000 for a 30x30 piece of land. Unfortunately, because of lack of all this, most of us who are poor cannot own land, hence we always find it difficult to secure funding” (Participant D).

“I always get rejected when applying for a loan from the bank because they say I do not have land or property under my name that I can use as collateral in case I fail to pay back their money” (Participant E).

The study participants indicated that they blame the customary land tenure system because it is rooted in BaSotho cultural beliefs and values which favour men more than women. In addition, these participants indicated that the customary land tenure system is biased as it promotes gender inequality which hinders most women from accessing and owning land. In support of this, one of the study participants said:

“Our traditional land tenure system is rooted into our culture and it does not favour us women.....as women, we are not allowed to own land in the presence of our husbands. Only men are given access to land and can buy land at a lower rate. Because of this, we struggle to secure land ownership, and this affects our abilities as business women” (Participant F).

Furthermore, due to a lack of land ownership, some female entrepreneurs who participated in this study revealed that they operate their livelihood strategies from their homes or on rented land. Most of the livelihood strategies that are operated from homes include poultry, home gardens, spaza shops, street vendors, tailoring, boutiques, and daycare centers. One of the participants was quoted saying:

“I do not have land where I can do my business, thus I have turned one of my backyard houses into a poultry.....some of the female entrepreneurs here do their businesses on rented land in villages like Bluegumbosch and Monontsha where there is enough land...” (Participant A).

“I pay a monthly rent of about R300 where I do my business....My other friend rents directly from the chief and pays R200 every month” (Participant D).

This study found that female entrepreneurs’ access to resources and their ability to manage these resources in QwaQwa is habitually restricted. As indicated in the participants’ quotes highlighted above, the resources that female entrepreneurs in QwaQwa lack are interrelated, hence this widens their vulnerability gap. For instance, some participants highlighted that they do not have access to financial resources due to lack of funding opportunities. Given their financial crisis, these participants further emphasised that they could not afford to buy adequate tools for their businesses, (see quote below).

“Another challenge is that we lack resources in terms of irrigation equipment, tractors, seeds, and jojo tanks. Seeds are expensive as well as chicken feed is costly” (Participant K).

As found by this study, another vulnerability that affects the livelihood strategies of female entrepreneurs in QwaQwa is water scarcity. Water is considered a natural and economic resource that sustains our livelihoods. However, given issues like climate change, inequalities, and lack of government support, QwaQwa has become a water-scarce zone. In this study, female entrepreneurs reported that they are exposed to water scarcity, which negatively affects their livelihood strategies. They also mentioned that at times they go for weeks without water in their taps. As explained by the study participants, the issue of water is worsened by power outages. For instance, participant C involved in the poultry business said:

“At times there is no water in the taps for days and weeks. This is a problem for chickens as they need water to drink on a daily basis”.

Similarly, Participant S said:

“Water is a problem here in QwaQwa, it’s a struggle for people like us who do farming as we will be struggling to water our plants and vegetables. At times we don’t have water for the whole week. This is worse in summer and during the days of load-shedding”.

This study found that female entrepreneurs are prone to water scarcity not only because of climate change. As highlighted by the study participants, water scarcity is worsened by poor infrastructure.

The government is failing to repair and maintain the water pipes in QwaQwa. This was argued by one of the participants who said:

“We lose a lot of water from the leaking pipes...there are so many leaks on the pipeline from Fika-Patso Dam and within our communities” (Participant Q).

The situation of water scarcity is exacerbated by a lack of effective policies and water management frameworks that govern water in QwaQwa. In relation to this, another participant said:

“People here in QwaQwa don’t care about water. They only get worried and protest once the taps are dry for weeks. No one is paying for water services in most villages...Those who are paying especially in Phuthaditjhaba, that money never reaches the municipality to deal with water-related issues...there is a lot of corruption in our municipality, that’s why we are still using water pipes from the apartheid regime” (Participant L).

Besides the challenges shared above, the study participants mentioned that a lack of access to climate-resilient services or products like ‘climate-smart’ agricultural inputs, flood defenses, equipment, and water recycling skills and technologies always limit their capacity to reduce vulnerabilities like climate change and build stronger entrepreneurship resilience. Moreover, they indicated that this is worsened by a lack of support from the government. In addition, they mentioned that their government is not supportive enough in terms of service delivery and other business inputs like tools, funding, and infrastructure (houses).

4.5.3. Financial Constraints

This study also found that female entrepreneurs in QwaQwa are exposed to financial constraints. As indicated by the study participants, a lack of finance lowers female entrepreneurs’ business capital and limits their capacity to employ casual staff during peak business activities. Additionally, it makes it difficult for them to adopt advanced technology and access the market. Due to lower levels of financial capacity, female entrepreneurs in QwaQwa indicated that they have lower echelons of business capital which include inventory, property (land), and equipment (tools), female entrepreneurs in QwaQwa reported that they make lower profits.

Female entrepreneurs in QwaQwa also highlighted that they are vulnerable to broader financial exclusion due to societal and cultural expectations. For example, one of the participants explained how culture hinders her from acquiring funding and financial loans. She said:

“Culturally, our society puts family or household duties on us as women and believes that men should be the economic providers of the family. So, such traditional or cultural beliefs limit us women to access funding. For example, when I go and seek funding, they always ask if I am married or not. Some, I can’t mention names would tell me that my husband as the head of the family should be the one applying for funding of financial loans. What if you are single and you don’t have a husband? You see how culture is affecting us? Heee!!” (Participant H).

Though female participants are experiencing financial challenges, participants reported that there are some positive signs of improvement recently, with micro-finance playing a critical role in reducing financial disparities. One of the participants said:

“We also have a Money Saving Stokvel together with other female entrepreneurs here, thus I used the money I got from the first round of stokvel to go back to business” (Participant F).

4.5.4. Lack of Collateral Security to Access Funding

This study found that besides a lack of financial credit and formal loans, most female entrepreneurs in QwaQwa have little or no control over the asset base. This limits their savings and reduces their capability to provide collateral. The study participants indicated that due to a lack of land ownership, they cannot access collateral and funding. Thus, due to a lack of collateral, participants indicated that fail to access large loans that can allow them to invest in vulnerability reduction and entrepreneurship resilience. In support of this, one of the study participants said:

“Property rights and land entitlements are the most acceptable collateral to secure financial loans from financial institutions. However, because culturally and politically, we are restricted to own land and property, we always fail to apply for these loans” (Participant Q).

In line with the above declaration, another participant said:

“ehhh...!!! socio-cultural norms and gender-based inequality, stereotypes, discrimination, and bias of women being less capable of leading businesses and being unable to repay loans, we as female entrepreneurs in QwaQwa are prevented from growing economically” (Participant A).

Furthermore, concerning the lack of collateral security, some participants explained how their cultural norms and beliefs are contributing factors. In view of this, the study participants highlighted that in their Basotho culture, women should be married to be considered for loans and other local funding opportunities. Culturally, the husband is viewed as the head and provider of the family. Thus, it is always the case that the husband should be the one to apply for loans or funding opportunities. However, this becomes more challenging for female-headed families. One of the participants expressed her concern regarding culture as a barrier to accessing financial resources and said:

“Our traditional or cultural beliefs limit us women to access funding. For example, when I go and seek funding, they always ask if I am married or not. If I say I am married, they ask me to bring my husband, if I say I am not, they reject my application. Because of this, in most cases we find ourselves struggling financially in our businesses” (Participant F).

Among the female entrepreneurs interviewed in QwaQwa, the majority of them reported a lack of support from formal institutions like local banks. They indicated that as female entrepreneurs operating unregistered businesses, they struggle to access finance from banks like Amalgamated Bank of South Africa (ABSA), Standard Bank and First National Bank (FNB) due to complexities piloting the application process. As reported by participants, this constraint is worsened by their lack of financial knowledge (see quotes below).

“ There is nowhere to get funding or money as all of our local banks cannot approve our applications due to our businesses being informal and unregistered. Most of us we do not have pay slips or collaterals to show that we can be able to pay back the money that we want to borrow from the banks” (Participant C).

“ We cannot even approach banks for financial aid because we do not have collateral security and some of us even do not have active banking accounts... which becomes difficult for us to access loans or credits” (Participant E).

As presented above, a lack of access to collateral or funding prohibits female entrepreneurs from growing. The necessity-driven female entrepreneurs, particularly those operating in the informal sector, cannot register their businesses and increase their operation scale as this needs financial capital. The challenges highlighted by the participants above explain why most female

entrepreneurs are exposed to multi-dimensional vulnerabilities. For instance, without access to collateral and funding, it becomes difficult to secure financial capital. It becomes difficult to reduce other vulnerabilities and build or enhance resilience without funding.

4.5.5. Lack of Security

This study found that most female entrepreneurs are vulnerable to thieves who steal their vegetables, crops, livestock, and tools. Participant N mentioned that in 2019, she lost 70 sheep, while Participant T lost five pigs that were stolen by thieves at night in 2021 (see quotes below).

“Fifthly, there is a problem of thieves. Heeelaaa mma!!! People invade our farms and steal cattle and sheep. In 2019, I lost 70 sheep and never recovered them” (Participant N).

One of the study participants also said:

“We have a problem of thieves. Since there is no security, they come here whenever they see that there is no one they break in and steal pigs. Last year they stole 5 of my pigs at night when were not at the plot” (Participant T).

Besides thieves, this study found that participants are vulnerable to fires that burn their farms and destroy their crops, livestock, and property. They mentioned that due to a lack of security, and jealousy people burn their property especially if they refuse to give them products on credit. Participants from Bluegumbosch reported that some of these fires are caused by people who burn grass along the bush and along the main road that connects QwaQwa and Harrismith (see quote below).

“..... You know people burn grass around farms and along the main road when the grass is dry and long. We are always losing property due to these fires. Last time my jojo tank at the farm got burnt by these random fires” (Participant N).

4.5.6. Socio-cultural Factors

Socio-cultural expectations in this study are cultural and social factors that affect the livelihood strategies of female entrepreneurs in QwaQwa. The study participants reported that they are deprived of their human rights by their cultural norms and beliefs that dictate adequate women’s livelihoods and force them to stay at home and perform domestic duties and responsibilities. These

cultural beliefs and norms limit female entrepreneurs' participation in other entrepreneurial activities (see quote below).

“My first challenge is time. I am failing to balance time for my business and family. Culturally, as a wife, I am supposed to take care of my family, cook for them, and do other household chores. At times I spend the whole doing household duties without sewing any clothes or attending to my firewood business. It’s also challenging for me to leave my husband and kids alone, and travel to Johannesburg and Durban on a monthly basis to stock/order (buy) material that I need for my business” (Participant E).

4.5.7. Poor Infrastructure

As indicated by participants during interviews and focus group discussions, infrastructure, technology, and markets are fundamental aspects of entrepreneurship, and enablers for vulnerability reduction and entrepreneurship resilience. As found by this study, the lack of infrastructure in terms of roads, electricity, and telecommunications, is a major constraint that affects the resilience of female entrepreneurs in QwaQwa. This study found that in Makwane and Bluegumbosch, dusty roads are rocky and poor, which then makes it difficult for cars to move around (see Figure 41).



Figure 41: Poor Roads in Makwane and Matsikeng (Fieldwork Images, 2023).

As seen in the figure above, during the rainy season the roads are slippery and are difficult to drive using a smaller car. Only 4x4 cars can access these roads. The researcher also encountered difficulties in driving within the communities from one participant to another because of poor roads. She had to walk longer distances as there was no transportation system due to poor roads. However, this was a good exercise that the researcher enjoyed and also an opportunity to take identify and photograph visible vulnerabilities.

The roads in Monontsha are full of potholes. This causes delays and affects transport access. Given the conditions of the roads, participants reported that they find it difficult to access the market and customers in different places. The above findings indicate that the vulnerabilities experienced by female entrepreneurs in QwaQwa are interrelated. For example, poor roads and transportation systems and communication barriers, limit opportunities for female entrepreneurs to access markets and advanced technologies and inputs. Moreover, the lack of market access prevents female entrepreneurs in QwaQwa from adopting knowledge and information regarding building entrepreneurship resilience.

4.5.8. Lack of Market

As highlighted by the majority of the participants during focus group discussions, a significant component for female entrepreneurs is to be able to access marketplaces and adequate knowledge and information about the predominant prices, mechanical substances, and trade exchanges. However, female entrepreneurs in QwaQwa mentioned that they are vulnerable to a lack of knowledge and information about the prices of inputs as well as their customers' preferences and tastes. They also lack knowledge and information on supply and demand, which then affects their setting of prices. Farmers, for example, reported that they are susceptible to intermediate merchants who buy their products at prices that are lower than the cost price. In support of this, participant, G said:

“Having insufficient knowledge about both the local and the national markets affects our decision-making and price-setting processes” (Participant G).

The findings reveal that a lack of market-related knowledge and information is caused by a lack of opportunities as participants do not have enough resources that allow them to network with

experts who have relevant knowledge and information. Also given the transport challenges, most participants do not have access to the market.

4.5.9. Climate Change

This study found that climate change affects the livelihoods of female entrepreneurs in QwaQwa in different ways (see Figure 42). As was found by this study, most of these female entrepreneurs operate rain-fed livelihood practices (farming) like market gardens, poultry, dairy, and piggery. However, because of climate change, the envelope of vulnerability exposure is changing and increasing, hence negatively impacting the livelihoods of female entrepreneurs in this region. As indicated by the study participants in Figure 42, there was an unexpected excessive rainfall in 2022 that led to flooding, hence, causing massive damage to property, infrastructure, and livestock.

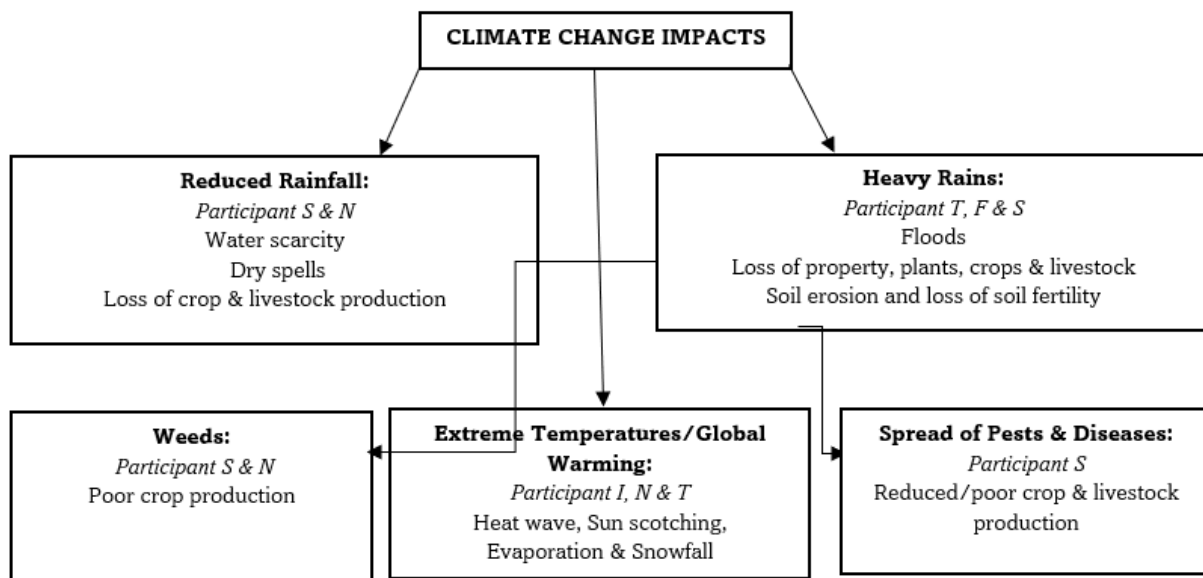


Figure 42: Climate Change Impacts on Female Entrepreneurs' Livelihoods in QwaQwa as per the Study Participants' Perspectives.

Besides flooding, this study found that participants also experience increased temperatures which lead to heatwaves that cause huge damage to their health and plants. One of the participants identified increased temperatures as global warming and mentioned that it affects their ability to produce quality products and provide services to their customers. Most of the entrepreneurs reported that they frequently lack access to water.

4.5.9.1. Reduced Rainfall Patterns (Water Scarcity)

As presented in Figure 42, this study found that QwaQwa is frequently prone to reduced rainfall patterns due to climate change. Reduced rainfall patterns have largely contributed to water scarcity in this study region. The study participants indicated that during hot days especially in summer, water evaporates quickly in open water bodies, and this affects the surface water and contributes to dry soils. Furthermore, they indicated that during such hot days, water evaporates quickly before the plants can absorb it. As a result, their plants and vegetables tend to suffer from stunted growth due to insufficient water and this affects their farm produces. This study also found that dry soils due to dry spells in QwaQwa absorb solar radiation, hence promoting high-pressure zones that then suppress precipitation, thus leading to a vicious cycle of dryness.

The issue of water scarcity in QwaQwa is worsened by poor or lack of basic service delivery. During the interviews and FGDs, participants mentioned that at times they could go for a week or more without any running water from the taps. Through the life history narratives, participants indicated that though QwaQwa became an officially self-governed homeland in 1974, water scarcity was already affecting them, and people were accessing water from springs, water tankers, and rivers. During focus group discussions, participants revealed that the history of water scarcity in QwaQwa is related to poor governance in the Maluti-A-Phofung (MAP) municipality. They further mentioned that even now, MAP water is failing to comply with its elementary functions due to various reasons. The various reasons that were shared by the study participants during FGDs include the following:

“The Maluti-A-Phofung municipality is failing dismally to maintain the water infrastructure like pipelines and dams. Most of the pipes are now outdated, have worn out, and leak causing water shortages in QwaQwa. Most of our dams are silted and no longer hold water throughout the year. No one is taking care of our springs and are now polluted by cow dung, papers, and other dirty stuff you may think of” (Participant B);

“There is poor water and sanitation delivery service in QwaQwa due to increased population. Our municipality cannot afford to supply water and sanitation to all of us. Thus, this has caused water cuts, especially in villages. We go for days to weeks without running water from the taps”
(Participant S);

“We do not have effective water policies that make it compulsory for rural communities like ours to have clean and constant water supply. Our traditional leaders do nothing about existing water policies and acts that guarantee equal water distribution” (Participant, N);

“In QwaQwa, we also encounter water scarcity because we do not have community water projects or NGOs that should be working closely with MAP municipality to make sure that we get an adequate supply of water, report and repair any worn out infrastructure, clean and rehabilitate open water sources and effectively plan and implement solutions to water scarcity in QwaQwa” (Participant, G).

Given the above-mentioned water scarcity challenges, this study found that it is extremely difficult for female entrepreneurs engaged in farming to produce large quantities of crops and vegetables of good quality. This study found that water scarcity is both a climate change and a human-induced vulnerability that female entrepreneurs in QwaQwa are exposed to. Though, at times they receive excessive rainfall, water scarcity remains a prominent issue in QwaQwa that seriously affects the livelihood strategies of female entrepreneurs. The images in Figure 43 were taken from two different villages in participants’ market gardens. As indicated in Figure 43, the soils were dry, and plants were poorly growing due to lack of water.



Figure 43: Poor Plant Growth due to Water Scarcity in Bluegumbosch and Makwane (Fieldwork Images, 2023).

Participants indicated that at times when there is no piped water for weeks, they get water from the nearby wells and construction sites. The municipality also sends water truck tankers to supply

water to people. However, as indicated by participants, this water is not safe for consumption as most people get sick after drinking the water. One participant also indicated her chickens got sick sometime after drinking this water. In support of this, she said:

“However, this municipal water in the reservoirs is not clean as it makes my chickens get sick always... every time after giving them water from the reservoir, my chicken gets sick and some they do not survive” (Participant A).

Participants also reported that though they get water supply from water tankers, there has been a decline in supply due to reduced trucks that deliver water to community members in QwaQwa. Furthermore, the participants indicated that previously, they used to receive water more than twice a week. However, they now receive water either once a week or twice every two weeks. Participants from villages like Bluegumbosch and Makwane raised some concerns and said that though they get water from water tankers, they are expected to pay for that water. Furthermore, they said they were told that the MAP municipality does not afford to supply water for free to every household, hence they should pay. One of the participants shared the water prices and said:

“...2500 liters of water cost R500 and 1890 liters of water cost R300. However, these prices vary depending on the distance from the water sources to the household” (Participant A).

Given the socio-economic status of women in QwaQwa, this study found that most female entrepreneurs struggle to buy water. Most of these female entrepreneurs are necessity-driven and do not generate much profit. The little money that they save is used to cover other basic needs like food, healthcare, and education for their children.

4.5.9.2. Heavy Rains (Floods)

This study found that QwaQwa is one of the marginalised rural communities that is also prone to heavy rains. As mentioned by the study participants, during summer, QwaQwa usually receives heavy rains which lead to extreme floods. Furthermore, these participants mentioned that due to floods they usually encounter loss of property, crops, and livestock (see quotes below).

“...at times we receive heavy rains that lead to flooding. In 2021, I lost 21 pigs that drowned after a heavy rain” (Participant T).

“During the previous heavy rains, I lost my chickens as they were washed away by rains”

(Participant F).

In addition to the above-mentioned flood impacts, this study found that floods usually cause soil erosion which then leads to the washing away of soil fertility. Due to the loss of soil fertility, they encounter reduced crop production. Furthermore, the study participants revealed that soil erosion often leads to large amounts of debris and sediments being washed away and deposited into open water sources like dams and rivers. This then leads to siltation which reduces the water-holding capacity of these water bodies. Participants also reported that siltation is one of the major problems that lead to water scarcity in QwaQwa as most of their dams no longer hold water for a longer period.

“.. our plants and crops are washed away always when there are heavy rains. Heavy rains also lead to iskhukhula (soil erosion), and that soil is washed into our dams and rivers beseziya gqibeleka (then they get silted)” (Participant S).

4.5.9.3. Weeds

Weed invasion is also one of the climate-change-induced vulnerabilities that is affecting the farming livelihood strategies of female farmers in QwaQwa. The Participants mentioned that during excessive rainfall, weed grows quickly and compete with their vegetables and crops. This then leads to stunted growth of crops and poor health of vegetables (see quotes below).

“Heavy rains cause the weeds to grow quickly. Weeds compete with plants or crops for water, and this reduces the quality and quantity of crops and vegetables we produce” (Participant S).

“..., we are vulnerable to weed which grows quickly because of heavy rains. Weeds affect plant growth as they lead to stunted growth of crops and vegetables” (Participant N).

As shown in Figure 44, grass is the most common weed that invades and competes with crops and vegetables in QwaQwa. The images below were taken in one of the farmers’ fields during fieldwork.



Figure 44: Maize and Vegetables Invaded by Weed in Monontsha (Fieldwork Images, 2023).

4.5.9.4. Global Warming (Extreme Temperatures)

This study found that abiotic pressures like extreme temperatures (high) are also some of the vulnerabilities that affect female entrepreneurs in QwaQwa. As explained by the study participants, temperatures are extremely high in summer due to global warming. Extreme temperatures expose female entrepreneurs to various vulnerabilities like heat waves and sun scorching. The study participants reported that both heatwave and sun scorching affect their health as well as the health of their plants and livestock (see quotes below).

“Our summers are usually associated with very high temperatures. Due to high temperatures, we always suffer from headaches due to heat waves.... we do not work under hot conditions, and this affects our businesses, especially for some of us who are involved in farming and gardening” (Participant I).

“The past two weeks were very hot and most of our crops and vegetables died due to sun scorching” (Participant Z).

Furthermore, when temperatures are extreme, water in open water sources and seedbeds quickly evaporates, hence leaving the soil dry. The study participants involved in farming indicated that

due to increased evaporation, their crops and vegetables wilt and die. This then affects their production.

“Water quickly evaporates during hot days. We usually water our vegetables almost every day when it’s hot because if we don’t our plants die. However, there are other days when it’s too hot that we don’t even come to work because we are scared of heat waves” (Participant T).

The study findings indicate that extreme (high) temperatures lead to low yields or production of vegetables. Participants indicated that the various development stages of vegetative growth, particularly flowering as well as fruiting stages are notably affected by the climate vagaries. In explanation, participants indicated that extreme temperatures combined with little rainfall disrupt plant growth and ultimately reduce crop and vegetable production.

As indicated in Figure 45, tomatoes in QwaQwa are strongly affected by extreme temperatures. According to participants, the tomatoes’ reproductive development is sensitive to extreme temperatures, and this leads to poor quality and reduced production. For instance, one of the FGD participants said:

“Due to too hot temperatures, our tomatoes produce unhealthy small fruits that we end up not selling because of poor quality” (Participant R).



Figure 45: Tomatoes affected by High Temperatures in Monontsha (Fieldwork Images, 2023).

The study participants also revealed that at times temperatures drop unexpectedly to freezing point. They also mentioned that usually when temperatures drop, they are accompanied by hailstorms and snow which then destroy plants and livestock (see quote below).

“Eyy this weather mara!!, this year there are few occasions, sometime in September when the weather just changed, and it was cold for days eyy!! and there was a hailstorm and every morning senngwe le senngwe sebe sele tshweu (snow, wasitsiba snow akere?)....ahh we lost everything in our gardens and some chickens and goats died hle!! (Participant D).

4.5.9.5. Pests and Diseases

As found by this study, climate change leads to the spread of pests and diseases that invade vegetables, crops, and livestock in QwaQwa. The study participants explained that due to pests like tsetse fly, their livestock always suffer from various diseases, and this affects the quality and amount of milk they produce. Furthermore, the participants indicated that heavy rains are always accompanied by locusts and other pests that destroy their crops and vegetables.

“Heavy rains also lead to the spread of pests and insects which then invade and attack our plants, crops, chicken, pigs and cattle” (Participant S).

As shown in the image below (Figure 46, pests largely invade cabbages, and they eat the leaves thus rendering the cultivation of cabbages unprofitable.



Figure 46: Cabbages Invaded by Pests in Monontsha (Fieldwork Images, 2023).

4.5.10. Landscape (Poor Soils)

This study found that some soils in Makwane and Bluegumbosch are not good for planting vegetables and crops like potatoes. As said by participants, due to the landscape being mountainous, beneath the soil there is an underlying rock that discourages plant growth. As shown in Figure 47, there is stunted growth of green beans, maize, and potatoes. Due to the land cover being rocky, in some areas, water does not infiltrate down into the soil, hence leading to poor quality of crops.



Figure 47: Poor Soils that have caused Stunted Plant Growth in Makwane and Bluegumbosch (Fieldwork Images, 2023).

4.5.11. Slope

As found by this study, QwaQwa is a mountainous area with most of these villages located in a steep sloping area. Particularly, in Bluegumbosch and Makwane the topography is a steep slope. Thus, a steep slope encourages excessive run-off of rainwater. This discourages plant growth as water quickly runs off before infiltrating down into plant roots. In support of this, one of the study participants said:

“Also, as you see this plot is located at the piedmont (at the foot of the mountain) and it’s a steep slope. So, whenever it is raining or when we are watering the plants, water quickly runs off down the slope leaving the soil dry. Water doesn’t infiltrate deep into the plant roots” (Participant T).

The section above has presented results of the vulnerabilities experienced by female entrepreneurs in QwaQwa. Besides the vulnerabilities, participants also shared their vulnerability reduction and resilience strategies that they use whenever faced with adversities. Below is a detailed presentation of the results shared by participants of the vulnerability reduction and entrepreneurship resilience strategies they apply in QwaQwa.

4.6. Vulnerability Reduction and Entrepreneurship Resilience of Female Entrepreneurs in QwaQwa

The study participants during interviews and focus group discussions shared a variety of strategies that they use to reduce the vulnerabilities they are exposed to and build entrepreneurship resilience. In this study, these strategies are all considered capital. This study is built on the Sustainable Livelihoods Framework (SLF) presented in Figure 11 of Section 2.4.7 in Chapter Two. The study adopted the SLF's five different types of capital (Table 3 in Section 2.4.7) to analyse the vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa. These five different types of capital include human capital, social capital, economic or financial capital, physical or natural and intellectual or institutional capital. Table 8 indicates a brief description of each capital as per the study findings.

Table 8: Different Types of Capital as per the Findings of this Study.

Type of Capital	Output
Human Capital	This includes business skills and expertise, education, access to knowledge, training, and information. These are vital for reducing vulnerabilities and maintaining the business resilience of female entrepreneurs in QwaQwa.
Social Capital	This includes the support female entrepreneurs in QwaQwa get from their families, relationships, government, NGOs, and networks for reducing vulnerabilities and maintaining business resilience.
Economic or Financial Capital	This includes financial credit in the form of loans and funding that is accessible to female entrepreneurs in QwaQwa.

Physical Natural Capital	or	This includes advanced technology, infrastructure, tools, and other farming inputs that are made available to female entrepreneurs in QwaQwa.
Intellectual Institutional Capital	or	This includes business permits and certificates, academic certificates, intellectual property, and title deeds as well as rules, regulations, policies, and frameworks that influence the entrepreneurship resilience of female entrepreneurs in QwaQwa.

4.6.1. Human Capital

As illustrated by scholars like Bullough et al. (2015) in Section 2.4.5, for an individual to be resilient and be able to bounce back after adversity, they need capabilities, skills, knowledge, and education. The SLF framework through its human capital, emphasises that an individual should possess the necessary skills, capabilities, knowledge, education, and expertise to improve their livelihoods in a rural community (Hlungwani & Sayeed, 2018). In Section 2.4.3, this study indicated that female entrepreneurs in QwaQwa are exposed to multidimensional vulnerabilities, to a lesser extent they could reduce their vulnerabilities and were resilient to some of these vulnerabilities. Furthermore, they revealed that they were able to reduce their vulnerabilities and build entrepreneurship resilience through the use of the skills, expertise, education, and traditional knowledge they possess. For instance, they used their skills to mobilise resources that enabled them to reduce their vulnerabilities. Most participants, for example, agreed that to bounce back and get back to business after the COVID-19 pandemic, they used their skills and knowledge.

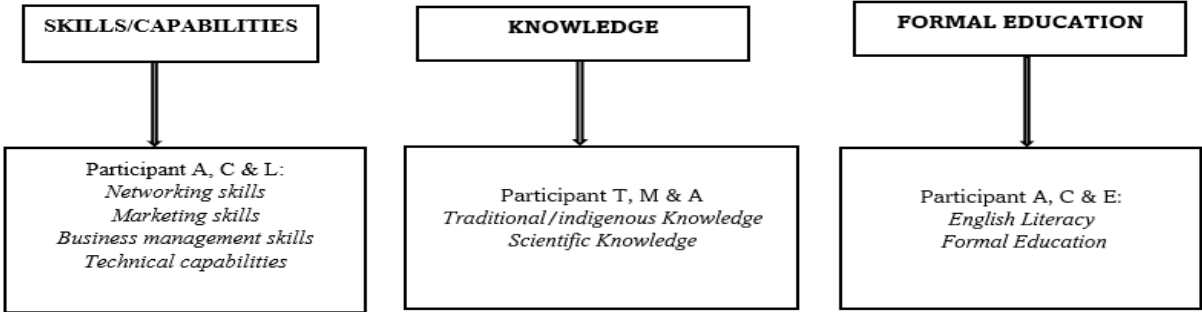


Figure 48: Participants' Perceptions of Their Vulnerability Reduction and Entrepreneurship Resilience.

4.6.1.1. Skills and Capabilities

As indicated in Figure 48, above, this study found that some of the female entrepreneurs possessed networking skills, marketing skills, business management skills, and technical capabilities. Thus, they were able to cope and adapt to the circumstances of their higher vulnerability exposure. Below are some of the quotes from participants explaining how they utilised their skills and capabilities to reduce vulnerabilities and build resilience.

“Networking...marketing skills assisted me to bounce back after COVID-19. I joined groups on WhatsApp and Facebook to mix and mingle with other entrepreneurs who were selling similar products in different places. These groups are useful as we share information on where to get stock at affordable prices” ...Eyy!! To get back my customers, I advertised that I am back to business on both Facebook and WhatsApp” (Participant A).

“Business management and marketing skills are essential for business growth. Through AGAPE’s workshops, I was able to learn how to manage and market my business. Looking back at where I started, I can safely say my business has grown. I now have customers not only in QwaQwa but in Bethlehem, Warden, and other places as well because I know how to satisfy my customers, ad because of that they refer each other to me. I now know how to save my profit, I save every little cent that I generate for future business purposes” (Participant C).

“...I had to Google the information from the internet and YouTube so that I can learn more about how to make pesticides from vinegar, dishwashing liquid and cooking oil” (Participant L).

4.6.1.2. Knowledge

This study found that female entrepreneurs relied on traditional or indigenous knowledge to reduce some of the vulnerabilities they were exposed to. For instance, one of the participants, residing at the foothill in Bluegumbosch, where snakes and rats are dominant, indicated that she relies on traditional knowledge to get rid of snakes as they are some of the vulnerabilities they are exposed to. When asked to elaborate further on this knowledge, she said:

“I have planted ishaladi lenyoka to scare away snakes that usually bite pigs and chickens here in the farm. It’s never safe here because we are surrounded by mountains, which are also home to

snakes and rats. Thus, we rely on this flower, we call it ishaladi lenyoka to get rid of these snakes” (Participant T).

When asked how they got to know about this flower, she further explained that she was told about it by her grandmother, back then when they were staying in a snake-infested area on the eastern coast (Durban) of KwaZulu Natal Province (KZN). Ishaladi lenyoka, is a Zulu name given to the Sweet Wild Garlic, also called Fragrant Tulbaghia (see Figure 49).



Figure 49: Tulbaghia (Ishaladi lenyoka) used by Farmers as a Snake Repellent in Bluegumbosch (Fieldwork Images, 2023).

The study participants from Monontsha also mentioned this Tulbaghia and indicated that it is a garlic-like flower that they use as a natural snake-repellent since it contains sulfonic acid, well-known for repelling snakes. Participants further narrated that traditionally, Zulus plant this flower around their huts to repel snakes away and they also use it as a pesticide to discourage moles and cats from eating their vegetables. They also use it to repel mosquitoes, ticks, and fleas.

Similarly, another participant shared how traditional knowledge assisted her in purifying water for poultry purposes. She said:

“Traditionally, we were taught that ash purifies water, apple cider vinegar and garlic destroy germs in water, Thus, I apply the same method to purify and treat water from the springs and tankers. My chickens never get ill after this” (Participant M).

In order to treat water from the natural reservoirs for it to be safe for domestic purposes, one of the explained that she applies scientific knowledge that she learned in high school. In explanation, she said:

“When there is no water, I fetch water from the river and scientifically, boil and apply chloride tablets then use it for cooking and my chickens” (Participant A).

4.6.1.3. Formal Education

This study found that female entrepreneurs need both basic and formal education to sustain their livelihood strategies given their high vulnerability exposure. The study participants mentioned that education helps them to communicate and network better with other entrepreneurs as well as with facilitators who cannot speak their local language during workshops and training. Some participants without basic education explained that they have lower vulnerability reduction and entrepreneurship resilience capacity due to lack of education. Furthermore, they mentioned that lack of basic education has affected their English literacy. One of the participants explained that during workshops and training, she cannot understand anything, and this makes her miss important information and knowledge that would have enabled her to reduce vulnerabilities and build stronger entrepreneurship resilience (see quotes below).

“I need a bit of education especially in the English language so that I can easily communicate with other people and be able to apply for funding” (Participant A)

“...Most of the workshops are conducted in English because some of these instructors neither communicate in Sesotho nor Zulu. As a result, most of the uneducated grannies like me end up missing important details about business management, funding information, and resource requisition” (Participant C).

This study also found that formal education has enabled some of the female entrepreneurs in QwaQwa to establish impactful livelihood strategies that also benefit other people. One of the participants mentioned that she possesses a Bachelor of Social Science (Honours) Degree in Community Development. Furthermore, she explained that after failing to secure a better job soon after graduating, she put her education into practice and started a farming project that now benefits some of the community members of QwaQwa. In explanation, she said:

“I have a BSc Honours Degree in Community Development from the UFS, thus after graduation, I started a farming project which has now grown and hires about 5 employees. These employees can now take care of themselves and support their families with the money and vegetables they get from this farm. I also survive from this farm, and I consider this as a full-time job because I am not employed elsewhere...I spend my time working in this farm together with the employees and other project members that I recruited into this farming project” (Participant S).

4.6.2. Social Capital

Building on the SLF, this study describes social capital as the support female entrepreneurs in QwaQwa get from their families, relationships, government, NGOs, and networks for reducing vulnerabilities and maintaining business resilience. The study participants indicated that to reduce their vulnerabilities and build stronger entrepreneurship resilience, they needed a stronger support system. During a focus group discussion, one of the participants defined this support system as:

“Support system encompasses business structures, institutions, legislation, governmental and NGOs as well as policies that shape our livelihoods as entrepreneurs. Given all this, as female entrepreneurs in QwaQwa, we can be able to reduce vulnerabilities and build entrepreneurship resilience” (Participant N).

In support of the definition above, this study found that female entrepreneurs get maximum support from their families in terms of emotional and financial support. Participants indicated that during COVID-19, they managed to remain calm and strong due to the emotional support and courage they were receiving from their family members. Some participants indicated that they were given money by their family members for start-ups when they were launching their businesses.

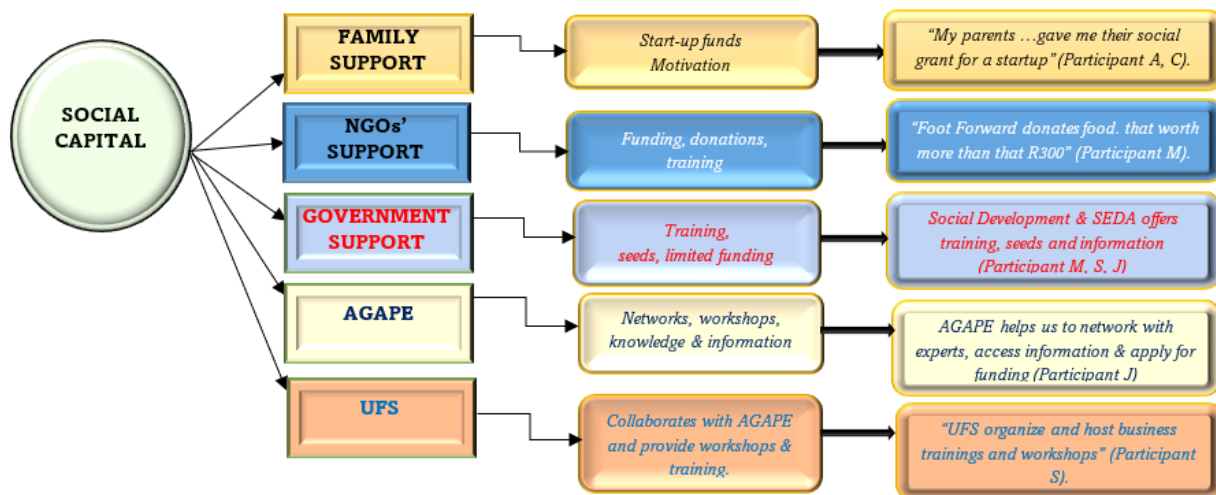


Figure 50: Participants' Perceptions of the Importance of Social Capital in their Livelihood Strategies.

When asked to elaborate on how these support systems can shape their livelihoods, assist them reduce vulnerabilities, and build entrepreneurship resilience, Participant M said:

“Government agencies, local institutions and NGOs, for example, can provide technical support to us as female entrepreneurs”.

As indicated in Figure 50 above, participants indicated that they have a support system from governmental organisations like SEDA and institutions like the University of the Free State (UFS) and AGAPE Foundation which help them reduce their vulnerabilities and build entrepreneurship resilience.

Participants elaborated further and highlighted that these organisations and institutions offer them support in terms of training, business mentoring, as well as knowledge, and information. One of the participants sang praises about the AGAPE Foundation and said:

“I am part of AGAPE Foundation. As AGAPE we have a WhatsApp Group for networking...mmmh!! here we share information, ideas, and opportunities. We also motivate each other to keep on going even if we encounter any problems. AGAPE also organizes workshops with SEDA and helps us with the funding application process. I also attend workshops and trainings offered by SEDA through AGAPE” (Participant C).

Participants indicated that through AGAPE, they were able to form WhatsApp groups where they interact with each other and share ideas, knowledge, and information that is necessary for their

resilience as female entrepreneurs in a vulnerable region like QwaQwa. Furthermore, participants indicated that their WhatsApp group enables them to build and maintain good relationships with each other.

The study participants who own boutiques and tailor enterprises indicated that they use social media like Facebook and WhatsApp to advertise their products and connect and potential and existing customers. They further explained that social media helps them to advertise their products and expand their business. Regarding this, one of the study participants said:

“After COVID-19, I advertised the little stock that I had on Facebook and WhatsApp. People bought and I used that money to order new stock” (Participant O).

Even though governmental organisations like SEDA and the DSD offer support to female entrepreneurs in QwaQwa, the study participants indicated that the support is inadequate. They indicated that they expect the government to provide long-term effective support like effective policies that empower all female entrepreneurs in their region. They also indicated that items farming inputs like seeds, fertilizers, and tools like hand hoes, shovels, and wheelbarrows are affordable as compared to tractors, advanced farming machinery, proper houses, and roads. As a result, they still believe that the government is failing them.

4.6.3. Economic or Financial Capital

Economic or financial capital as described by participants of this study refers to financial credit in the form of loans and funding that is accessible to female entrepreneurs in QwaQwa. The study participants revealed that they have difficulties in sourcing funds for the resilience of their businesses. They also indicated that given the nature of their informal businesses, they cannot afford to qualify to apply for financial credit or loans from the Bank. However, all these challenges do not limit them as they save the little profit that they get and thus loan it to trustworthy people in need of instant cash. They described this instant loan as ‘mashonisa’ in Zulu and loan sharks in English. One of the participants explained how loan sharks benefited her during the COVID-19 pandemic, and said:

“When lockdown started, I had saved money. Thus, I took that money and borrowed it from people at an interest rate (we call it ‘ukushonisa’ in Zulu), (loan sharks). So, the profit I made

from these interest rates helped me to resume my business after COVID-19, when things were back to normal” (Participant P).

4.6.4. Natural Capital

According to the World Bank (2019), natural capital encompasses natural resources like water, land, geology, air, soil, and other living organisms. It is where human beings derive a variety of ecosystem services that make their lives possible.

As indicated previously in Section 4.5, female entrepreneurs in QwaQwa lack natural capital in terms of water scarcity and lack of land ownership. Relating to water scarcity, this study found that these female entrepreneurs are experiencing water shortage which affects their livelihood strategies. Though they experience water scarcity, female entrepreneurs in QwaQwa never stop operating their businesses. They have developed low-cost strategies that help them to solve the water crisis. For instance, participants indicated that they practice rainwater harvesting whenever it is raining in QwaQwa (see Figure 51).

As shown in Figure 51, farmers in Bluegumbosch collect rainwater and store it in large containers for future purposes. They have built temporary shacks from which they collect rainwater and store it in large containers for watering the vegetables, crops, and chickens.



Figure 51: Rainwater Harvesting in Market Gardens in Bluegumbosch (Fieldwork Images, 2023).

The study participants from Makwane also indicated that they divert running-off rainwater into man-made wells in their gardens. Figure 52 shows some of these man-made wells in the participants' market gardens.



Figure 52: Man-made Wells for Storing Diverted Run-off Rainwater in Bluegumbosch (Fieldwork Images, 2023).

As indicated in Section 4.4.7.5, the study participants involved in Project X indicated that there is a community jojo tank that supplies water to every resident. Thus, they rely on that jojo tank whenever there is no water in their taps. In Section 4.5.9.1, the study participants also indicated that, at times the municipality sends water truck tankers to supply water to people especially when there is no piped water for more than a week. Some participants also indicated that they end up buying water from construction sites. However, they all indicated that both water from mobile tanks and construction sites is not safe for consumption. Hence, to make it safer, participants indicated that they either boil it or add chlorides first before drinking it.

Though faced with such vulnerabilities, female entrepreneurs in QwaQwa reported that they continue to persist in the face of adversities. The mobile kitchen entrepreneurs indicated that when there is no electricity, they use gas stoves. However, production is very low compared to the use of electric stoves. The main challenge they indicated with Gas stoves is that Gas is too expensive, and it is not readily available around their premises. In Section 4.4.7.1, the female entrepreneurs involved in poultry keeping indicated that when there is no electricity, they use candles and solar lights to provide light to their chickens. However, solar lights and candles do not provide heat to the chickens, thus some of their chickens die when it is too cold.

In relation to farming inputs, participants indicated that they have decided to opt for climate-smart agriculture, traditional knowledge, and the use of local resources to mitigate the impacts of climate change and reduce climate-change-induced vulnerabilities like the spread of weeds, pests, and diseases. For example, as stated in Section 4.4.7.5.2, participants indicated that they rely on wild garlic (*Ishaladi lenyoka* in Zulu) for making pesticides.

In relation to climate-smart agriculture, one of the participants said:

“To control the spread of weeds, I mulch, to control pests and diseases I apply ash on my plants...Though they give us fertilisers, I never use them, I only use organic manure from chicken and cattle manure” (Participant T).

The study participants also mentioned the issue of lack of security as a major challenge that affects their resilience and livelihood strategies. Participants involved in farming businesses raised concerns about thieves who steal their vegetables, crops, cattle, chickens, and pigs. Thus, to mitigate thieves, some participants have devoted to the use of dogs (see Figure 53) as their form of security during their absence or at night.



Figure 53: Dogs on Leashes in Participants' Farms in Bluegumbosch (Fieldwork Images, 2023).

Some participants indicated that they have decided to collaborate with other businesspeople to hire private security that will guard their farms from thieves and fires. In support of this one of the participants said:

“Together with other local farmers we have formed a collaborative. We have hired a private security to patrol and watch over our farms and monitor any veld or man-made fires”

(Participant N).

4.6.5. Institutional Capital

As found by this study, institutional capital encompasses access to business permits and certificates, academic certificates, intellectual property, and title deeds as well as rules, regulations, policies, and frameworks that influence vulnerability reduction, the resilience of female entrepreneurs in QwaQwa as well as the sustainability of their livelihood strategies.

Participants reported that they are operating in the informal sector and not registered. This as articulated by the participants, affects their resilience and exposes them to various vulnerabilities. For example, all participants agreed that there are no rules, policies, and governance frameworks that safeguard them. Due to a lack of rules, regulations, and policies that work in their favor, participants indicated that they always find themselves suffering from the vicious cycle of vulnerabilities. The study participants also shared that a lack of rules, regulations, policies, and frameworks is closely linked with a lack of strong support from the government. According to participants, the government is failing to provide basic services like electricity and water that can enhance vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa. Participants who are involved in farming indicated that they believe that if given proactive vulnerability mitigation strategies, like climate-smart education initiatives, they can be able to deal with vulnerabilities like water scarcity. In agreement with other participants, Participant O said:

“...if the government can give us resources like jojo tanks, we can be able to implement initiatives like rainwater harvesting, we would be able to collect a lot of water from the rain and store it for future purposes since water scarcity is the main problem that is affecting us the whole of QwaQwa” (Participant O).

In relation to electricity, the study participants agreed that they wish the government and other NGOs to sponsor them with solar systems or funding to buy and install solar systems in their homes and farms. They believe that solar systems will allow all entrepreneurs in QwaQwa to

operate their businesses sustainably without encountering any electricity-related challenges. In support of this, one of the participants said:

“... the sun is free!!! Ehh!! and it does not get finished at all! We only need the government to support us with solar panels that can help us generate our electricity both in our homes and farms...” (Participant P).

4.7. Female Entrepreneurship Hotspot Analysis in QwaQwa

The third objective of this study was to identify and map the spatial distribution of female entrepreneurs using GIS hotspot mapping in QwaQwa. GIS hotspot mapping in this study was used as an ideal analytical tool to identify concentrations of female entrepreneurship in QwaQwa because it produces accurate spatial patterns and underpins theoretical reasoning that justifies why female entrepreneurship is hot in some villages and cold in others. Whenever the researcher encountered a selected female-led enterprise, she recorded its location using a GPS Status installed on her mobile cellphone. Upon recording the location, she also recorded both physical and socio-economic vulnerabilities using ODK installed in her mobile cellphone as well. She then sent the form generated from ODK to ONA Data software for analysis purposes. Analysed data from ONA Data was then transferred to ArcGIS to create a database. The created database was then used to develop entrepreneurship hotspot maps, showing the spatial distribution of each female-led enterprise in each village involved in this study (see maps below). The map below presents findings on entrepreneurship hotspots and cold spots in Makwane.

4.7.1. Makwane

The map in Figure 54 shows the spatial distribution of female entrepreneurship in Makwane. It shows both hot and cold spot entrepreneurship zones.

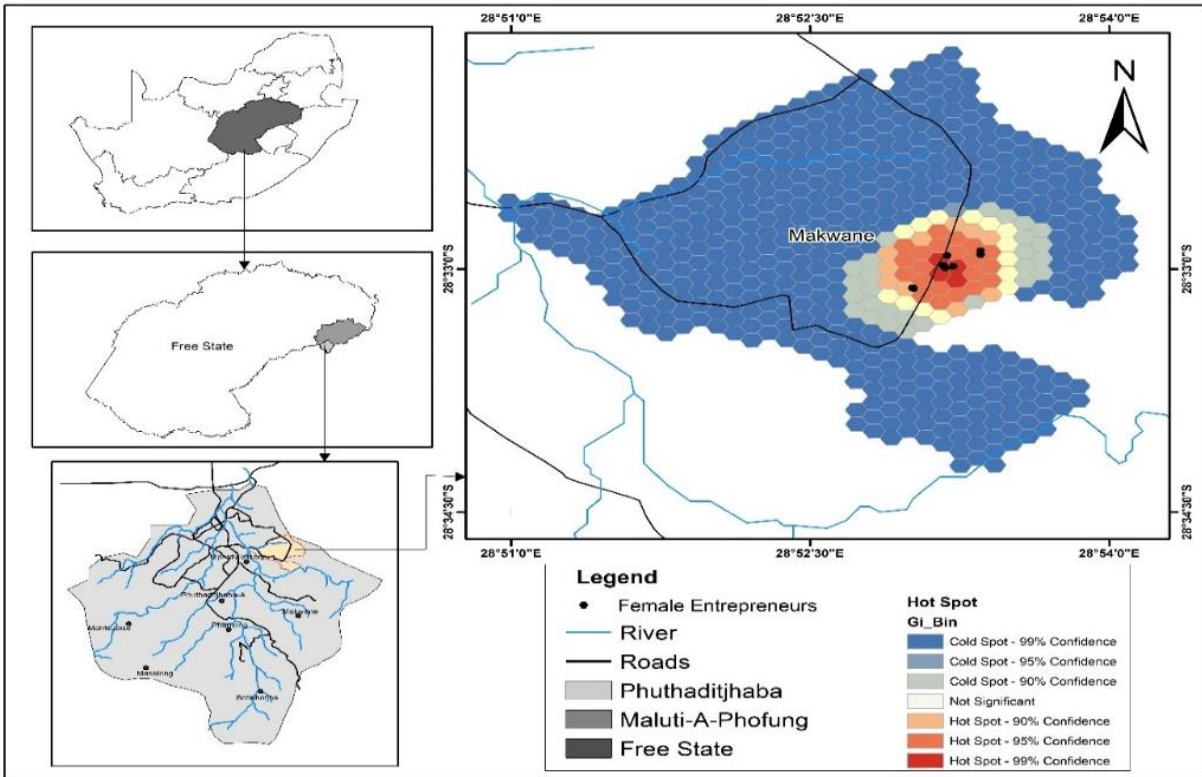


Figure 54: Entrepreneurship Hotspot Map of Makwane (Researcher's work, 2023).

As indicated in the map above, female entrepreneurs in Makwane are spatially distributed with a 90-95% entrepreneurship hotspot concentration. These entrepreneurs are densely located closer to each other. Participants indicated that they get support in the form of business knowledge and information, training, and mentorship from the AGAPE Foundation. AGAPE Foundation is located in Makwane, thus there is a higher concentration of female entrepreneurship in Makwane than in other villages. Looking at this map, it can be easily seen that a few of the entrepreneurs are located a bit far from others. The reason being that these entrepreneurs operate farming businesses that need a bigger piece of land. Given this, the only place where there is enough space is outside the residential area.

It should be noted that places marked as cold spots were not included in the study. The reason for their exclusion is that entrepreneurship in this area is male-dominated and most of the entrepreneurs operate formal businesses that were outside the scope of this study.

4.7.2. Matsikeng

The map in Figure 55 indicates a cold spot (95-99%) of female entrepreneurship in Monontsha. As indicated in this map, only three female entrepreneurs participated in this study.

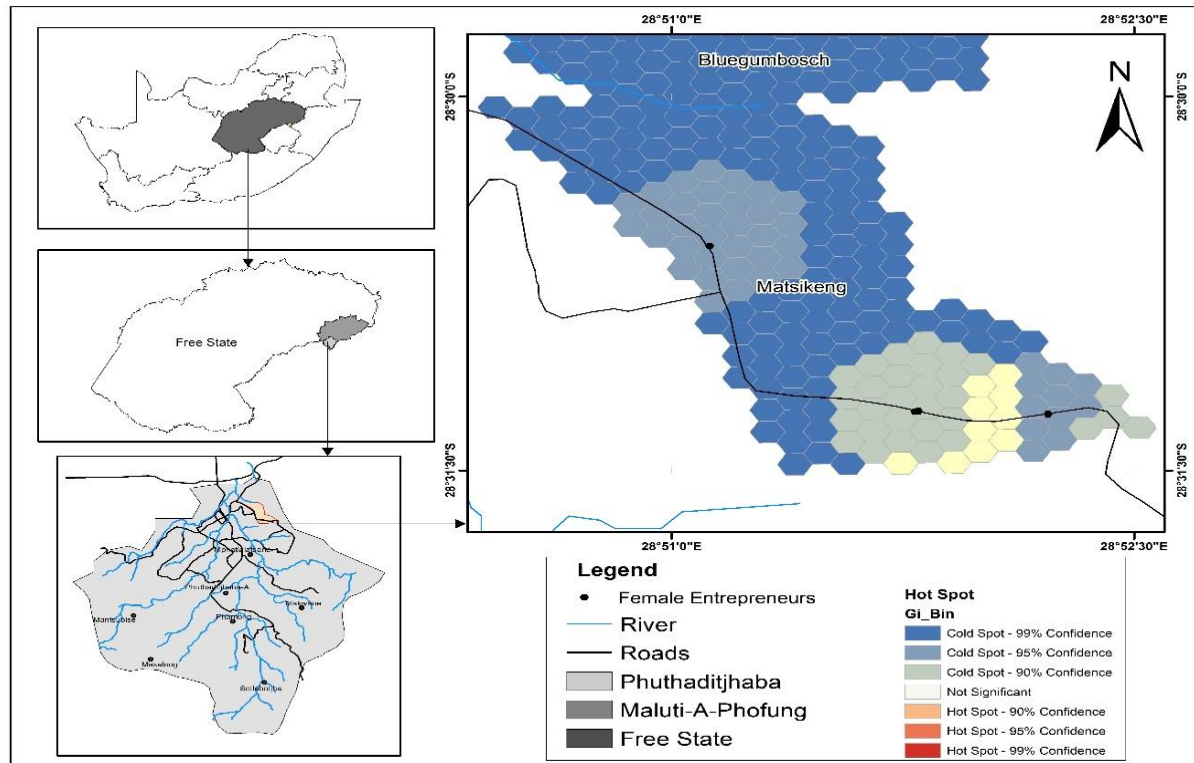


Figure 55: Entrepreneurship Hotspot Map of Matsikeng (Researcher's work, 2023).

As shown in the map above, female entrepreneurs are located along the main road. These female entrepreneurs include street vendors, meat dealers, daycare centers, and mobile kitchens. According to participants, the main reason why they are located along the main road is to be easily accessible to customers and transport.

Above all, this study found that entrepreneurship in Matsikeng is dominated by male entrepreneurs who operate shebeens, car wash, tuck shops, and street trading (street vendors). As a result, there are few female entrepreneurship hotspots in this area. As compared to other villages, Matsikeng is more vulnerable to water scarcity and transport problems. Thus, given these challenges, only a few people engage in entrepreneurship.

4.7.3. Bluegumbosch

The map in Figure 56 shows the spatial distribution of female entrepreneurs in Bluegumbosch. Just like Makwane, this study found that there are plenty of female entrepreneurs who lead various livelihood strategies. As shown in the map, entrepreneurship hotspot ranges between 90-99%.

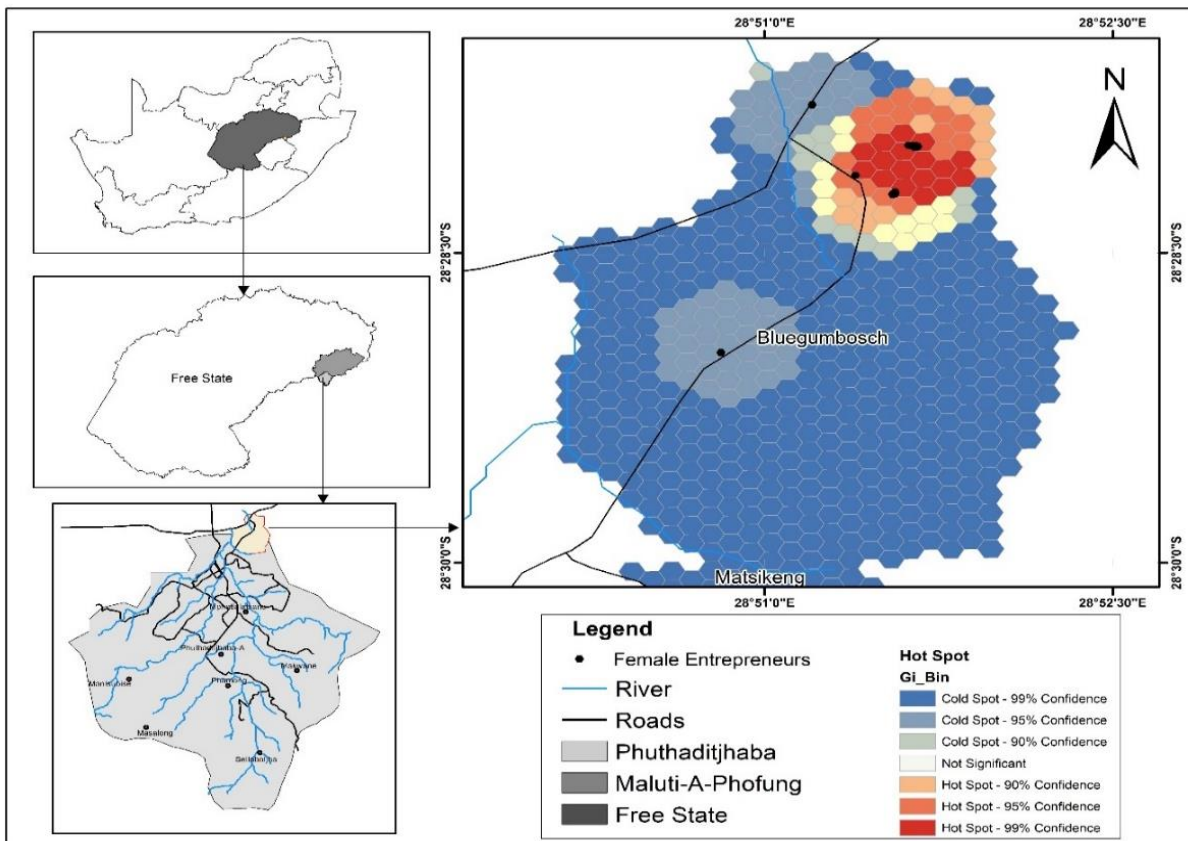


Figure 56: Entrepreneurship Hotspot Map of Bluegumbosch (Researcher's work, 2023).

As shown in Figure 56, most female entrepreneurs in Bluegumbosch are located on the outskirts of Bluegumbosch where there are no residential houses. The reason for their location is that there is a bigger piece of land that accommodates their farming and recycling activities. Also, there are more female entrepreneurs in this village as compared to Matsikeng and Monontsha because water is not as scarce as in other areas. There is also easy access to transport, hence it is less challenging for female entrepreneurs to access both market and customers.

The other two female entrepreneurs who are a bit further than others are located along the main roads. One of the entrepreneurs is a street vendor and the other one operates a tuck shop (spaza shop) within Bluegumbosch.

4.7.4. Monontsha

The map below indicates the spatial distribution of female entrepreneurship in Monontsha. This study involved a group of 10 female entrepreneurs who are involved in a farming project, named Project X in this study. Among the 10 project members, three of them also run their separate farming livelihood strategies as extra safety nets. Among these three farmers, one of them also operates a daycare center in Monontsha. It should be noted that the other seven project team members did not consent to be interviewed but consented to be part of the FGDs. As a result, their individual livelihood strategies were not mapped.

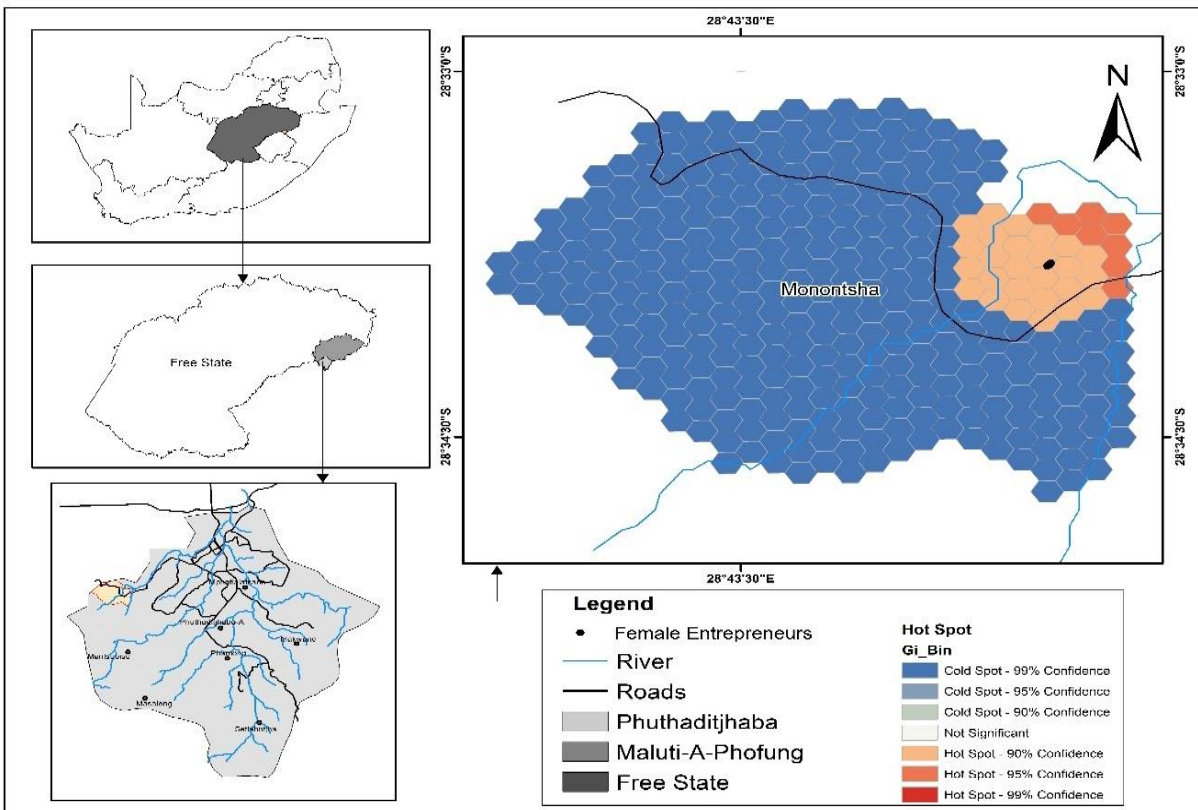


Figure 57: Entrepreneurship Hotspot Map of Monontsha (Researcher's Work, 2023).

As shown on the map above, these female entrepreneurs are densely populated, meaning that they are located closer to each other. The reason for their closeness is that they are located near the

community jojo tank which supplies the community with water for both domestic and farming purposes. They are also located near their farming project site so that they can easily engage with each other.

Though Monontsha is dominated by entrepreneurship cold spot zones, this does not mean that there are no female entrepreneurs in the cold spot zones. Monontsha is located a bit further from the other villages which are located next to each other. Thus, this study only managed to access a few female entrepreneurs who are involved in farming Project X in Monontsha. Transport due to poor roads is also another vulnerability identified by participants in Monontsha. Due to poor roads, it was difficult for the researcher to drive into the whole village and identify hotspot zones.

Given all the livelihood strategies, identified vulnerabilities, factors for reducing vulnerabilities and building entrepreneurship resilience as well as the female entrepreneurship hotspot zones, the researcher developed an entrepreneurship resilience and vulnerability reduction model for female entrepreneurs in QwaQwa. Below is a presentation of that model.

4.8. Entrepreneurship Resilience and Vulnerability Reduction Model of Female Entrepreneurs in QwaQwa

The last objective of this study was to develop an entrepreneurship resilience and vulnerability reduction model for female entrepreneurs in QwaQwa. A detailed discussion and presentation of the entrepreneurship resilience and vulnerability reduction model for female entrepreneurs is presented in chapter six. The model is built from the multi-theoretical framework, capital pillars of the SLF, and the study findings. Figure 58 illustrates that this study believes that the vulnerability reduction and resilience capacity of female entrepreneurs is determined by different capital attributes which include human capital, social capital, economic capital, natural capital, and institutional capital. As indicated in Figure 4.50 of Section 4.6.2, the AGAPE Foundation and the University of the Free State (QwaQwa campus) play pivotal roles in providing both human capital and social capital. AGAPE Foundation and the UFS-QwaQwa provide female entrepreneurs in QwaQwa with training and workshop opportunities that enable female entrepreneurs to gain business-related information, knowledge, skills, and expertise. Furthermore, they also connect them with useful NGOs and other government organisations. They also provide them with skills on how to gain support from families, NGOs, and the government. Lastly, they both train them

how to collaborate and form partnerships and networks. Figure 58 shows how the vulnerability reduction and entrepreneurship resilience of female entrepreneurs are shaped by the SLF.

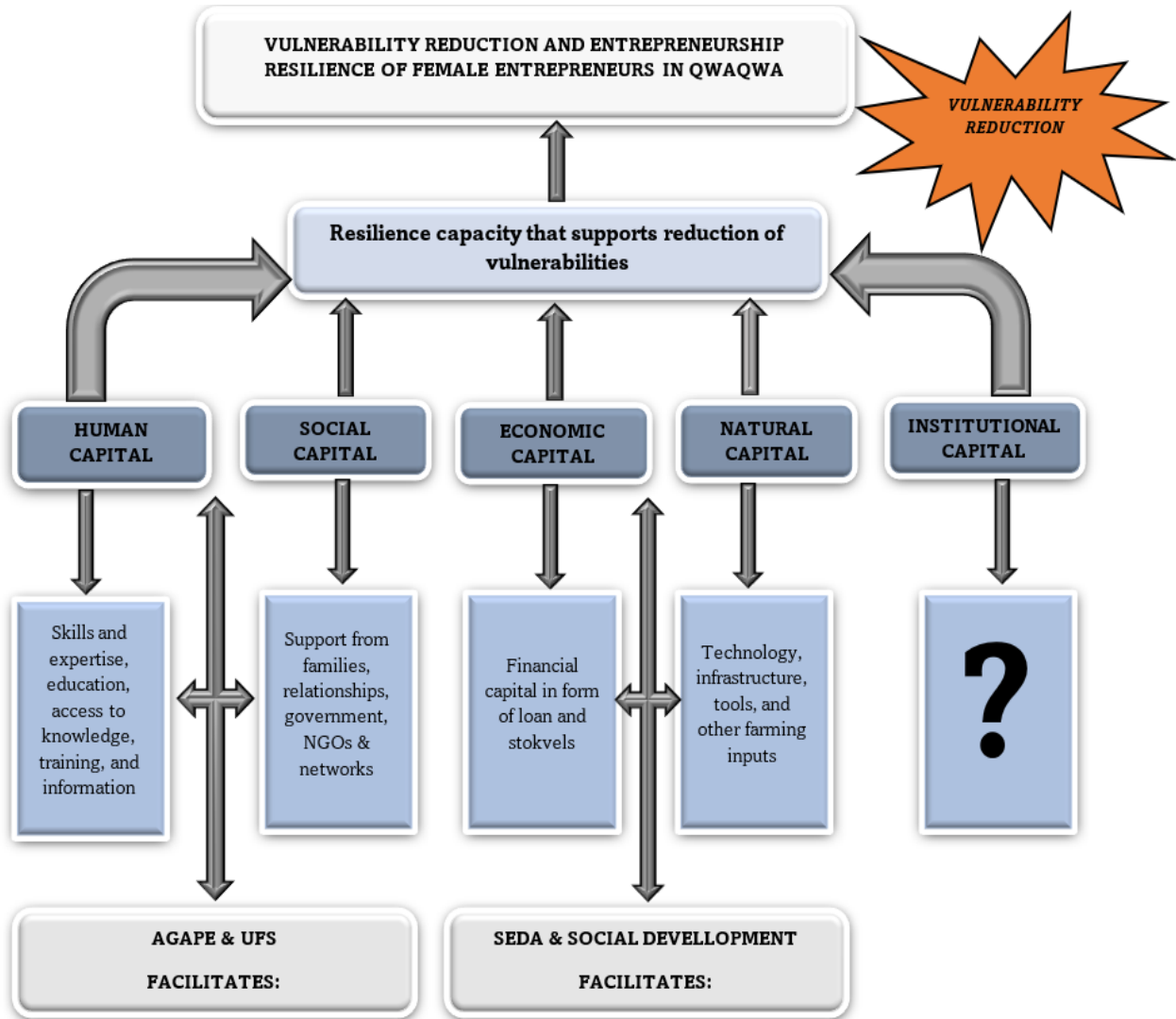


Figure 58: Entrepreneurship Resilience and Vulnerability Reduction of Female Entrepreneurs in QwaQwa.

As indicated in Figure 58 and evidenced in Section 4.6.2, government organisations like SEDA and DSD, as indicated in the model above, play significant roles in enhancing the vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa. In addition, they provide both economic and natural capital that is necessary for vulnerability reduction and entrepreneurship resilience of female entrepreneurs in QwaQwa. They provide information on how to access funding, financial credit, and loans from the Bank. Additionally, they provide guidance to female entrepreneurs in QwaQwa on how to apply for business permits, register businesses, and acquire title deeds. The DSD also provides financial support to female

entrepreneurs involved in farming projects in villages like Monontsha in QwaQwa. SEDA and DSD both play pivotal roles in providing valuable business inputs like farming tools, seeds, and chemicals. However, not all female entrepreneurs in QwaQwa benefit from the training, information, and knowledge offered by DSD and SEDA. As stated in the Section, some participants though they attended these workshops and training, never understood since discussions would be conducted in English. Though English is regarded as a universal language, older people who do not have formal education cannot speak or understand English.

However, this study found that female entrepreneurs in QwaQwa lack institutional capital in terms of access to business permits and certificates, title deeds (land ownership), regulations, effective policies, and frameworks that can assist them to reduce their vulnerabilities and build stronger resilience. Due to the lack of institutional support and other multidimensional vulnerabilities mentioned in the previous sections, female entrepreneurs in QwaQwa have lower vulnerability reduction and entrepreneurship resilience capacity. It should be noted that the information presented in Figure 58, assisted in the development of the vulnerability reduction and entrepreneurship resilience model presented in Section of the next chapter.

4.9. Conclusion

The findings presented in this chapter were collected through semi-structured face-to-face in-depth interviews, FGDs, transect walks, life history narratives, and images. A GIS hotspot analysis was also conducted to map entrepreneurship and vulnerability hotspots and cold spot zones in Bluegumbosch, Makwane, Matsikeng, and Monontsha. As presented in this chapter, entrepreneurship resilience is a complex system whereby entrepreneurs, when confronted with traumatic events, arrange a host of protection and implement coping and adaptation strategies. Female entrepreneurs in QwaQwa are exposed to a plethora of vulnerabilities which include COVID-19, climate change (floods, water scarcity, weeds, pests, and diseases as well as global warming which leads to heatwaves and scorching of plants and vegetables). Though to a lesser extent, this study found that female entrepreneurs in QwaQwa can reduce their vulnerabilities and build entrepreneurship resilience through various forms of capital which include, human capital, social capital, economic, capital, and natural capital. In relation to institutional capital, this study found that there is little support from the government in terms of effective policies that empower all women in all villages of this study. Coloniality also emerged as a new theme that contributes

to the vulnerability exposure of female entrepreneurs in QwaQwa. In simple terms, English was declared a universal language by the colonisers many years ago. As a result of using English as an official language in workshops and training, the majority of the older people are left out of communication, and this makes them lose important information and knowledge that could contribute a positive change to their livelihood strategies. The issue of coloniality calls for a decoloniality of English as an official language in African societies. The next chapter presents a discussion of the findings presented in this chapter.

CHAPTER FIVE: DISCUSSION OF THE STUDY FINDINGS

5.1. Introduction

This chapter presents a discussion of the study findings that were presented in Chapter Four of this study. The previous chapter presented findings on the livelihood strategies of female entrepreneurs in QwaQwa, vulnerabilities encountered by female entrepreneurs in the study region, entrepreneurship resilience, and vulnerability reduction strategies implemented by female entrepreneurs in QwaQwa, entrepreneurship hotspot analysis in the four villages where participants of this study were selected and an entrepreneurship resilience and vulnerability reduction model developed specifically for the female entrepreneurs in QwaQwa. In relation to the study findings, this chapter first discusses the study findings on the livelihood strategies of female entrepreneurs in QwaQwa, followed by the vulnerabilities encountered by these female entrepreneurs, then entrepreneurship resilience and vulnerability reduction strategies implemented by female entrepreneurs in QwaQwa. It also discusses the entrepreneurship hotspot analysis of female entrepreneurship in QwaQwa and the entrepreneurship resilience and vulnerability reduction model developed by the researcher for the resilience of female entrepreneurs in QwaQwa. Below is a discussion of the livelihood strategies of female entrepreneurs in QwaQwa.

5.2. Livelihood Strategies of Female Entrepreneurs in QwaQwa

Though research on female entrepreneurship in the Afromontane region is still in its infancy stage, female entrepreneurship is growing at a rapid rate, particularly in the informal sector. This study found that the majority of female entrepreneurs are necessity-driven and operate informal livelihood strategies to alleviate poverty, change their livelihoods, and generate some profit for future purposes. According to Shoma (2019), female entrepreneurship offers great opportunities for people mostly in the informal sector globally by creating unskilled to semi-skilled job opportunities and opportunities to achieve self-esteem and self-efficacy. However, Mulatu and Prasad (2019), argue that female entrepreneurship is taking a comparative approach whereby female entrepreneurs are ‘benchmarked’ and undermined as compared to their male counterparts. In most marginalised African regions, women are viewed as underperforming in workplaces and entrepreneurial spaces (Nziku et al., 2022). In Section 2.4.6, Muyambo et al. (2024b) argued that female entrepreneurs are undermined and deprived of basic services and opportunities that can

improve their livelihoods. This has also been found to be true as the study participants in Section 4.5.2 indicated that they are viewed as underperforming and inadequate, hence they are denied access to resources, basic services, and opportunities that can contribute to the growth of their livelihood strategies.

Most of the livelihood strategies of female entrepreneurs in QwaQwa are not registered and they operate in poor environments, in the informal sector. As indicated in Section 4.5.4, most of the necessity-driven female entrepreneurs in QwaQwa have little or no access to financial capital due to lack of funding, lack of land, and access to collateral as well as lack of access to funding opportunities. As a result, they are forced to operate and remain in low capital livelihood strategies.

As found by this study and presented in Section 4.4.7.5, female entrepreneurs in QwaQwa encounter multidimensional vulnerabilities and have a very high vulnerability exposure. The majority of these female entrepreneurs are exposed to vulnerabilities due to various factors. For instance, this study found that there is a lack of basic service supply, and support networks tailored to the needs and resilience of female entrepreneurs. According to Mosotoane (2022), with little or no basic services like electricity and water as well as network opportunities, female entrepreneurs in QwaQwa struggle to reduce their vulnerabilities and build stronger resilience. In addition to their vulnerabilities, most of the interviewed female entrepreneurs indicated that they have limited entrepreneurial education due to a lack of training opportunities. This has affected their skills and knowledge of leading successful livelihood strategies. As indicated in Section 4.5.4, balancing entrepreneurial responsibilities with family duties is a huge turmoil for most female entrepreneurs in QwaQwa due to their cultural norms and beliefs. The majority of them indicated that at times they fail to attend workshops organized by the AGAPE and SEDA due to family demands. The married female entrepreneurs indicated that culturally, they are restricted from traveling to far places for business purposes or to look for resources, leaving their husbands and children behind. Such restrictions worsen their vulnerability exposure.

Though these female entrepreneurs encounter vulnerabilities that hinder their growth and sustainability, they never give up. According to existing literature, female entrepreneurship is the driver of economic development, poverty alleviation, and provision of employment and economic growth (Diop et al., 2018; UN Women, 2018). Similarly, female entrepreneurs in QwaQwa are necessity-driven entrepreneurs who use entrepreneurship as a tool for alleviating poverty and

sustaining their livelihoods. Diop et al. (2018) articulate that most female entrepreneurs are dominant in the informal SMEs, and they usually depend on resources that are climatically sensitive, and highly exposed to climate change impacts. In Section 2.4.8, Raniga (2017) highlighted that most of these female entrepreneurs in South Africa operate informal or small-scale livelihood strategies like farming (crop and livestock production) and trading. This has also been found to be the case in QwaQwa where the majority of the female entrepreneurs in the informal sector are concentrated on a variety of livelihood strategies like farming (market gardening, poultry, piggery, crop and livestock production), food services, tuck-shops or spaza-shops, and street trading (see Section 4.4). However, as indicated in Section 4.5.9, most of their livelihood strategies highly depend on resources that are highly vulnerable to climate change impacts. For example, this study found that most female entrepreneurs concentrate on rain-fed agriculture which is climatically sensitive and prone to climate change impacts like water scarcity due to reduced rainfall patterns, global warming which results in heatwaves and sun scorching. Due to the nature of their entrepreneurship, which is necessity-driven, thus these female entrepreneurs focus more on farming-related livelihood strategies. They do so to increase food security for their families. They also operate more than one livelihood strategy to alleviate poverty and be able to improve their livelihoods.

Though the female entrepreneurs in QwaQwa are engaged in necessity-driven entrepreneurship, they have gained their economic empowerment and no longer rely on their families or government to support them. Being economically empowered has led to a major shift in the traditional gendered roles and responsibilities by giving female entrepreneurs more power to make decisions regarding their livelihoods. The interviewed female entrepreneurs also indicated that due to their engagement in entrepreneurship, they are now viewed as role models for the young girls and other women in their community, therefore challenging the traditional male bias of viewing men as the sole providers of the family.

The findings of this study reveal that female entrepreneurship in QwaQwa has spurred economic growth and development in their community. For instance, as indicated in Section 4.4.7.5, Project X and female entrepreneurs in villages like Bluegumbosch and Makwane managed to hire their fellow community members to do casual work on their farms. Besides job creation, as highlighted in Figure 27, female entrepreneurs provide food services to their communities at affordable prices.

Unlike the bigger formal shops like Shoprite, Spar and Pick n Pay, female entrepreneurs in informal sectors like QwaQwa allow their customers to buy on credit. This shows that their services are always available to the community. Given this, it is good to acknowledge female entrepreneurs in the informal sector as crucial players in improving employment, food security, and economic growth. This is also supported by the GEM (2023) which in Section 2.4.1 states that female entrepreneurs are large contributors to food security and economic growth in most African countries. Nishimwe-Niyimbanira (2020) also stated that through entrepreneurship, women in developing countries have been able to create jobs and participate in economic growth and sustainable development.

Given the findings and arguments highlighted above, it can be said that female entrepreneurship in QwaQwa has assisted in economising the traditional roles of women by encouraging economic growth and community development. Furthermore, this study asserts that such contribution to economic growth by informal female entrepreneurs shows how female entrepreneurship can be used as a tool to decolonise traditional beliefs and norms that oppress women and view them as sole caretakers of their families. As a result, female entrepreneurs, particularly necessity-driven, should be given adequate support and resources to reduce any vulnerabilities they are exposed to and build stronger entrepreneurship resilience.

However, though female entrepreneurs play a crucial role in alleviating poverty, creating jobs, boosting the economy, and developing their communities, due to higher vulnerability exposure, most of these women in marginalised regions of the Afromontaane, particularly QwaQwa, still operate in a difficult and hostile cultural and socio-economic context. Given such a hostile environment, it becomes challenging for these female entrepreneurs to reduce their vulnerabilities and build stronger entrepreneurship resilience. Furthermore, due to higher exposure to multidimensional vulnerabilities, female entrepreneurs in Afromontane communities like QwaQwa have proven to have a great challenge in growing. Only a few of these entrepreneurs in QwaQwa are well-versed in registered businesses in the formal sector.

In view of this, Fineman (2024) in his Vulnerability Theory in Section 2.5.2, argued that human beings cannot escape vulnerabilities because they were born vulnerable. Furthermore, he states that some vulnerabilities are beyond the control of human beings. For example, vulnerabilities like climate change and diseases come anytime and cannot be controlled by an individual. In order to

reduce such vulnerabilities and build stronger resilience, in Section 2.5.3.3, scholars like Robeyns and Byskov (2023) highlighted that people need to have adequate education, skills, capabilities and networks.

As understood by the UN Women (2018) in Section 2.4.8, livelihood strategies denote a combination of various activities that people undertake to reduce their vulnerabilities. As presented in Section 4.4, female entrepreneurs in QwaQwa have resorted to various livelihood strategies to alleviate poverty, empower themselves, and create job opportunities for others in their community. The majority of the female entrepreneurs in QwaQwa operate more than one livelihood strategy and they consider some of their livelihood strategies as safety nets to safeguard them and generate some extra profit for strengthening their resilience. The livelihood strategies of female entrepreneurs in QwaQwa include tuck shops or spaza shops, street trading (street vendors), tailoring and boutiques, recycling, selling firewood as well as operating farming livelihood strategies like poultry keeping, market gardens, dairy, and piggery.

This study found that most agriculture-related or farming livelihood strategies in QwaQwa are dominated by female entrepreneurs, who also provide hard labour without any help from men. Despite the female entrepreneurs dominating the informal agricultural sector, Section 4.5.2 indicated that they have little support from the government and little or no access to resources like land. As supported by the 'World Bank', 'Food and Agriculture Organization (FAO) of the United Nations', 'International Food Policy Research Institute (IFPRI)' as well as other multinational actors (African Union Development Agency-NEPAD (AUDA-NEPAD), 2021), this calls for urgent need to support female entrepreneurs operating both in the formal and informal agricultural sector. Supporting female entrepreneurs would assist in closing the gap in female entrepreneurs' vulnerability to lack of resources, lack of support, and lack of financial capital to access agricultural assets.

The United Nations Sustainable Development Goals (SDGs) and the Africa Union's Agenda 2063 advocate for women empowerment, gender equality, and food security in Africa's agriculture (AUDA-NEPAD, 2021). This highlights the nexus between gender equality, women empowerment, and food security and its significance for promoting sustainable development in Africa. Addressing gender inequalities promotes women's empowerment and participation in agricultural-related livelihood strategies. Hence, to improve food security in Africa, women should

also be empowered with entrepreneurial opportunities and resources that will allow them to be productive in agricultural activities. In the context of this study, improving food security in QwaQwa involves promoting the involvement of female entrepreneurs in agricultural activities and enhancing their resilience to climate change impacts.

As found by this study, female entrepreneurs in QwaQwa play a crucial role in the production and distribution of food services. The livelihood strategies they are operating improve food security and assist in alleviating poverty. For instance, in Section 4.4, most female entrepreneurs in this study indicated that the income they generate helps them buy food, pay school fees for their children, and take care of their families' needs. Female entrepreneurs in Section 4.7.4 indicated that they produce vegetables (Table 7) for both selling and family consumption. Furthermore, they indicated that they supply vegetables, chicken, pork, eggs, and milk to local supermarkets, households, and other businesses in QwaQwa. All female entrepreneurs involved in this study reported that their livelihoods have improved ever since they started operating these various livelihood strategies. In view of this, it does suffice to believe that female entrepreneurship is a significant tool for alleviating poverty and building sustainable communities in marginalised Afromontane regions. Although their livelihoods have improved, these female entrepreneurs are exposed to various vulnerabilities that affect their growth and resilience. Below is a detailed discussion of the vulnerability exposure of the female entrepreneurs in QwaQwa.

5.3. Vulnerabilities of Female Entrepreneurs in QwaQwa

As argued by the GEF (2019) the context of vulnerability entails the seasonality, shocks, and trends which affect people's livelihoods. In this study, as described by participants, vulnerability makes female entrepreneurs unable to cope and adapt to shocks and adversities when they hit them. They also make them unable to build entrepreneurship resilience and unable to benefit from their livelihood strategies. As argued by the UN (2024) in Section 2.4.2, vulnerabilities are formed by a multifaceted mixture of environmental, economic, and socio-cultural forces.

5.3.1. Multidimensional Vulnerability Index of Female Entrepreneurs in QwaQwa

In Chapter Two of this study, Section 2.4.2.1 presented a global MVI developed by the UN (2024). This global MVI shows various vulnerabilities that female experience globally. In line with this

global MVI, this study developed a local MVI (Figure 59) that shows the multidimensional vulnerabilities experienced by female entrepreneurs in QwaQwa. These multidimensional vulnerabilities have been classified into four dimensions which are environmental, natural, economic, and socio-cultural vulnerabilities.

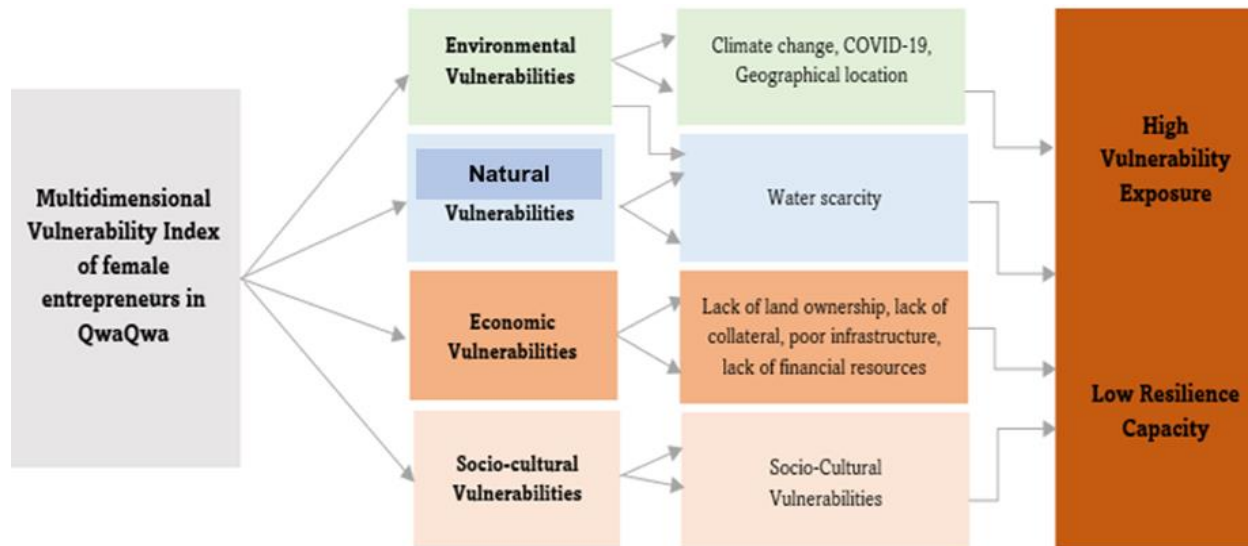


Figure 59: Multidimensional Vulnerability Index of Female Entrepreneurs in QwaQwa.

In identifying the vulnerabilities experienced by female entrepreneurs in QwaQwa, the researcher applied the vulnerability theory of Martha Fineman presented in Section 2.5.2. This theory provided a comprehensive foundation for understanding female entrepreneurs' exposure to vulnerabilities and it irradiated multidimensional vulnerabilities ranging from environmental, natural, economic, and socio-cultural factors (see Figure 59). As indicated in Table 1 of Section 2.2.2, various indicators of vulnerability make the concept of vulnerability multidimensional. These include environmental indicators, economic indicators, social indicators, cultural indicators and political indicators. However, as argued by the UN (2024) in Section 2.4.2, vulnerabilities are not naturally induced, but people are made susceptible to them because of environmental, natural, economic, cultural, and social influences. As found by this study (see Figure 59), female entrepreneurs in QwaQwa are exposed to multidimensional vulnerabilities which are linked to indicators like environmental vulnerabilities, natural vulnerabilities, economic vulnerabilities, and socio-cultural vulnerabilities. The section below gives a detailed discussion of how each type or indicator of vulnerability has affected the livelihood strategies of female entrepreneurs in QwaQwa.

5.3.1.1. Environmental Vulnerabilities Experienced by Female Entrepreneurs in QwaQwa

The concept of environmental vulnerability encompasses the challenges experienced by individuals due to environmental factors. As understood by Husna et al. (2019), environmental vulnerability refers to the exposure to the negative impacts of environmental ‘variability’ and the extent to which a community or individual can cope with, resist and recover from the impacts of a particular environmental event. In the case of QwaQwa, the environmental vulnerabilities affecting the resilience of female entrepreneurs include climate change and geographical location.

5.3.1.1.1. *Climate change impacts*

As suggested by reviewed literature (Bello, 2019; Nambiar et al., 2020), the majority of female entrepreneurs in South Africa are confined to SMEs in the informal sector, with high exposure to climate change-induced vulnerabilities. This has been found to be true in QwaQwa as most female entrepreneurs mentioned that they operate small and unregistered businesses that are easily impacted by climate change. The scholars cited above also argued that these female-owned businesses tend to be concentrated in business sectors like small-scale agriculture, which rely on the availability of rainfall and moderate temperatures (Funmbi et al., 2022). However, due to the rapidly changing climate, most of these livelihood strategies find it difficult to grow and increase their productivity.

In this study, the Vulnerability Theory presented in Section 2.5.2, provided two major reconceptualisations of the concept of vulnerability in the climate change context by indicating how the vulnerability of female entrepreneurs to climate change is universal and distributed in QwaQwa. According to Kotzé (2019), climate change universally underlines vulnerability and affects diverse groups of people in different ways. Concerning universal vulnerability, Fineman (2024) argued that nobody is immune to vulnerability, and vulnerability exposure and intensity differ from person to person. This has been found to be true as all interviewed female entrepreneurs in QwaQwa indicated that they are vulnerable to climate change. However, the degree of exposure from participant to participant is different because of the type of livelihood strategies they operate as well as the vulnerability reduction and resilience capacity of an individual. This is also supported by Davies (2019) who argues that the impacts of climate change vary from place to place. For example, in Monontsha village in QwaQwa, the female entrepreneurs involved in farming are invaded by pests and diseases due to excessive rainfall. They also experience

unexpected weather changes like snowfall between July, August, and September. Snow, pests, and diseases invade farmers' crops and vegetables. Challenges like financial instability worsen the vulnerabilities of female entrepreneurs in QwaQwa as they do not have enough money to buy pesticides and structures to prevent plants from being destroyed by snow. Monontsha is located along the border of Lesotho, where there are higher occurrences of snowfall. As a result, female entrepreneurs in this village experience intensive impacts of snow more than entrepreneurs in the other villages of QwaQwa which are located a bit further away from Lesotho.

Davies (2019) argued that some female entrepreneurs are exposed to climate change impacts because of their geographical locations. For instance, Bluegumbosch and Makwane are covered by a mountainous landscape, and thus during excessive rainfall, female entrepreneurs in this village experience flooding more than entrepreneurs in Monontsha. Below the first layer of the soil, there is an underlying rock that discourages water infiltration. Due to poor infiltration, excessive water is washed away leading to floods, soil erosion and loss of soil fertility. As indicated in Section 4.5.10, due to the nature of the topography most crops and vegetables in both Bluegumbosch and Makwane experience stunted growth (Figure 47) as compared to crops in Monontsha. This makes them more prone to and less resilient to floods. As floods destroy female entrepreneurs' crops, vegetables, and livestock, they also lead to the destruction of business properties and resources. As highlighted in Section 4.5.11, floods in Bluegumbosch are worsened by the slope which encourages excessive surface run-off due to its steepness.

Eekhout et al. (2018) argue that climate change does not only lead to increased temperatures but also affects rainfall patterns. These scholars also found that the Maloti-Drakensburg in the Afromontane region during the last century has experienced differences in rainfall variability. In some seasons, the region received excessive rainfall that led to flooding. Furthermore, on other occasions, the Maloti-Drakensburg region experienced drought due to reduced rainfall patterns. Figure 60 indicates differences in rainfall variability for the QwaQwa area in the previous years as found by Avenant et al. (2023).

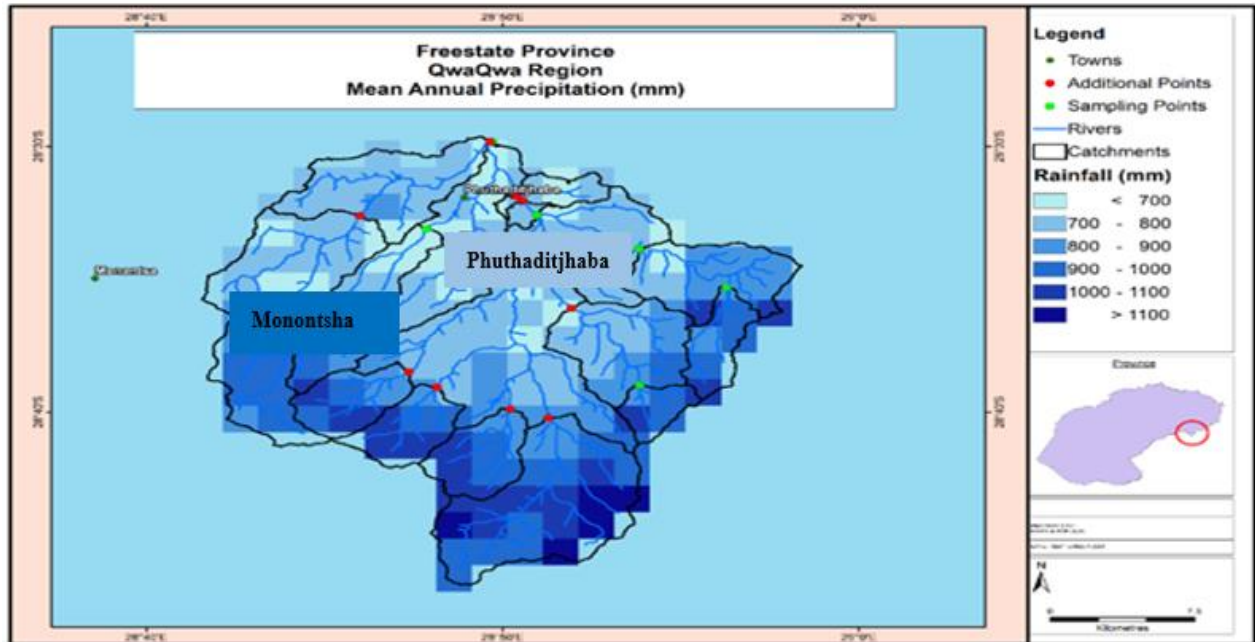


Figure 60: Historical Rainfall Variability in QwaQwa

As shown in Figure 60, QwaQwa in 2016, has been receiving a mean annual rainfall of about 700mm to 1100 mm. As presented in Figure 60, in 2016, Monontsha received more rainfall than Phuthaditjhaba. As shown in this figure Monontsha received about 900-1000 mm of rainfall while Phuthaditjhaba received about 700 to 800mm of rainfall. Such variations in rainfall patterns confirm the findings of this study that the impacts of climate change vary from place to place. For instance, Monontsha in this figure is more likely to receive excessive rainfall that could lead to floods than Phuthaditjhaba. Figure 60 explains why more female entrepreneurs in Monontsha are involved in farming than in the other three villages (see Table 7).

This study found that female entrepreneurs in QwaQwa have been receiving unexpected excessive rainfall and snow which seriously affected their livelihood strategies. For instance, some female entrepreneurs in Section 4.5.9.2, reported that they lost their pigs, chickens and crops due to floods that occurred in 2021. Figure 61 presents the average rainfall in mm for Phuthaditjhaba (QwaQwa) in 2024. As shown in this Figure, January received the most rainfall of about 157 mm in an average of 12 to 13 days. As presented in Figure 61, May to September 2024 received little rainfall which also lasted for not more than 6 days. According to Worldweatheronline.com (2024) predicts that December will receive the most rainfall of nearly 160mm in an average of 13 to 14 days (Worldweatheronline.com, 2024).

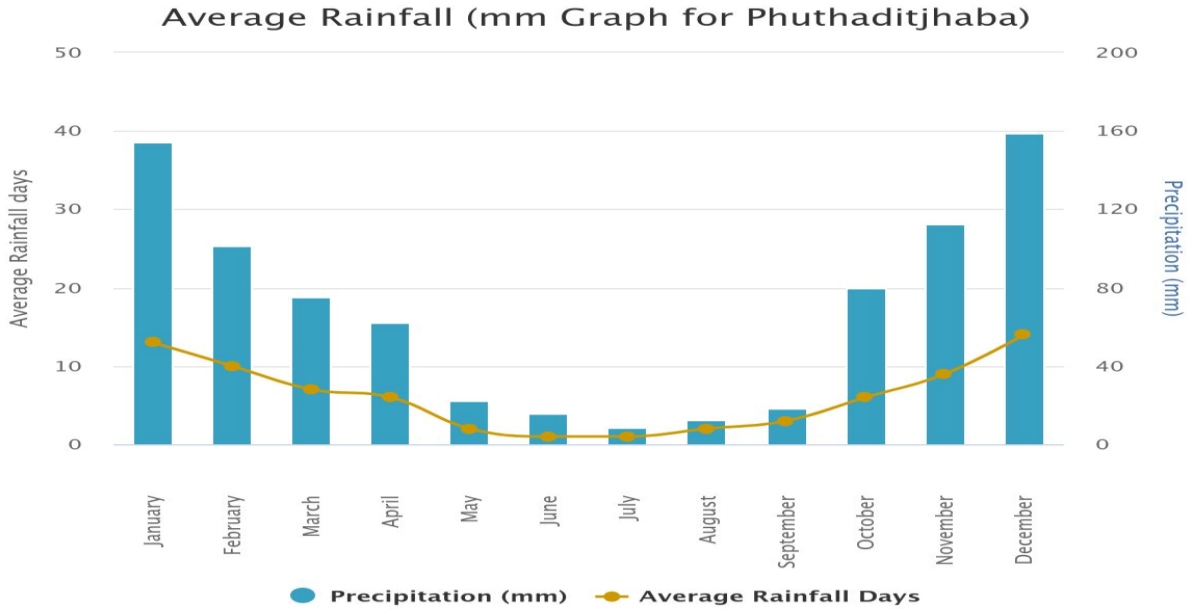


Figure 61: Average Rainfall in QwaQwa in 2024 (Worldweatheronline.com, 2024).

The information presented in Figure 60 and Figure 61, if made accessible to female entrepreneurs, particularly those who are involved in farming can assist them to plan for their next planting season. This information would also assist them in preparing for any predicted vulnerabilities like floods. For instance, if January received an average of 157mm, and December is expected to receive an average of 159mm, then the study participants should be prepared for any challenges that are associated with excessive rainfall patterns.

In summary, the issue of climate change in QwaQwa can be addressed better by implementing SDG 13 (take urgent action to combat climate change and its impacts). Failure to combat climate change, informal businesses will continue suffering from vulnerabilities. As presented in Section 4.4.7.5, female entrepreneurs in QwaQwa do not have advanced technology that can assist them to cope and adapt to climate change impacts. As a result, there is a need for the government and other NGOs to intervene and provide these entrepreneurs with the advanced technology that will allow them to enhance their resilience to climate change impacts.

5.3.1.1.2. COVID-19

In Section 2.5.3, Nielsen and Axelsen (2017) argued that capabilities are crucial for the application of freedom. Furthermore, this Capabilities Approach scholar argued that capabilities as various

combinations of functionings, (doings and beings of a person) can readdress an individual's capacity to accomplish a certain functioning. In the case of this study, the female entrepreneurs in Section 4.5.1 stated that the COVID-19 pandemic limited them to grow their livelihood strategies. Moreover, the lockdown regulations that were implemented limited their freedom to expand their businesses. For instance, in Figure 39, the study participants mentioned various impacts of COVID-19 on their livelihood strategies. Furthermore, they highlighted that they lost their savings due to business closure. Some indicated that they lost their customers because they were forced to close since they did not have business permits and traveling permits to go and buy stock in either Johannesburg or Durban.

As argued by Robeyns (2017) in Section 2.5.3, a lack of freedom hinders individuals in society from obtaining what they value. Given the impacts of COVID-19 on female entrepreneurs highlighted above, it is safe to say that the COVID-19 pandemic limited the capabilities of female entrepreneurs to generate more profit that could sustain their livelihoods and assist them in reducing other vulnerabilities they are exposed to.

5.3.1.1.3. Geographical Location

As articulated by Pagliacci and Russo (2019), geographical location plays a crucial role in the exposure to vulnerability, and areas that are socially and economically disadvantaged are prone to increased vulnerabilities and socio-economic disasters. In addition, the Development Bank of Southern Africa [DBSA] (2023); Funmbi et al. (2022), articulate that most mountain communities in South Africa precisely are disadvantaged. People in these mountain communities lack of basic service delivery and other support systems and processes like communication or mobile network coverage. Thus, due to such challenges, most female entrepreneurs encounter various vulnerabilities that also hinder them from building entrepreneurship resilience. Moreover, African mountain areas are the most vulnerable as they do not have sufficient space for both human settlement and agricultural activities (Funmbi et al., 2022). Relatively, QwaQwa is located in the Afromontane (African mountain) region and is one of the marginalised regions experiencing a lack of service delivery, lack of support from the government, and prone to poverty and inequalities (Avenant et al., 2023). Female entrepreneurs in this study reported that due to their location, the government does not provide enough basic services in terms of electricity and water supply. Most people in QwaQwa are living in poverty, thus they end up resorting to informal necessity-driven

entrepreneurship. Due to their informality, they are exposed to multidimensional vulnerabilities that limit their resilience and sustainability.

5.3.1.2. Natural Vulnerabilities Experienced by Female Entrepreneurs in QwaQwa

Natural vulnerability comprises the condition determined by the natural aspects of the environment which increase the exposure of an individual or community to vulnerabilities (Köhle, Schlögl, & Fuchs, 2019). As indicated in Figure 59, there is a close interrelationship between natural vulnerability and environmental vulnerability. As a result of this close relationship, their effects are interrelated. For instance, as shown in Figure 59, water scarcity is an effect of both environmental and natural vulnerabilities. The natural vulnerabilities affecting the livelihood strategies of female entrepreneurs in QwaQwa as per the study findings include water scarcity and lack of land ownership. These vulnerabilities are discussed in the next section in their respective manner.

5.3.1.2.1. Water scarcity in QwaQwa

In the context of this study, water scarcity has been identified as one of the vulnerabilities affecting the livelihood strategies and resilience of female entrepreneurs in QwaQwa. Its vulnerability component is understood within Amartya Sen's Capability Approach. As presented in Section 2.5.3, the Capability Approach encompasses two standard claims. The first claim entails the freedom to accomplish well-being, and the second one declares that well-being of an individual should be understood in terms of the individual's 'capabilities' and 'functionings' (Robeyns et al., 2023). As noted by Robeyns et al. (2023), capabilities are viewed as doings and beings that an individual can achieve if given freedom and opportunities to do so. In this case, it refers to the capabilities of female entrepreneurs to reduce their vulnerabilities and build resilience. Functionings as understood by Robeyns et al. (2023) is the ability to achieve 'doings and beings'. In this case, it refers to the ability of female entrepreneurs to use their capabilities to reduce vulnerabilities, build resilience, and lead sustainable livelihood strategies. In relation to Sen's argument, people should have the capability to access water to achieve their functions in their society. However, in the case of QwaQwa, female entrepreneurs are experiencing slow growth in their livelihood strategies due to water scarcity. As indicated in Section 4.5.2, poor infrastructure, lack of effective water management policies, and corruption within the water sector of MAP are

the major challenges that affect the capabilities of female entrepreneurs to grow their businesses. Farmers for example, due to water scarcity, they cannot expand the scale of their business. The amount of water that they have in QwaQwa cannot afford them to extend their farming to commercial or large-scale farming. As a result of such challenges, these female entrepreneurs will remain confined in small-scale farming. have a challenge of lack of water due to various reasons.

Water is a vulnerable and scarce natural resource. As a vulnerable natural resource, it becomes not only because of human impacts. As a result of both natural and human factors, water scarcity remains a complex vulnerability to reduce in QwaQwa (Sekhele & Ottomo, 2023). Section 4.5.9.1 has highlighted how climate change is contributing to water scarcity in QwaQwa. This study found that due to increased temperatures (global warming), female entrepreneurs in this study region experience very hot and dry seasons which then lead to excessive evaporation. A study conducted by Avenant et al. (2023), indicates that QwaQwa experiences a mean monthly maximum temperature that ranges between 19° to more than 25°C in summer, and -3°C or less (during snow) to more than 3°C in winter (see Figure 62).

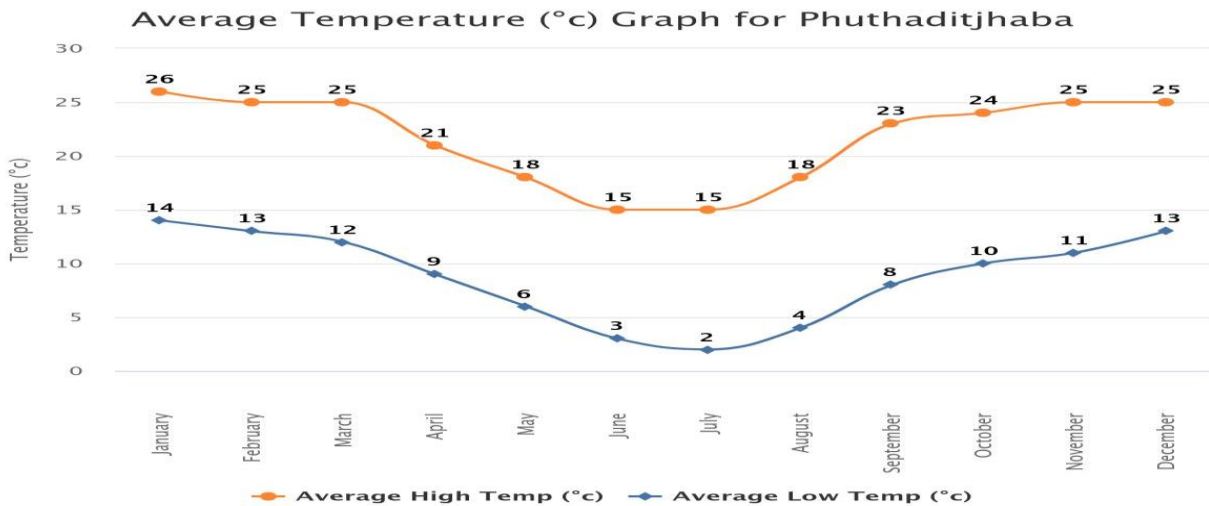


Figure 62: Recent Average Temperature in Phuthaditjhaba (Worldweatheronline.com, 2024).

5.3.1.2.2. Average high and low temperatures in QwaQwa

The Weather Spark (2024) indicates that the warm season in QwaQwa lasts for about four months, that is from November to March, with an average day temperature of 22.8°C (high). The recorded hottest month of 2024 in QwaQwa was January, with an average day temperature of 23.9°C (high)

and 13.3°C (low). QwaQwa’s cold season starts from May till August, with an average day temperature of 17.2°C (high) and 0°C (low) (Weather Spark, 2024).

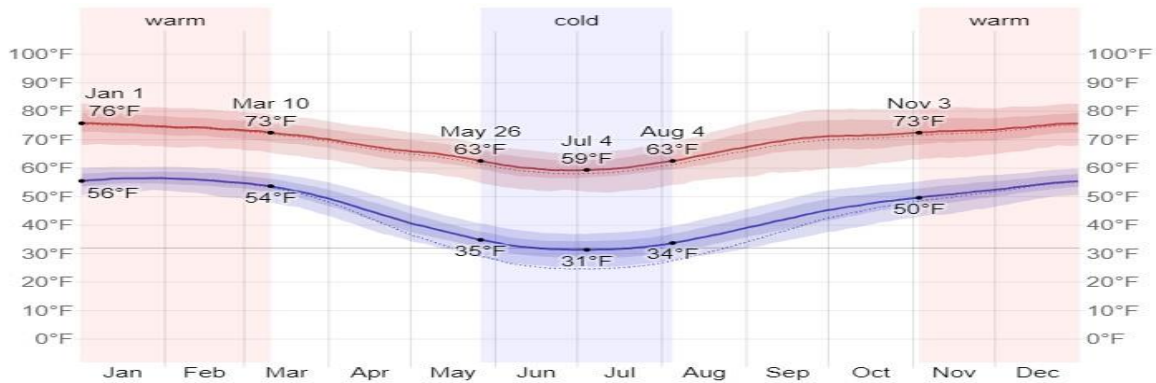


Figure 63: Average High and Low Temperatures in QwaQwa in 2024 (Weather Spark, 2024).

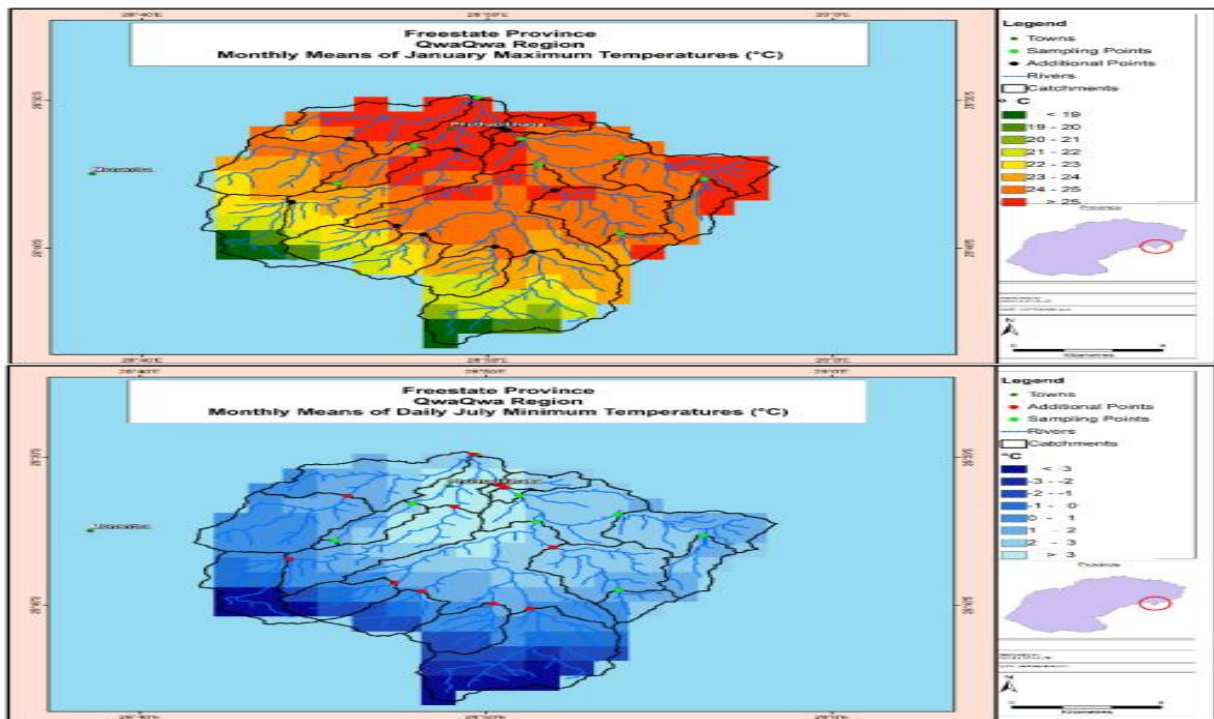


Figure 64: Mean Monthly Maximum Temperature Ranges in QwaQwa in 2023 (Avenant et al., 2023).

As found by the study and confirmed by Avenant et al. (2023), excessive temperatures are accompanied by a very high evaporation rate in QwaQwa. A study conducted by Avenant et al. (2023), indicates a very high evaporation rate recorded in this QwaQwa (see Figure 65). As shown in Figure 66, evaporation in QwaQwa is high, with an annual average of less than 1200 mm to more than 1800 mm. Avenant et al. (2023) reveal that historically, an annual ‘A-pan equivalent

reference' potential evaporation was 1491 mm in a cooler year and 1638 mm in a hotter year. Furthermore, these scholars indicate that most evaporation in QwaQwa occurs in December, with a total of 199 mm, which is equivalent to 6.9mm per day (Avenant et al., 2023). Given such rates, it is safe to say that evaporation contributes to massive loss of water which then leads to water scarcity in QwaQwa.

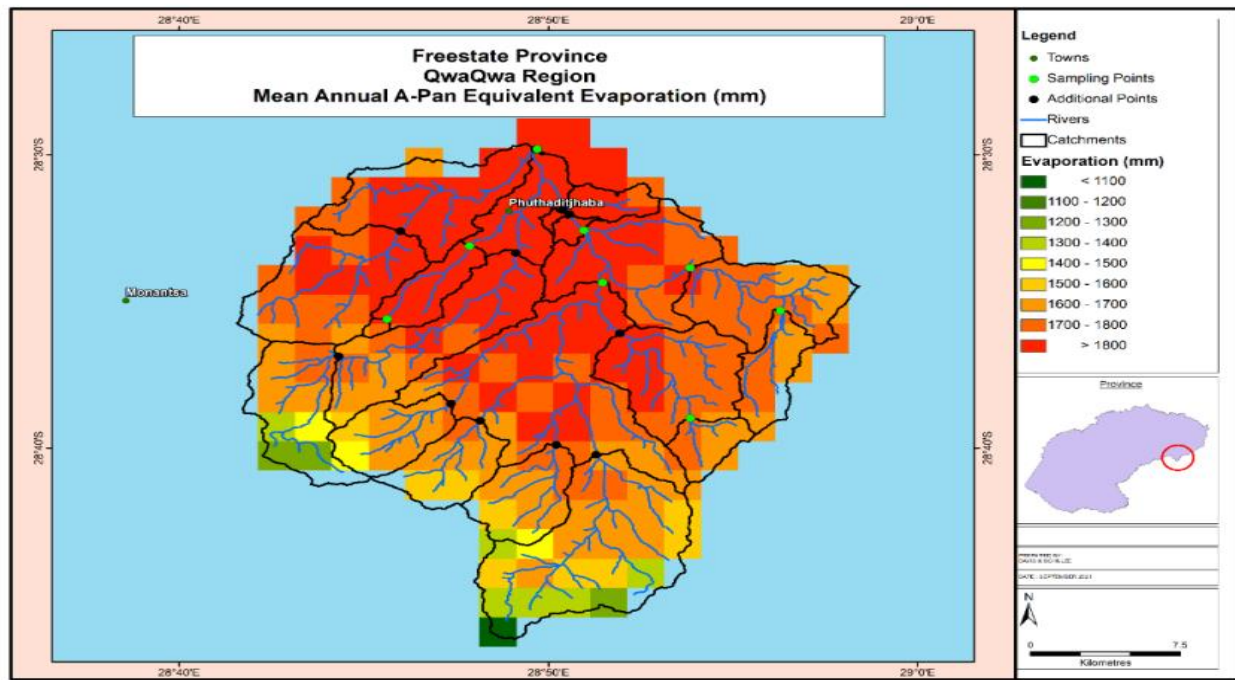


Figure 65: Mean Annual Potential Evaporation in QwaQwa in 2023 (Avenant et al., 2023).

As indicated in Figure 66, most of the open water sources in QwaQwa do not store water for a longer period. Evaporation affects the water table as most water is lost before infiltrating and reaching the underground water table. Due to a reduction in the water table, the soil becomes too dry, hence failing to support plant growth. In relation to this, Section 4.5.9.4, the study participants reported that in summer, they reported that most of their vegetables wilt and die due to sun scorching and lack of enough water supply.

Water scarcity is a serious problem that needs urgent attention. Since female entrepreneurs are producers and suppliers of food in the informal sector, they need to be assisted with resources that can enable them to mitigate the issue of water scarcity. Failure to address water scarcity will lead to reduced food production and supply in most villages of QwaQwa. This will also affect the livelihood strategies of female entrepreneurs in QwaQwa. Given their low resilience capacity and

higher exposure to water scarcity, if this issue is not addressed, female entrepreneurs in the informal sector will be swallowed by bigger businesses like Spar, Pick n Pay, BiBi and Shoprite that value profit more than the livelihoods of people. As presented in Section 4.4.6, this is already happening in QwaQwa. Street vendors for example, reported that during the days when there is no water, they miss a lot of customers because they start their businesses late. They travel long distances looking for water and while looking for water, their customers end up buying in bigger shops like Spar, Pick n Pay, Shoprite and BiBi.

The issue of water scarcity confirms the UN's assertion that girls and women are the most vulnerable as they pay a higher price for water scarcity than men (UN, 2024). In relation to this, female entrepreneurs operating in the informal sector in QwaQwa have been found to be at the forefront of water scarcity as it impacts their ability to maintain their livelihood strategies. For these female entrepreneurs, water scarcity means a more laborious and time-consuming collection of water, placing them at increased vulnerability exposure and prohibiting them from running their businesses

Relatively, from the capability approach's perspective, this study found that water scarcity in QwaQwa limits the functionings of female entrepreneurs as it leads to increased vulnerabilities. The interviewed female entrepreneurs reported that the lack of water has impacted their capability to expand their businesses and acquire opportunities and resources. In Section 4.5.9.1, female entrepreneurs reported that at times they fail to attend entrepreneurial workshops and trainings due to lack of water. Due to not attending workshops, they always miss information and knowledge about opportunities and resources. They also miss important business skills offered by experts during workshops and trainings. The situation of female entrepreneurs is worsened by exposure to other challenges like the economic vulnerabilities available in QwaQwa.

The Vulnerability Theory as stipulated by Fineman and Spitz (2023) in Section 2.5.2, recognises water scarcity as an indicator of environmental vulnerability stemming from a lack of government support. Furthermore, in view of this theory, the government should provide services and policies that enable its citizens to improve their livelihoods. In Section 4.5.2 of this study, the participants indicated that they receive limited support from the government. Furthermore, they highlighted in Section 4.4 and Section 4.5 that, at times they spend two weeks without water in their taps. Thus, they are forced to buy water from the truck tankers who charge them higher prices. Given their

high exposure to multidimensional vulnerabilities, the female entrepreneurs in QwaQwa reported that the lack of policies and initiatives from the government to address the issue of water scarcity in QwaQwa exposes them to other vulnerabilities like financial constraints. This is also supported by Hickey (2023) who asserted in Section 2.5.2 that government institutions contribute to either the vulnerability or resilience of its citizens. Given all the challenges found by this study, it is safe to say that the MAP Water Sector is contributing to the vulnerability exposure of female entrepreneurs in QwaQwa.

The findings of this study revealed in previous sections that due to a lack of effective water policies and frameworks, the female entrepreneurs who operate their livelihood strategies in the informal sector have little or no ability to address the issue of water scarcity. The female entrepreneurs fail to address the issue of water scarcity in QwaQwa because they are never included in the decision-making processes and management of water. This exclusion in water management and decision-making is one of the factors that hinder female entrepreneurs from building resilience to water scarcity in this community.

5.3.1.2.3. Lack of land ownership

As indicated in Section 4.5.2, female entrepreneurs in QwaQwa are exposed to vulnerabilities due to a lack of land ownership. The issue of lack of land ownership in South Africa draws back to the ‘1994 to 1999 Land Redistribution Programme (LRP) and Land Reform Pilot Programme (LRPP), which was aimed at improving the political, social and economic status of women in South Africa. As articulated by Brixiová, Kangoye and Tregenna (2020), the LRPP failed to improve the status of women because women were underrepresented in all institutional structures of this programme. It is because of this failure that female entrepreneurs in QwaQwa are facing more vulnerabilities than their male counterparts. In QwaQwa, for instance, most female entrepreneurs who were part of this study reported that they do not own land. As presented in Section, amongst the 20 female entrepreneurs who were interviewed, only two of them indicated that they owned land. The most cited factor in Section 4.5.2 that hinders women in QwaQwa from owning land is the customary land tenure system of QwaQwa. Female entrepreneurs in this study mentioned that since they do not own land, the only way they access land is through making relationships with men who own land or through renting land from the owners. Furthermore, they indicated that land in this region is owned by chiefs and the rich people who bought from the chiefs.

Section 3.6.2 reveals that during life history narratives and transect walks, the study participants explained the history of land distribution and ownership in their region. They indicated that in 19194, soon after gaining independence from the apartheid government, most women were deprived of the ‘Settlement/Land Acquisition Grant’ which only favoured men and paid to the head of the household. This grant allowed men to access land, and women were to depend on their spouses. Through this grant, men managed to buy large pieces of land for grazing their cattle. In relation to this, Brixiová et al. (2020) reveal that in the Free State province, the Odendaal’s Rust managed to purchase about 1,200 hectares of land and turn it into a farm. While the majority of men bought grazing lands, a few affording single women bought homesteads. As a result, men ended up owning larger pieces of land and most of these men were chiefs who could afford to buy land during that time (Brixiová et al., 2020). Given the social, economic, and cultural factors, most women failed to access and buy land. Some female entrepreneurs in this study reported that they come from poor families and most of them did not have a source of income at that time, thus due to lack of money they failed to buy land. The younger female entrepreneurs also reported that most of their parents and grandparents were also poor and did not own land that they could give to them as inheritance.

From a Capability Approach viewpoint, a focal point of discussing the susceptibility of female entrepreneurs to economic vulnerabilities is the acknowledgment that female entrepreneurs in QwaQwa are functioning not only for the livelihood strategies they operate but of the resilience strategies that are shaped by land ownership. Lack of land ownership as indicated in Section 4.5.2 limits the capabilities of female entrepreneurs to operate successful enterprises and build stronger resilience. Given the nature of land ownership in QwaQwa, this study asserts customary land tenure system has made more women prone to other vulnerabilities in QwaQwa. For instance, some female entrepreneurs indicated that due to a lack of land, they are living in poverty and cannot access other resources that can enable their businesses to grow. The vulnerability theory as presented in Section 2.5.2 served as a valuable and complementary framework for understanding how traditional and communal land ownership affect the livelihood strategies and resilience of female entrepreneurs in QwaQwa.

The existing gaps in customary land tenure restrict a diversity of entrepreneurial activities that shape the livelihoods and resilience of female entrepreneurs. For example, this study found that

female entrepreneurs without land entitlements face challenges in forming market partnerships and associations with other macro enterprises that prefer working with enterprises with secure ownership or entitlements. Also, due to a lack of land ownership, the female entrepreneurs indicated that they will never grow as they are renting small portions of land. Given the land size, they are only limited to small-scale production. In order to close the existing gap in land tenure, land should be equally redistributed to each household in QwaQwa. The government should allocate all farmers enough land that will allow them to grow in terms of production.

5.3.1.3. Economic Vulnerabilities

Guillaumont (2009) defines economic vulnerability as the susceptibility of an individual or community to be struck by economic adversity or shocks caused by social, political, cultural or natural factors. For example, an individual might be susceptible to economic instability caused by political instability, inequalities, and corruption in the government (Guillaumont, 2009). In the case of QwaQwa, female entrepreneurs are economically vulnerable due to a lack of collateral, financial capital, and market. The vulnerability theory was applied in this study to provide an understanding of how female entrepreneurs in this study region are susceptible to economic vulnerability.

5.3.1.3.1. Lack of collateral

As indicated earlier in Section 4.5.4, some of the vulnerabilities female entrepreneurs encounter in QwaQwa, as per the study findings include a lack of collateral. In this case, participants' narratives affirmed the findings of documented literature that access to financial services is tilted more towards men than the majority of African women in business are financially challenged due to lack of collateral (World Bank, 2019). As found by this study, most female entrepreneurs in QwaQwa encounter challenges in accessing funds and financial capital for their livelihood strategies because they do not have the required collateral that can be used in exchange for financial credit or bank loans. As narrated by the study participants, most female entrepreneurs in QwaQwa have little or no asset base, savings, and safety nets that can be used as collateral to access loans and credit to invest in their entrepreneurship resilience.

This study is in line with the findings of the World Bank (2019) which indicate that property rights are usually the most acceptable and common collateral that guarantees credit and loans from banks

and other financial institutions. However, in the case of QwaQwa, this study found that most female entrepreneurs do not have property rights, for example, lack of land ownership combined with socio-cultural beliefs, gender inequality, and male bias restrict most female entrepreneurs from accessing collateral. These hindrances limit female entrepreneurs from attaining economic success and growth and reduce their capacity to build stronger resilience.

5.3.1.3.2. Poor infrastructure

Infrastructure, technology, and market are major aspects of entrepreneurship that enable the resilience of entrepreneurs (UN Women, 2018). According to the World Bank (2019), infrastructure entails electricity, transportation, telecommunications, and water, and these promote sustainable development and economic growth of enterprises within the SME sector. Poor infrastructure limits entrepreneurs from accessing opportunities necessary for adaptation and resilience to vulnerabilities. In the case of QwaQwa, this study found that female entrepreneurs are vulnerable to electricity cut-off problems (national loadshedding and Maluti-loadshedding), which also lead to other challenges like water scarcity and loss of mobile networks (telecommunications cut-offs). As indicated in Section 4.5.7, the roads connecting all four villages that were part of this study are poor and have potholes that affect the transportation system. Due to the poor transportation system, female entrepreneurs in QwaQwa find it difficult to access the market where they can buy inputs, sell their products, and also buy advanced technology.

In relation to technology, participants in Section 4.5.2 revealed that they do not have access to advanced technology that can assist them build stronger resilience to vulnerabilities like climate change impacts. For example, some participants reported that they do not have advanced technology like flexible telemetry and real-time sensors for flood forecasting and early warnings or alerts. Lack of infrastructure, technology, and market limits female entrepreneurs in QwaQwa from reducing the vulnerabilities they are exposed to. For instance, participants mentioned that if they had adequate advanced technology like proper flood warning systems, they would find better ways of managing and resisting floods in QwaQwa. These participants also indicated that due to a lack of proper infrastructure both in their farms and households, they frequently lose their property, livestock, crops, and vegetables to natural disasters like floods. Such challenges limit their chances of accessing information on resilience.

Nyasimi et al. (2017) state that a lack of market access prevents entrepreneurs from adopting innovative climate-resilient technologies and services. Meanwhile, lack of access to resilient technologies like ‘climate-smart’ agricultural equipment, rainwater harvesting, and flood warning technologies are some of the challenges highlighted by female entrepreneurs in this study. As stated by Nyasimi et al. (2017), most of the dimensions that enable business environments are habitually dependent mutually. For instance, poor transportation systems and lack of reliable communication and electricity, limit access to the market for advanced technologies and other business inputs.

5.3.1.3.3. Lack of financial resources

The UN Women (2018) indicates that poverty disproportionately affects mostly women across the African continent, and the impacts seriously hit the enterprise industry. Furthermore, these scholars articulate that most female-led enterprises are quite small and have business capital levels (World Bank, 2019). In case of this study, it was found that female entrepreneurs operate informal smaller livelihood strategies due to a lack of finance and resources like land, water, and business permits. In countries like Nigeria, female entrepreneurs operating in the informal sector experience wider financial segregation due to gender gaps (Ingram et al, 2017). Correspondingly, as indicated in Section 4.5.3 and Section 4.5.4 of this study, it is difficult for female entrepreneurs in QwaQwa to secure funding and other financial resources due to gender inequality, corruption, and bribery. The participants reported that men occupying higher positions and who have much influence in the allocation of resources often demand sex or bribes in exchange for information related to the existing funds that are allocated to empower women in entrepreneurship.

Various scholars (Adebite & Machethe., 2020; Dermirgüc-Kunt et al., 2018) declare that most African women, particularly the older and poor ones in marginalised rural areas have no registered formal businesses or active bank accounts. Access to financial credit remains a vulnerability that hinders female entrepreneurs in QwaQwa from establishing successful businesses and building stronger entrepreneurship resilience. Participants of this study revealed that they also fail to access financial credit and loans due to a lack of collateral that can be used as security in case they fail to pay back the loan or credit. A detailed discussion on how the lack of collateral is affecting female entrepreneurs is provided below.

According to the World Bank (2019), financial capital like climate finance is not well-designed for female entrepreneurs in most African countries. The findings of this study indicate that informal female entrepreneurs in African mountain communities like QwaQwa are marginalised and underrepresented in decision-making and climate finance fora. As stated by participants in Section 4.5.4, the ability of female entrepreneurs to secure financial resources is often restrained by a lack of opportunities that involve female entrepreneurs in decision-making. Participants also revealed that they are never given opportunities to discuss the vulnerabilities they are exposed to and their financial needs.

Twala (2020) articulated in Section 1.6 that business funding is a substantial foundation for business ventures; thus, without funding, female entrepreneurs in marginalised regions like QwaQwa face vulnerabilities that constrain them in their business engagements. Narratives from the study participants revealed the vulnerabilities encountered by female entrepreneurs in QwaQwa, and they are all linked to a lack of financial funding or support in terms of credit and loans from banks and other small business funders. Furthermore, participants revealed that the requirements of most financial funders are stringent. In Section 4.5.4, the findings of this study indicated that banks have very high interest rates that female entrepreneurs in QwaQwa fail to meet. Stringent requirements like collateral combined with higher bank interest rates as indicated in Section 4.5.4 hinder the ability of female entrepreneurs in QwaQwa to obtain financial capital. Due to a lack of financial capital, female entrepreneurs in QwaQwa find it challenging to access markets and other resources that can assist them in reducing their vulnerabilities and building stronger entrepreneurship resilience. This is also confirmed by Etim and Iwu (2018) who indicated that lack of access to market and resources due to financial constraints worsens female entrepreneurs' exposure to other vulnerabilities.

Given the above difficulties, it becomes difficult for female entrepreneurs operating in the informal sector of a marginalised region to grow. Female entrepreneurs need to be empowered with financial capital through funding, loans, and credits. Such capital will allow them to expand their livelihood strategies and be able to establish collateral. According to the Capability Approach in Section 2.5.3.3, expanding their livelihood strategies means providing capabilities, skills, education and network opportunities that improve the well-being and livelihoods of female entrepreneurs (Robeyns & Byskov, 2023). As highlighted by Fineman (2015) in Section 2.5.2, the

government must fund female entrepreneurs in marginalised communities so that they can be independent and depend less on the government. If female entrepreneurs in marginalised regions are empowered, they also empower other people in their communities, hence reducing the rate of unemployment. A reduced unemployment rate reduces the strain on the government and allows the focus to be shifted on other areas of development highlighted in the Sustainable Development Goals (SDGs).

5.3.1.4. Socio-cultural Vulnerability

As presented by Guillaumont et al. (2017) in Section 2.2.2, the social indicators of vulnerability include lack of skills, capabilities, formal education, support, and network opportunities. The cultural indicators of vulnerability include cultural beliefs, values, norms, and practices that hinder an individual from achieving their goals (Table 1 in Section 2.2.2). Given the social and cultural indicators of vulnerability, this study defines socio-cultural vulnerability as the susceptibility of a community or individual to shocks emanating from both social and cultural factors (Figure 59 in Section 5.3.1). Through applying insights from the Capability Approach and Resilience Theory, this study in Figure 50 of Section 4.6.1.1 indicated that female entrepreneurs in QwaQwa are also susceptible to a lack of formal education, skills capabilities, and information due to existing gender inequality and cultural beliefs that value men than women.

Table 4.1 and Figure 4.3 in Section 4.1 indicated that the majority of the female entrepreneurs who participated in this study did not have formal education. As a result, they have higher vulnerability exposure and lower resilience capacity which affects their livelihood strategies. This is supported by Roundy et al. (2017) who stated in the Resilience Theory in Section 2.5.1.1 that individuals with inadequate cognitive skills and capabilities cannot adapt easily to vulnerabilities and adversity. From a Capability Approach perspective, female entrepreneurs in QwaQwa who do not have formal education find it difficult to access the necessary skills, knowledge, and information that can assist them in reducing the vulnerabilities they are exposed to. Furthermore, due to a lack of formal education and skills, these female entrepreneurs cannot function fully and grow their livelihood strategies. For instance, in Section 4.6.1, the findings of this study indicated that female entrepreneurs who lack formal education cannot understand English properly. Due to such constraints, these female entrepreneurs indicated that they tend to miss valuable information and knowledge during training and workshops that are conducted in English.

In Section 4.6.2, the findings of this study indicate that cultural beliefs, values, norms, and expectations play an integral part in exposing female entrepreneurs to other vulnerabilities. For instance, some female entrepreneurs explained that they do not have access to knowledge and information regarding funding and network opportunities. Regarding this limitation, Molo (2018), articulates that lack of education is a major challenge that hinders female entrepreneurs from gaining skills, acquiring knowledge and information, networking, and accessing or applying for funding.

Although female entrepreneurs in QwaQwa have dynamic livelihood strategies, the study findings indicate that female entrepreneurs are vulnerable to gender inequality rooted in their culture that favours patriarchy. Female entrepreneurs in this study indicated that they have been discouraged by their cultural beliefs and norms from attending training offered by SEDA through the AGAPE foundation. Culturally, their husbands expect them to stay at home and operate their livelihood strategies within the home premises while looking after their families and taking care of their children. As a result, these female entrepreneurs indicated that they do not have sufficient knowledge and skills that can assist them in reducing vulnerabilities and enhancing their livelihood strategies.

The Capability Approach in Section 2.5.3.4 highlighted the notion of agency, which is the ability of an individual to make logical decisions and choices about their livelihoods (Robeyns & Byskov, 2023). In this case, female entrepreneurs indicated that without education, skills, and capabilities, they face limitations, especially in the decisions they make regarding the savings they generate from their businesses. According to Nsengimana et al. (2017) as well as Adom and Asare-Yeboah (2017), education empowers an individual to function fully in society. Thus, for female entrepreneurs who have little or no education, it has been challenging to operate their businesses during COVID-19 (Rowling, 2023). For instance, some of these entrepreneurs reported that they failed to operate during COVID-19 because they did not know how to apply for permits that would have allowed them to operate. Moreover, they could not read and understand the COVID-19 regulations and principles since they were written in English (Mbeve et al., 2020).

Skills in this study are understood from a capabilities' point of view in such a sense that they are considered important capabilities that enable an individual to function effectively in a society. Thus, without enough entrepreneurial skills and capability to negotiate, manage businesses and

finances, and market businesses, most female entrepreneurs in this study indicated that they struggled to bounce back after COVID-19. This was exacerbated by a lack of training and mentorship programmes during and soon after COVID-19. Similarly, Cabrera and Mauricio (2017) state that most women in business have a lower rate of business management literacy and higher ignorance as compared to their male counterparts. This usually restricts them from accessing resources, financial credit, and loans as well as opportunities that stimulate business growth and success (Cabrera & Mauricio, 2017).

Insufficient skills, lack of formal education and training opportunities have been found to be the dominant vulnerabilities that affect the livelihood strategies of female entrepreneurs in QwaQwa. Female entrepreneurs involved in livelihood strategies like farming are the most vulnerable because such sectors need advanced knowledge, capital and diverse skills set to increase productive. Atela et al. (2018) argue that without advanced knowledge, resources and skills, it is difficult to mitigate, cope and adapt to vulnerabilities like climate change. Majority of the female entrepreneurs in QwaQwa who are involved in farming indicated that they are susceptible to climate change impacts due to a lack of sufficient knowledge, skills and capital that can assist them to mitigate climate change and enhance their resilience capacity.

In order to understand how female entrepreneurs are susceptible to socio-cultural vulnerabilities, this study also adopted the social resilience from Resilience Theory and analysed the effectiveness of networking opportunities offered by institutions like AGAPE, UFS, and SEDA to female entrepreneurs in QwaQwa. From this analysis, this study found that though female entrepreneurs receive training and networking opportunities from the institutions highlighted above, not all of these entrepreneurs benefit. Only female entrepreneurs who have good networking and communication skills benefit and access information and knowledge on how to reduce vulnerabilities and enhance their resilience capacity.

According to the UN Women (2018) as indicated in Section 2.2.5, entrepreneurship resilience requires access to relevant knowledge and information (UN Women, 2018). In relation to this, Gannon et al. (2018), also asserts that knowledge and information range from business management and financial management skills to vulnerability reduction, entrepreneurship resilience strategies, networking, and resource mobilisation. Such information and knowledge can be obtained from various sources which include formal education, governmental and non-

governmental training, business networks, and workshops (GEM,2023). However, given the challenges presented earlier in this section, this study believes that there is a need for institutions like AGAPE, UFS, SEDA and many more to equip female entrepreneurs in QwaQwa with relevant skills that will allow these female entrepreneurs to access networking opportunities, knowledge and information relevant for reducing their vulnerabilities and building stronger entrepreneurship resilience. Failure to that, female entrepreneurs especially those with little or no formal education will continue experiencing high vulnerability exposure

As indicated by Nishimwe-Niyimbanira (2020) and Twala (2020) in Section 1.5.2.2, QwaQwa is a rural community that values culture and is dominated by a patriarchal system. However, due to this male dominance, this study found that female entrepreneurs are experiencing hindrances in accessing resources and opportunities. Due to a lack of access to resources and opportunities, female entrepreneurs have higher exposure to multidimensional vulnerabilities. As argued by various scholars, gender inequality in the form of gender bias hinders female entrepreneurs from accessing financial capital and natural capital (Balachandra et al., 2019; Shaheen, 2017). In the context of this study, female entrepreneurs confirmed that they are unable to compete with men for financial funding and other resources like land and agricultural inputs. Furthermore, in Section 4.5.4, the findings of this study revealed that when applying for funding and other opportunities, male entrepreneurs are always given first preference as they are culturally viewed as the heads and providers of their families. Most of the older female entrepreneurs who participated in this study indicated that they do not have formal education because they were never allowed to go to school when they were still at their school-going age. In addition, they explained that long back their parents believed that only boys were supposed to seek education while girls were expected to stay at home and learn how to do household duties in preparation for their marriages. Thus, today they are experiencing challenges that emanate from cultural beliefs and values that were created long back before they were born.

Though efforts have been made to address the issue of gender inequality and its negative impact on women's livelihoods, still, there remain multiple limiting regulatory laws, legislative systems, and local policy frameworks that hinder female entrepreneurs from establishing sustainable livelihood strategies. For instance, female entrepreneurs in QwaQwa are not allowed to own land because of this patriarchal inclination policy on BaSotho's land ownership. Given this challenge,

most female entrepreneurs in QwaQwa do not own land but rent it. Unfortunately, these female entrepreneurs cannot rent bigger spaces of land and capitalise on long-term livelihood strategies that would allow them to compete in larger markets.

In order to reduce their vulnerabilities and build entrepreneurship resilience, this study encourages influential institutions like AGAPE, SEDA, DSD and many more to educate men about gender inequality and how it affects the livelihoods of women. They should also teach them about the importance of female entrepreneurship in economic growth and building sustainable communities. Furthermore, the government should develop and implement policies that will empower women to access equal opportunities with men. NGOs and governmental organisations should promote decolonisation of Western ideologies and encourage indigenous knowledge systems (Ndlovu-Gatsheni, 2018). Indigenous knowledge systems will give power to indigenous languages. This can be achieved through encouraging institutions offering training and workshops in rural or marginalised communities to use local languages. Local languages accommodate the uneducated population (uneducated female entrepreneurs in this case) to access valuable information and knowledge that will enhance their skills and allow them to build stronger vulnerability reduction and entrepreneurship resilience capacity.

One of the vulnerabilities affecting the resilience of female entrepreneurs in QwaQwa as found by this study is the lack of policies that empower women and support their livelihood strategies. In understanding how female entrepreneurs are suffering from a lack of policies, this study followed the guidance provided by Martha Fineman in her vulnerability theory. In this study, the Vulnerability Theory as indicated in section 2.5.2, is viewed as a powerful and influential framework for understanding ‘substantive equality’. This theory states that governments should play an affirmative role in responding to vulnerability by guaranteeing that all people equally access institutions that allocate resources (Kohn, 2014). In this sense, the Vulnerability Theory offers an alternative foundation for understanding the responsibility of government in implementing ‘social welfare’ policies. In this case, the role of government is lacking in providing resources and policies that safeguard the welfare of female entrepreneurs in QwaQwa. Female entrepreneurs who participated in this study reported in Section 4.5.2 that they do not have access to institutions that provide resources and the few resources that are available in QwaQwa are unequally distributed. Furthermore, they indicated that resources are unequally distributed because

of a lack of institutional and societal policies that ensure resources are equally distributed in the Maluti-A-Phofung municipality.

Kohn (2014) in Section 2.5.2 states that the Vulnerability Theory in academia has gained recognition as it assists in explaining the foundation of ‘social welfare’ policies and understanding the concept of vulnerability. Fineman in her theory proposes that to play its role of responding to vulnerability, the state or government must offer equal access to societal institutions that allocate and distribute basic services like employment, security, and healthcare (Hickey, 2023).

The Vulnerability Theory in this study provided an understanding of policy in three ways. Firstly, by proposing that ‘vulnerability is a universal condition of the human race’. This relates to the significance of the government in creating policies that promote resilience for all female entrepreneurs. In this sense, it justifies that the local government of the Maluti-A-Phofung should provide laws and policies that reduce vulnerability exposure and sustain the social welfare of female entrepreneurs in QwaQwa. Female entrepreneurs in this study explained that only if the government had implemented policies that empowered them and provided safety nets for all entrepreneurs in their municipality, they would have more capacity to reduce their vulnerabilities and increase their resilience.

Following existing literature that maintains that underrepresentation and exclusion of women in policy and decision-making processes impede their ability to reduce vulnerabilities and build stronger resilience (Atela et al., 2017), the participants in this study also highlighted this gap in policy and decision-making. The female entrepreneurs who participated in this study reported that they are never included in policy and decision-making about entrepreneurial livelihood strategies, vulnerabilities, and resilience strategies. They indicated that there are no policies that accommodate their needs as female entrepreneurs in rural or marginalised regions. Due to a lack of policies and underrepresentation in policy and decision-making, these female entrepreneurs articulated that their exposure to multidimensional vulnerabilities is very high.

Despite these gaps in policy and decision-making exclusion, South Africa has a sophisticated entrepreneurship policy landscape aimed at supporting female entrepreneurs. For example, there are several networks highlighted by Etim and Daramola (2020), that support both formal and informal female entrepreneurs in South Africa and these include the following.

- She Leads Africa:

This is an entrepreneurial ‘incubator’ aimed at enhancing female entrepreneurship in Africa and other continents.

- Africa Women Innovation & Entrepreneurship Forum (AWIEF)

This is an award-winning organisation aimed at empowering female entrepreneurs in Africa to advance their businesses and grow economically.

- The Future Females

This platform assists female entrepreneurs to collaborate and network with one another for easy access to resources, knowledge, information, and skills.

- Dream Girls Academy

This institute provides young girls (youth) and women in business with access to resources, opportunities, personal and professional development, business skills, and information.

- Xtraordinary Women

This platform promotes a community of female entrepreneurs through educational resources and business events.

- Girlhype

This platform offers the youth (girls) from impoverished regions in the tech industry, with the skills to launch successful and long-lasting businesses.

Given all these above support networks in South Africa, it is saddening to discover that none of them are beneficial or accessible to the female entrepreneurs in the Afromontane region, precisely QwaQwa. This lack of support networks in QwaQwa shows that there is an existing gap in policy and representation of female entrepreneurs in the marginalised regions of South Africa. The common local support networks mentioned by the participants of this study include AGAPE, SEDA, UFS, and the Department of Economic Small Business Tourism and Environmental Affairs (DESTEA).

Given this existing gap in policy regarding female entrepreneurship, this study declares that it is strategically significant for the South African government to also target female entrepreneurs in marginalised regions like QwaQwa for policy attention. Furthermore, it is of paramount importance to address the vulnerabilities encountered by female entrepreneurs in these marginalised regions, and how these vulnerabilities are entombed within state policies. This study also highlights an urgent need for governmental involvement in the development and empowerment of necessity-driven female entrepreneurs in the informal sectors of marginalised regions through offering funding and resources necessary for vulnerability reduction and entrepreneurship resilience.

In Section 4.4.7.5.1.2, the findings of this study highlighted the exposure of female entrepreneurs to climate change impacts in QwaQwa. Surprisingly, till today there are no policies that have been put in place to help female entrepreneurs in the marginalised mitigate climate change impacts, reduce their sensitivity to climate change impacts, and build stronger adaptation and resilience to climate change. Furthermore, the study findings presented in Section 4.5.2 indicate that in QwaQwa, women are excluded from decision-making processes about vulnerabilities like climate change, water scarcity, and gender inequality that affect their livelihoods. These findings are in line with the discussions that transpired during the United Nations' meetings on 'Greater Female Participation, Gender-Responsive Approaches Key for Tackling Climate Change, Natural Disasters' in March 2022. During these meetings, it was discussed that climate change responses, environmental degradation, and natural disasters need the active involvement of women, who are largely affected by climate change impacts (UN, 2021). Concerning this study's findings, the United Nations Secretary-General, António Guterres said:

"We are still living with the millennia patriarchal results that exclude women and hinder their voices from being heard".

The above declaration is supported by the UN (2021) which states that women occupy only one-third of the decision-making at the 'United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol, and Paris Agreement on climate change', and 15% only of environmental ministers are females. Globally, only one-third out of 192 frameworks for national energy include gender deliberations (UN, 2021). This shows that issues of gender inequality are less considered in climate change financing. In the case of QwaQwa, female entrepreneurs are less

represented in climate change vulnerabilities that affect livelihood strategies and entrepreneurship resilience. They also mentioned that they encounter gender inequalities that are rooted in the existing patriarchal system in their communities. These challenges limit their capacity to reduce vulnerabilities and build stronger resilience. However, there are no policies that work in their favor and eliminate gender inequality in QwaQwa.

The findings on the vulnerability exposure of female entrepreneurs in QwaQwa also correspond with the work of Swartz, Scheepers, and Toefy (2022), cited by one of the common South African writers, economist, and entrepreneur, *Trudi Makhaya*. In her article, titled *'The Reality of Being a Female Entrepreneur in SA'*, this scholar articulated that some of the gender-related socio-structural vulnerabilities encountered by female entrepreneurs in South Africa include the following:

- Lack of resources and financial capital
- Lack of local 'business-oriented' networks
- Social exclusion
- Domestic or family responsibilities, and
- Cultural beliefs and practices that affect self-confidence and ability to operate successful businesses.

In summary, Ndikumana and Boyce (2021) argue that in most African countries, overall vulnerability is shaped by the interaction of multiple vulnerability drivers. For example, a lack of financial capital weakens the resilience capacity of an individual and hinders investment in other livelihood strategies (Canton, 2021). As indicated by the MVI of this study in Section 5.3.1, Figure 59, female entrepreneurs in QwaQwa are exposed to multidimensional vulnerabilities. Due to a lack of capital and adequate support from the government, they have a higher vulnerability exposure and lower entrepreneurship resilience capacity.

5.4. Entrepreneurship and Vulnerability Hotspot Analysis of Female Entrepreneurship in QwaQwa

This study found that there are major vulnerabilities that female entrepreneurs in QwaQwa are exposed to, and these include climate change, water scarcity, COVID-19, and gender inequality embedded in cultural beliefs and values. For instance, vulnerability to climate change impacts,

largely floods, leads to the destruction of property and houses, disruption of water sources which then affects the supply of water, loss of crops and livestock, loss of human life as well as displacement of people. In the case of QwaQwa, the female entrepreneurs involved in this study reported that they are occasionally exposed to floods that lead to loss of crops and livestock, disruptions of water sources, and destruction of property and infrastructure like houses and roads.

Regarding the issue of water scarcity, the study participants indicated that it leads to poor water quality which then reduces their crop and livestock production. As indicated in Section 4.5.9.1, water scarcity also leads to the spread of diseases, particularly in chickens which then affects the poultry businesses. For example, participants from Makwane reported that they once lost their chickens due to contaminated water from construction sites and reservoirs.

Though the COVID-19 pandemic has already passed, it left people with serious challenges that some are still struggling to recover from. It is an undebatable fact that COVID-19 affected almost everyone's livelihoods globally (Torres et al., 2021). QwaQwa is of no exception as most people, female entrepreneurs, in this case, endured various vulnerabilities induced by COVID-19. As found by this study and supported by various scholars (Torres et al., 2021), during the COVID-19 pandemic era, there was a national shutdown which led to travel restrictions, and the closure of businesses and schools. Female entrepreneurs who participated in this study also confirmed that they had to close their businesses and stay at home. Staying at home increased the workload of most female entrepreneurs, which then reduced their amount of time for operating their businesses. The closure of businesses and schools put a lot of strain on South Africa's economy and the consequences of such strain were largely felt by female entrepreneurs in the poverty-stricken areas like QwaQwa.

As per the COVID-19 regulations, after the lockdown, business owners were expected to work only under specific permits, which they failed to obtain due to a lack of business registration documents (Section 4.5). Since businesses were closed, participants revealed that they had to use all of their savings to survive and buy the recommended medication and other facilities for COVID-19. The majority of the participants indicated that even today, they are still healing from COVID-19 be it emotionally, financially, and psychologically. Only a few participants indicated that they are still struggling to recover from the aftermath of COVID-19 due to a lack of capital.

Other female entrepreneurs indicated that since schools were closed for a longer period, thus they were forced to stay at home and take care of their families. Participants explained that their husbands ordered them to stay at home and perform household responsibilities even when the lockdown was lifted. Additionally, due to travel restrictions combined with cultural limitations, most female entrepreneurs were unable to travel to other provinces to look for resources and other products to sell. Travel restrictions also limited their access to larger markets, knowledge, and information for vulnerability reduction and entrepreneurship resilience. Due to such hindrances, these female entrepreneurs in Section 4.5.1 indicated that their businesses suffered major losses and some of their peers never recovered due to a lack of feasible resilience strategies.

Some participants indicated that COVID-19 complicated their health status in various ways. While other female entrepreneurs complained of weaker immune systems after ailing from COVID-19, some reported that they got sick after taking the mandatory COVID-19 vaccination. Due to such health complications, the affected entrepreneurs reported that they can no longer work for longer hours. When all these factors are combined, they reduce the capital needed by female entrepreneurs to invest in resilience, hence exposing them to more vulnerabilities.

In line with the MVI presented in Section 5.3.1, Figure 66 shows how female entrepreneurs in each of the selected villages of QwaQwa are susceptible to these vulnerabilities (vulnerability analysis).

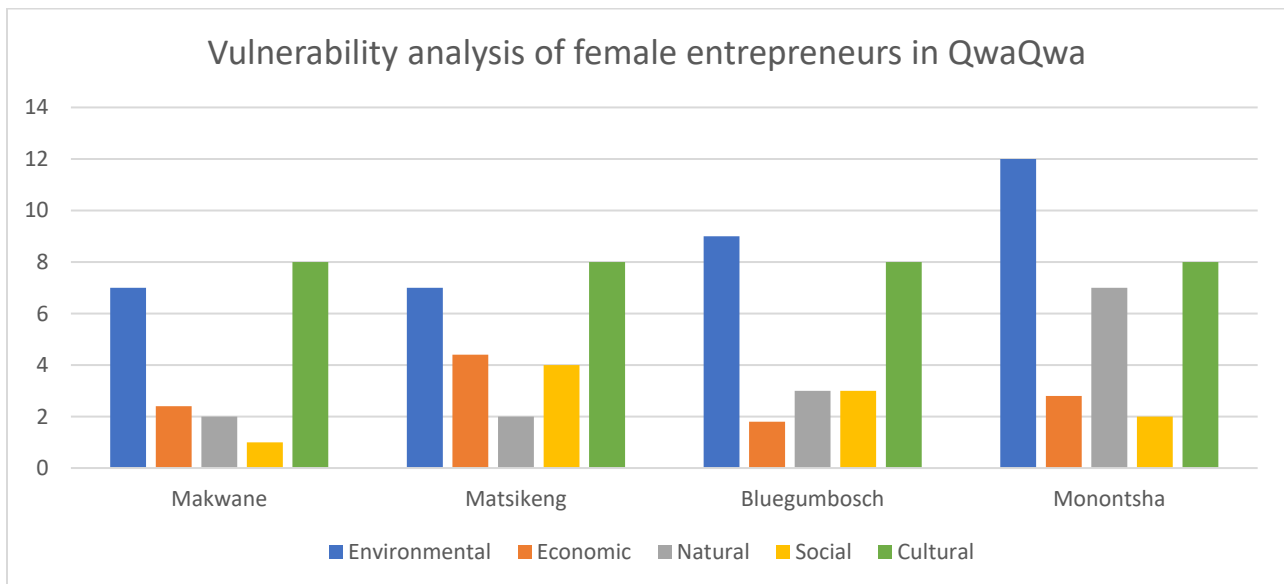


Figure 66: Vulnerability Analysis of Female Entrepreneurs in QwaQwa (Researcher's Findings).

Figure 66 indicates how female entrepreneurs in each selected village of QwaQwa are vulnerable to various vulnerabilities. As shown in the graph above, female entrepreneurs in Makwane village are highly exposed to cultural vulnerabilities and less exposed to social and human vulnerabilities. The reason why their social and human vulnerabilities are low is that the AGAPE Foundation is in Makwane. As explained earlier, AGAPE works collaboratively with the UFS to arrange training opportunities and workshops for female entrepreneurs in QwaQwa. Female entrepreneurs in QwaQwa have also an active women's support group that is monitored by AGAPE. As shown in Figure 5.9, female entrepreneurs in Matsikeng village are more exposed to cultural vulnerabilities than natural vulnerabilities. In this village, the road is tarred and there is easy access to the transport system.

The findings presented above are in line with the works of Funmbi et al. (2022), GEF (2019), and Thomas et al. (2019) who articulate that environmental, socioeconomic, political, social, and cultural factors cause certain people or individuals to be more vulnerable to adversities; and thus, these people later suffer dreadful vulnerability consequences. Funmbi et al. (2022) argue that the core of vulnerability analysis explains the spatial distribution of vulnerabilities in places that are associated with marginalisation or poverty. Some people or individuals are more prone to vulnerabilities than others in the context of various vulnerabilities (GEF, 2019). In the case of QwaQwa, this study found that female entrepreneurs in Monontsha are more vulnerable to environmental and socio-economic vulnerabilities than female entrepreneurs in the other three villages. They are more vulnerable because of their geographical location, which is a bit far from the market, resources, and network opportunities. Moreover, the roads that connect Monontsha with the other three villages and the main town, where there are market opportunities are poor. Monontsha as presented in Figure 57 in Section 4.7.4, is located at the far end near the Lesotho border, and there are electricity issues that also affect mobile networks, hence communication at large.

Entrepreneurship hotspot analysis maps were plotted after analysing all the entrepreneurial livelihood and resilience strategies of female entrepreneurs in QwaQwa and the vulnerabilities that they were exposed to. From the collected data, a vulnerability hotspot analysis was conducted and several significant vulnerabilities that affect the livelihoods of female entrepreneurs in QwaQwa were identified. The entrepreneurship hotspot analysis as indicated in Section 4.7, provided an

understanding of the spatial distribution of female entrepreneurship in QwaQwa. The hotspot analysis enabled the researcher to establish and understand a logical relationship between the spatial distribution of entrepreneurship livelihood strategies and capital in the four villages of QwaQwa. In this study, as identified by the hotspot mapping, the factors that affect the spatial distribution of female entrepreneurship in QwaQwa differ from village to village. For instance, Makwane as presented in Figure 54 in Section 4.7.1, is dominated by female entrepreneurs because these female entrepreneurs wanted to be near the AGAPE Foundation. As stated earlier in Section 4.6.2, the AGAPE Foundation connects female entrepreneurs from QwaQwa with the UFS, SEDA, DSD, and other organisations that offer free business training, information, knowledge, and skills as well as other resources like seeds and fertilisers.

As indicated in Figure 55 in Section 4.7.2, in Matsikeng most of the female entrepreneurs are located along the main road and near schools. Most of the livelihood strategies that they operate include tuck shops and day-care services. Their location is determined by the availability of clients, customers, and market. This means that for their businesses to be successful, they need to be located closer to their clients and other resources.

Figure 56 in Section 4.7.3 indicated that in Bluegumbosch, most of the female entrepreneurs operate farming-related enterprises like market gardens, poultry, piggery, and tuck shops. Farming is dominant in this village because as compared to other villages like Makwane, entrepreneurs can easily access agricultural land through rental processes. As compared to other villages in QwaQwa, Bluegumbosch has plenty of land next to the mountains that is owned by chiefs and leased to entrepreneurs at a lower price. Additionally, water is also available from perennial streams and wells that can be used for agricultural processes (crop and livestock production).

As shown in Figure 57 of Section 4.7.4, Monontsha is located near the geographical boundary of Lesotho. This region receives higher rainfall as compared to other places in QwaQwa. This explains some of the reasons why most entrepreneurs engage in farming projects. They plant crops like maize, that require plenty of water. Additionally, Monontsha is located a bit far away from Phuthaditjhaba, which is the only town for QwaQwa. Because of its location, only a few people reside there, and thus there is plenty of land to operate farming activities like crop production and market gardening. The farmlands or plots in Monontsha are bigger as compared to the ones in Bluegumbosch.

The findings of this study revealed that various factors affect the spatial distribution of female entrepreneurship in QwaQwa. The availability of capital is the most significant factor that determines female entrepreneurship in QwaQwa. In this regard, the study findings as presented in Section 4.6, indicate that the existence of capital in the form of social, human, economic, natural, physical, and institutional capital affects the spatial distribution of female entrepreneurship in QwaQwa. In vice versa, the lack of capital affects the vulnerability exposure in this region as well. As indicated by the hotspot analysis conducted in this study, the villages located within and closer to the cold spot zones are infested with various vulnerabilities that affect the livelihood strategies of female entrepreneurs in QwaQwa.

In summary, reducing the vulnerabilities encountered by female entrepreneurs in QwaQwa remains critical. This study, therefore, encourages development practitioners, policymakers, funders, and other relevant stakeholders to collaborate and assist female entrepreneurs, especially in the informal sector to reduce their vulnerabilities and build stronger entrepreneurship resilience. Such efforts and collaboration will allow female entrepreneurs in marginalised regions like QwaQwa to lead sustainable livelihoods. In turn, sustainable livelihood strategies can also improve the resilience of female entrepreneurs and their capacity to alleviate poverty and hunger in QwaQwa.

5.5. Vulnerability Reduction and Entrepreneurship Resilience of Female Entrepreneurs in QwaQwa

The third objective of this study was to explore the vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa. This goal guided this study toward understanding various strategies implemented by female entrepreneurs in QwaQwa in reducing vulnerability exposure and building stronger entrepreneurship resilience. As presented in the literature review section, Robert Chambers and Gordon Conway in their SLF, assess various vulnerability contexts (Conway, 2022). According to these scholars, a livelihood entails, the capabilities, resources, and activities necessary for an individual to earn a living. However, a livelihood can only be sustainable if an individual can cope, adapt, and recover from adversity (Conway, 2022). In addition, an individual can be sustainable and resilient to vulnerabilities only if they have capabilities, capital, and other benefits like safety nets that provide opportunities for

sustainable livelihood strategies at local, national, and international levels (Cornwall & Scoones, 2022).

Recent studies have identified ways of empowering female entrepreneurs to cope and adapt to heightened vulnerability exposure (Crick et al., 2018; Ganon et al., 2018). For example, these studies have highlighted the need for enabling effective policies, and institutions that support female entrepreneurs in informal sectors. In order to understand the vulnerability reduction and entrepreneurship resilience strategies of female entrepreneurs in QwaQwa, this study was guided by the multi-theoretical framework of this study. As presented in Chapter Two, Section 2.5.4, the multi-theoretical framework of this study is made up of the resilience theory, vulnerability theory, and capability approach.

As argued by the Resilience Theory in section 2.5.1, it is not the nature of vulnerability or adversity that is most significant, but how people deal with or cope and adapt to it. This simply means that when people encounter adversity or vulnerabilities, resilience can help them to bounce back and recover. bounce back. In this study, the resiliency theory provided a framework for understanding the strategies implemented by female entrepreneurs in QwaQwa to reduce their vulnerabilities and build or increase resilience. It also helped in understanding why some female entrepreneurs are exposed to vulnerabilities and have less resilience capacity than others. According to Garmezy (1991), resilience focuses on ‘promotive factors’ that assist individuals to overcome vulnerabilities. Promotive factors are understood as social-ecological factors that actively improve the well-being of an individual and these include resources and assets (Fergus & Zimmerman, 2005). Resources as understood by Hayward et al. (2010) as well as Fergus and Zimmerman (2005) include financial capital, family support, empowerment programmes, and opportunities that can provide people with opportunities and training to learn and improve their skills and gain education, knowledge, and information.

In the case of this study, female entrepreneurs have little or no access to resources like financial capital due to a lack of funding opportunities. Due to a lack of financial resources, they find it very challenging to reduce their vulnerability exposure. They also lack resources and this has led them to be more vulnerable because they cannot afford to access relevant knowledge and information as well as resources that can increase their resilience capacity. As a result, their resilience capacity remains low. Failure in mobilising and accessing resources, this study found that female

entrepreneurs have resorted to traditional or indigenous knowledge and cost-effective strategies for improving resilience. In Section 4.4.7.5, the study participants explained that they rely on traditional knowledge to make pesticides and snake repellents. For example, most of the participants involved in farming highlighted that they did not have enough money to buy pesticides, thus they decided to use “ishaladi lenyoka”, called ‘wild garlic’ or ‘*Tulbaghia acutiloba*’ in English to make pesticides. In making pesticides, the study participants explained that they crush the plant and mix it with sunlight dishwashing liquid, and cooking oil. Then they sprinkle it on the plants. Other participants also indicated that this plant is also used as a snake repellent. Their pigs and chickens are now safe from being attacked by snakes because of this plant.

This study also found that due to a lack of financial capital to buy jojo tanks, water pumps, and irrigation equipment, female entrepreneurs in QwaQwa indicated that they practice rainwater harvesting during rainy days. They have built shacks using old, corrugated iron from scrap in their community gardens and farms. In Section 4.6.4, it is indicated that most female entrepreneurs in QwaQwa collect rainwater from the roof and store it in small containers. A few of the participants indicated that they have jojo tanks, thus they store collected rainwater in those jojo tanks. Some participants have dug contour ridges and wells to divert running-off rainwater. Other participants explained that when there is no water in their taps, they fetch water from the wells and boil it for watering their chickens.

The female entrepreneurs who participated in this study indicated they got support from the AGAPE Foundation located in Makwane village in QwaQwa. AGAPE connects them with SEDA, the DSD, and UFS for training opportunities. The participants indicated that it is because of AGAPE that they have little knowledge and skills that they gained from the few trainings offered by SEDA and UFS. Moreover, they highlighted that it is because of AGAPE that they get to network with one another and share traditional knowledge and cost-effective resilient strategies. The use of traditional or indigenous knowledge and cost-effective resilience strategies have made these female entrepreneurs to remain in business though experiencing vulnerabilities. However, due to a lack of other resources like financial capital to access advanced knowledge and technology, the vulnerability reduction and resilience capacity of female entrepreneurs in QwaQwa remains low.

As outlined by Roundy et al. (2017), in the resilience theory, various forms of resilience can be adopted by entrepreneurs to prepare themselves for unforeseen vulnerabilities and shocks. These forms include cognitive resilience, social resilience, emotional resilience, and financial resilience, of which in cognitive resilience only those female entrepreneurs with adequate expertise, skills, and capabilities as well as creative and innovative entrepreneurial ideas can make optimistic decisions that help them to build stronger resilience. In the case of QwaQwa, this study found that female entrepreneurs have adequate skills and capabilities to reduce their vulnerabilities and improve entrepreneurship resilience. For instance, these female entrepreneurs mentioned that they were able to bounce back during and after COVID-19 because of their skills and capabilities. Additionally, the majority of them mentioned that they applied their resource mobilisation skills to mobilise resources like sanitizers and masks for their customers. Those who are involved in sewing garments indicated that during COVID-19, they shifted from sewing garments to sewing cloth masks. All these efforts enabled them to be able to reduce their exposure to the vulnerabilities induced by COVID-19 and sustain their livelihood strategies.

From Resilience Theory, social resilience as understood by Roundy et al. (2017) and presented in Section 2.5.1, entails the ability of entrepreneurs to develop and maintain networks or connections in order to build entrepreneurship resilience. When applied to this study, female entrepreneurs indicated that they were able to build and maintain networks with other female entrepreneurs through the AGAPE Foundation. They have created an effective WhatsApp group where they discuss their entrepreneurial needs, motivate each other, and share ideas on how to reduce the vulnerabilities that they are exposed to. Additionally, these female entrepreneurs indicated that through the help of the AGAPE Foundation, they have strong business relationships with other institutions like the UFS, SEDA, and the DSD. From these associations, the female entrepreneurs reported in Section 4.6.2 that they get guidance and enough support in terms of mentorship, training, information, knowledge, and skills related to vulnerability reduction and entrepreneurship resilience. Moreover, they also revealed that they are willing to broaden their networks and establish relationships and business associations with other entrepreneurs and role models outside the periphery of QwaQwa.

When evaluated qualitatively against the frameworks structured by Crick et al. (2018), female entrepreneurs from QwaQwa are lacking some of the key factors that reinforce vulnerability

reduction and entrepreneurship resilience. For example, there are lack of policies that accommodate the entrepreneurial needs of female entrepreneurs, particularly those operating in the informal sector. In addition to this, these female entrepreneurs only a few institutions support the livelihood strategies of these female entrepreneurs in this region. Given such challenges, the resilience capacity of female entrepreneurs in QwaQwa is very low. Female entrepreneurs are also vulnerable to financial constraints and lack of information on resilience as well as lack of infrastructure and advanced technology that is suitable for strengthening their vulnerability reduction and entrepreneurship resilience capacity.

However, though the vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa is very low, other female entrepreneurs have a stronger resilience and higher vulnerability reduction capacity. Their vulnerability reduction and entrepreneurship resilience capacity are reinforced by the availability of capital. As highlighted in the multi-theoretical framework, female entrepreneurs can be resilient in various ways. As outlined by Crick et al. (2018) and Ganon et al. (2018), the ability of female entrepreneurs to reduce their vulnerability exposure and build entrepreneurship resilience is shaped by various political, economic, social and cultural factors.

The Vulnerability Theory of Martha Fineman calls for a ‘radical ethics of care’ as the basis for governance, whereby it is the responsibility of the government to empower people to build or increase their resilience. Contradicting neoliberalism, the vulnerability theory postulates that no human being is independent or autonomous to thrive or prosper alone (Kohn, 2014). Instead, an individual’s resilience depends continuously on resources provided by the government through its laws, policies, and empowerment initiatives. Like Garnezy (1991), Fergus and Zimmerman (2005) as well as Hayward et al. (2010) in the resilience theory, Fineman in her vulnerability theory terms resources as ‘resilience’, accenting that though people cannot run away from vulnerability, their capability to cope and adapt to it, their capability to function and achieve their well-being, is determined by the resilience levels available to them. In relation to this study, this theory has provided a distinct ‘ontological’ ground for understanding the role of government in improving the vulnerability reduction and resilience capacity of female entrepreneurs in QwaQwa.

The notion of resilience is a fundamental prominence of the Vulnerability Theory, as it denotes that people’s capability to cope with vulnerabilities depends on the government’s policies and

initiatives that shape their lives. The Resilience Theory on the other hand explains how the government through its market laws and policies affects the capabilities of individuals to access resources, skills, and capabilities (Robeyns & Byskov, 2023). The Capability Approach argues that vulnerability exposes various ways in which governmental policies and laws are blind to the notion of promoting resilience. Thus, in this study, with a focus on female entrepreneurs, the three theories of the multi-theoretical framework of this study were used as building blocks for understanding the vulnerability exposure, vulnerability reduction, and entrepreneurship resilience of female entrepreneurs.

As argued by Robeyns and Byskov (2023), the Capability Approach acknowledges the significance of empowerment through support networks in improving an individual's capabilities. This is supported by various scholars who argue that women's groups and other forms of collective action and collaboration through formal and informal social networks and cooperatives play an important role in supporting female entrepreneurs in the face of the multiple and concurrent social and economic challenges they experience (Agol et al., 2021; Gumucio et al., 2020). This also extends into climate change adaptation and resilience, where informal institutions such as women's groups are used to share knowledge on adaptation; identify new opportunities to diversify activities; build market linkages; access extension services; initiate group-based adaptation and resource management practices; organise informal access to credit; and pool resources to facilitate the introduction of new climate resilient technologies (Agol et al., 2021; Gumucio et al., 2020). In the case of QwaQwa, in Section 4.4, female entrepreneurs highlighted the importance of formal and informal support networks, such as women's groups, in improving their vulnerability reduction and entrepreneurship resilience capacity. Furthermore, they explained that they have one established community group monitored by the AGAPE, whereby they share the little information that they get about available training and workshops. They also share information and knowledge that is vital for strengthening their resilience capacity through this group. In addition, these female entrepreneurs indicated that they use social networks like WhatsApp to communicate and share training opportunities and information about training and workshops around QwaQwa and other regions.

Documented literature has suggested that social networking remains a major adaptation tool for women both in rural and urban areas, as women often come together in groups to share and support

each other (At et al., 2018). A key example of these networks in Narok manifests in 'merry-go-round' and table banking initiatives, which bring groups of women together to save and lend money amongst themselves. In table banking, women make collective savings through which they can earn interest and access credit to invest in their SMEs. Female entrepreneurs who participated in this study stated that they value the existence of their community support group as it is an important means of accessing cash for business and household needs. For example, they do table banking, also called stokvel in their group. However, most of the participants felt that money from table banking was not adequate to protect their businesses from vulnerabilities like climate change impacts.

As stated by Sallah and Caesar (2020) networks and support groups promote collaboration that improves entrepreneurship resilience and increases the likelihood of female entrepreneurs accessing other types of capital. Therefore, the higher the forte of networks available in a community, the higher the vulnerability reduction and entrepreneurship resilience capacity. In QwaQwa, because of the AGAPE Foundation and the existence of the female support group, female entrepreneurs in this area have a higher vulnerability reduction and entrepreneurship resilience capacity.

Capabilities as understood by Amartya Sen in her capability approach capabilities entail access to education, training opportunities, information, skills, and capabilities (see Figure 67). As argued by Newman et al. (2019), education arms individuals with abilities, skills, and knowledge to improve their livelihoods. However, for most female entrepreneurs in QwaQwa, lack of access to adequate training and formal education affected their capability to reduce vulnerabilities and increase their entrepreneurship resilience. Few of the female entrepreneurs who have access to formal education and adequate training highlighted that they can reduce their vulnerabilities and increase their entrepreneurship acumen. Moreover, they indicated that through education, they have been empowered to navigate vulnerabilities effectively.

As indicated in Figure 67 in the next page, academic education influences building knowledge, and developing skills and competencies necessary for entrepreneurial self-efficacy and resilience (Newman et al., 2019). Relatively, this study found that education empowers women to be resilient entrepreneurs and those with little or no education have a lower vulnerability reduction and resilience capacity. Considering the context of QwaQwa, there is an existing gap in education,

access to knowledge, and skills among female entrepreneurs, particularly the ones in their 40s, 50s, and 60s of age. Due to a lack of education, skills, and knowledge, this study found that female entrepreneurs around the ages highlighted above have a lower ability to reduce vulnerabilities and build stronger entrepreneurship resilience.

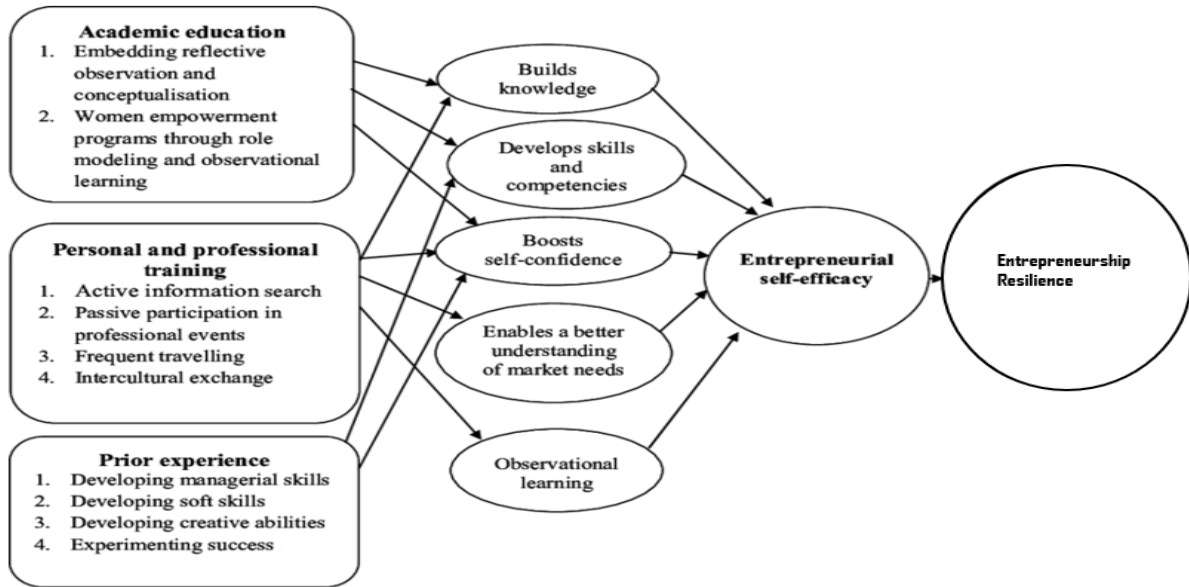


Figure 67: Importance of Education in Entrepreneurship Resilience (Adopted from Newman et al., 2019).

The findings of this study expand previous empirical research on the significance of education, skills, and entrepreneurial experience and emphasise the need to embed entrepreneurship with education to boost the entrepreneurship resilience of female entrepreneurs. As outlined by Atela et al. (2018) in Section 2.4.1.1, having adequate education, skills, and knowledge is a prerequisite for reducing vulnerabilities, entrepreneurship resilience building, and boosting economic growth.

Having highlighted this, thus this study encourages female entrepreneurs in QwaQwa to be involved in business networks, associations, training, and workshops to access knowledge, and information and equip their skills and capabilities for livelihood strategies and resilience. This is supported by Sen (1985), who in his Capability Approach argued that capabilities are a set of opportunities consisting of freedoms that individuals have for accomplishing the lifestyle they value.

The resilience theory as highlighted by Garmezy (1991), posits that financial or economic resources are a fundamental factor for reducing vulnerability exposure and building or

strengthening entrepreneurship resilience. In addition, in farming, a lack of financial capital can hinder female farmers from hiring labor during peak farming activities and accessing markets and advanced technology (Adegbite & Machethe, 2020).

As stated previously, female entrepreneurs in QwaQwa are vulnerable to financial constraints due to a lack of funding and collateral. However, though most of these female entrepreneurs do not have funding, access to markets, and advanced technology, most of them indicated that they have resorted to low-cost entrepreneurship resilience options. For example, to be financially stable, the majority of the interviewed female entrepreneurs highlighted that they save every little profit that they generate. They then use their savings for informal financial loan investment (commonly called ‘*ukushonisa*’ in the local language).

While Africa has a lot of indigenous knowledge and practices that have been overlooked due to the embracement of Western ideologies (Ndlovu-Gatsheni, 2018), female entrepreneurs in QwaQwa have adopted some of these indigenous practices to reduce their vulnerabilities and enhance their resilience. For example, in Section 4.6, the study participants indicated that they practice stokvels, also called credit unions or table banking to promote entrepreneurship resilience, and business growth and improve their livelihood strategies.

According to the Women’s Report (2023), stokvels are a form of credit union whereby a group of people mutually collaborate and contribute a fixed sum of money pool weekly or monthly towards a common pool. Other scholars describe stokvels as ‘rotating savings and credit associations’ (ROSCA), in which a group of people contribute and save money together (Iwara, Adeola, & Netshandama, 2021).

In QwaQwa, stokvels are viewed as traditional income generation practices that female entrepreneurs use to alleviate poverty and enhance their entrepreneurship resilience. Table 9 shows the existing types of stokvels in QwaQwa that female entrepreneurs participate in as found by this study.

Table 9: Types of Stokvels in QwaQwa as per the Study Findings

Type of Stokvel	Description
Budget stokvel	Consists of group of people who share a common goal and contribute a fixed amount of money weekly or monthly per one group member.

Farming stokvel	This consists of a group of farmers who collectively take turns and work on each farmer's farm at a time. They also contribute equal amounts of money for farming inputs and transportation costs.
Building stokvel	Here group members contribute an equal amount of money and buy building materials for each member. They also use their skills to build each member a house.
Property stokvel	In this one, group members take turns and contribute money every month to buy property like house appliances, land, furniture, and kitchen utensils for each member.
Grocery stokvel	This type of stokvel is only meant for food items. Group members buy a large stock of different food items and share them equally amongst each other. They usually share their groceries at the end of the year towards Christmas.
Borrowing Stokvels	In this type of stokvel group members contribute and save money together into a pool to loan it to other group members. They also borrow people outside their group. They usually charge higher interest rates for profit generation and sustainability of the group.

As outlined by the study participants, female entrepreneurs in QwaQwa rely on these different types of stokvels to sustain their livelihood strategies. Given the significance of stokvels presented in the table above, this study thus posits that indigenous knowledge, and practices should be taken into serious consideration as they immensely contribute to poverty alleviation, vulnerability reduction, and entrepreneurship resilience in African societies. These stokvels provide financial funding for investment and livelihood strategies for female entrepreneurs particularly in marginalised regions like QwaQwa with little or no government support systems. Given the socioeconomic benefits of stokvels, it does suffice to say these stokvels play a pivotal role for a developing nation like South Africa, struggling with meeting the 2030 UN Sustainable Development Goals (SDGs 1-No poverty and SDGs 2-Zero hunger). The role of stokvels in poverty alleviation and hunger eradication in marginalised regions gives them enough credit to be considered as contributors of building blocks of entrepreneurship resilience and enablers of vulnerability reduction in impoverished regions like the Afromontane communities.

5.6. Conclusion

This chapter presented a discussion of the findings of this study. Empirical evidence gathered by this study asserts that the livelihoods of female entrepreneurs in QwaQwa, while diversified, are fundamentally different from their male counterparts. Based on the findings of this study, female entrepreneurship plays a critical role in poverty alleviation in QwaQwa and is significant for achieving the SDGs (for example, SDG 01: No Poverty and SDG 02: Zero Hunger). In overall, this study found that female entrepreneurs in QwaQwa operate various livelihood strategies but at a smaller scale.

Among the identified livelihood strategies, agriculture or farming (as in crop and livestock production) plays a significant role in the livelihoods of female entrepreneurs in QwaQwa. Female entrepreneurs in QwaQwa have proved their major contribution to food security in rural or informal settings and have sovereignty over their livelihoods. However, due to a lack of resources, business education, skills and support networks, these female entrepreneurs are exposed to various vulnerabilities.

However, this study established that these female entrepreneurs are exposed to various vulnerabilities which include climate change impacts, inadequate government support, cultural setbacks, lack of entrepreneurial information and knowledge to build entrepreneurship resilience, lack of collateral and funding as well as lack of market, poor infrastructure and lack of advanced technology. In order to understand female entrepreneurs' vulnerability exposure, vulnerability reduction, and entrepreneurship resilience capacity, this study adopted an SLF. Given all the vulnerabilities discussed in this chapter, the livelihood strategies of female entrepreneurs in QwaQwa are largely vulnerable to climate change impacts.

The conducted research has found that female entrepreneurs in QwaQwa strongly feel climate change impacts like water scarcity due to reduced rainfall patterns (drought) and occasional floods. They are exposed to these impacts because they concentrate mostly on agricultural livelihood strategies like farming (crop and livestock production).

Though these female entrepreneurs are exposed to various vulnerabilities, they never give up. They have adopted various strategies for reducing vulnerabilities and enhancing or building their resilience. Female entrepreneurs in this study region have developed and implemented traditional

versions of entrepreneurship which rely mostly on traditional or indigenous knowledge and practices for resilience.

These strategies include the use of low-cost resilience strategies like rainwater harvesting, traditional or indigenous knowledge and practices, and stokvels and their skills and capabilities. Female entrepreneurs in this study have adapted the local resources, skills, and indigenous or traditional knowledge and practices readily that require low-cost management and resilience. For example, they operate extra livelihood strategies that they consider as safety nets, which always help them sustain their livelihoods. These female entrepreneurs believe that safety nets are alternative livelihood strategies that also help them generate extra income that can be used for other purposes like education for their children and improving their healthcare and well-being.

Given this, it does suffice to say female entrepreneurship contributes largely to the fulfillment of the UN 2030 SDGs like SDG 03 (Good health and well-being), and SDG 04 (Quality education). Thus, for these female entrepreneurs to be able to reduce vulnerabilities, build strong resilience, and continue operating sustainable businesses, this study developed a vulnerability reduction and entrepreneurship resilience model specifically for female entrepreneurs in QwaQwa. The next chapter presents a detailed conclusion of this study, recommendations for future research, proposed vulnerability reduction and entrepreneurship resilience model, and contributions to scholarship.

CHAPTER SIX: RECOMMENDATIONS AND CONCLUSION

6.1. Introduction

This study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region, particularly focusing on analysing the livelihood strategies of female entrepreneurs in QwaQwa. This chapter first presents the gaps in research, literature, knowledge, theory, and methodology as well as the limitations of this study. The focus then shifts to presenting the recommendations and contribution of this study to scholarship. Lastly, a general conclusion of this study, derived from the study findings on the livelihood strategies of female entrepreneurs in relation to their vulnerability reduction and entrepreneurship resilience is presented.

6.2. Research Gaps

As noted in Section 1.6 of Chapter One, research on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane, precisely in QwaQwa, is still in its infancy stage. Given that, this study noted some existing research gaps that need urgent attention. This study tried to close some of these existing gaps. The illustration below indicates that other research gaps still need to be addressed in the future for a better understanding of entrepreneurship resilience and vulnerability reduction of female entrepreneurs in marginalised regions.

6.2.1. Literature Gap

While there is an existing body of literature on female entrepreneurship in South Africa, there is also an existing literature gap on vulnerability reduction and entrepreneurship resilience of female entrepreneurs in the Afromontane region, precisely in QwaQwa. When conducting a systematic literature review of this study, the researcher observed an existing gap in empirical research on female entrepreneurship, vulnerability reduction, and entrepreneurship resilience in marginalised Afromontane communities like QwaQwa. Due to the lack of empirical research on this given topic, this study concludes that a deficiency in research contributes to a gap in the body of literature. In summary, below are the noted gaps in the literature that need urgent attention.

- There is little or no literature that explains how the entrepreneurial needs of female entrepreneurs in QwaQwa can be fulfilled, induced or reinforced to establish or enhance their vulnerability reduction and entrepreneurship resilience capacity.
- There is a lack of guidelines or foundation for empirical research on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region.
- There is little information or literature gap on policies that govern female entrepreneurship in the Afromontane region.
- There is little recognition of female entrepreneurs in the informal sector. Thus, most of the female entrepreneurs in QwaQwa have a higher vulnerability exposure and a lower resilience capacity.

Due to the lack of literature on female entrepreneurship as presented in Section 1.5.1, this study noted a gap in the definition and conceptual framework of entrepreneurship. There is a need to reconceptualise the concept of ‘entrepreneurship’, particularly given the fact that entrepreneurship is a multifaceted concept. The multidisciplinary conceptual framework of entrepreneurship will assist in understanding entrepreneurship from a holistic view and identifying points of integration across different disciplines.

6.2.2. Knowledge Gap

Though various scholars have studied female entrepreneurship, there is limited knowledge of the relationship between entrepreneurship resilience and vulnerability reduction. In order to close this gap, the current study applied a multi-theoretical framework and a multidimensional vulnerability indicator to understand vulnerability exposure, entrepreneurship resilience, and vulnerability reduction of female entrepreneurs in QwaQwa. However, this holistic approach was only applied to the context of QwaQwa, hence leaving the knowledge gap still in existence in other marginalised regions of the Afromontane. Given this existing knowledge gap, this study encourages future researchers from various disciplines to apply a Multidimensional Vulnerability Index and multi-theoretical approaches in studying vulnerability exposure, vulnerability reduction, and entrepreneurship resilience in other marginalised regions across the Afromontane and beyond.

Additionally, further research and publications on entrepreneurship resilience and vulnerability reduction in African mountain communities are highly recommended. There is also a need to

disseminate research findings with community members so that they can have access to the findings and recommendations that might assist them acquire knowledge about entrepreneurship resilience and vulnerability reduction strategies. In the case of this study, the research findings will be disseminated and shared with the female entrepreneurs who participated in this study in QwaQwa.

6.2.3. Theoretical Gap

This study noted an existing gap in theoretical frameworks of understanding entrepreneurship resilience and vulnerability reduction of female entrepreneurs. Most previous studies have used a single theory to understand either entrepreneurship resilience or vulnerability reduction. There is little or no use of a multi-theoretical framework in understanding entrepreneurship resilience and vulnerability reduction of female entrepreneurs in marginalised regions like QwaQwa. Due to the lack of triangulation of theories in this matter, it becomes difficult to identify and understand the vulnerability exposure, vulnerability reduction as well as the resilience strategies that can be used use by female entrepreneurs to improve their livelihoods and build stronger entrepreneurship resilience.

In order to close this gap, this study applied a multi-theoretical framework to explore entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa. In so doing, it synthesised and integrated the resilience theory, vulnerability theory, and Capability Approach. From this multi-theoretical framework, reviewed literature, and study findings, this study also developed an entrepreneurship resilience and vulnerability reduction model that can be used by female entrepreneurs in QwaQwa to reduce their vulnerabilities, build or strengthen their entrepreneurship resilience, and improve their livelihoods. This study also encourages future scholars to adopt a multi-theoretical framework in understanding multifaceted issues like vulnerability exposure, vulnerability reduction, and entrepreneurship resilience in marginalised regions. Applying a multi-theoretical framework in the study of entrepreneurship resilience and vulnerability reduction of female entrepreneurs will allow compensation for any explanatory limitations coming from a single theory and hence enhance the depth of scrutiny of the matter under investigation. Additionally, the integration of various related theories will lead to a more robust and holistic interdisciplinary approach that will assist in addressing other research gaps and produce new insights and advanced knowledge.

6.2.4. Methodological Gap

Though the literature provides a variety of studies on female entrepreneurship, there is little exploration of the number of female entrepreneurs exposed to vulnerabilities in QwaQwa. This limitation shows an existing gap in methodologies used to study female entrepreneurship in this region. Though this study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in QwaQwa, it applied a qualitative approach and used a smaller sample. Due to the nature of the research method used, the study did not use a larger sample. This makes it challenging to generalise the findings to other regions experiencing similar vulnerabilities. Given these existing methodological gaps, this study encourages future researchers to use mixed methods which will allow them to use a larger sample and robustly collect statistical data on female entrepreneurship in QwaQwa. The results generated through a mixed methods approach will allow generalisation of the results to a larger population. Furthermore, a mixed method is proposed for future research to make the findings more robust.

In summary, though previous and current studies played a significant role in studying entrepreneurship resilience and vulnerability reduction of female entrepreneurs, there is still a need for theory-driven research and substantial application of mixed methods in the context of entrepreneurship resilience and vulnerability reduction of female entrepreneurs, particularly in the Afromontane region. Furthermore, future research on this matter would be reinforced by the larger use of multidimensional index and multi-theoretical frameworks that provide a holistic understanding of entrepreneurship resilience and vulnerability reduction. The identified research gaps also indicate a need for extensive engagement with scholars from various disciplines to provide new and diverse insights for policy development.

6.3. Limitations of the Study

This study's limitations are mainly related to the applied methodology and literature gaps. Since this study followed a qualitative approach, thus its findings are context-specific and have been driven by participatory interactions with female entrepreneurs from four villages of QwaQwa. Therefore, the study findings cannot be extrapolated and generalised to a broader population, outside QwaQwa. Secondly, since this study is qualitative, its findings have not been quantified to show the accurate statics of female entrepreneurs exposed to vulnerabilities in QwaQwa. Also, the

vulnerability exposure and entrepreneurship resilience capacity of female entrepreneurs in this study region has not been quantified.

As mentioned earlier, there is a lack of empirical research which has contributed to an existing gap in the body of literature on entrepreneurship resilience and vulnerability reduction in the Afromontane region. Given this limitation, this study could not compare its findings with other marginalised communities of the Afromontane region. Also due to a lack of empirical research on female entrepreneurship in QwaQwa, there is no profile for female entrepreneurs in the informal sector (villages of QwaQwa). Due to the lack of profiles for female entrepreneurs in QwaQwa, it was challenging to identify relevant participants in this study. However, this study would like to acknowledge the AGAPE Foundation for providing a list of some female entrepreneurs in QwaQwa, who then identified their friends through snowball sampling.

Besides the methodological and literature gap limitations, this study encountered other limitations, and these include the following: Given the socio-economic vulnerabilities of QwaQwa, some of the villages in QwaQwa were not easily accessible due to poor roads. The poor roads in those villages affect the transport system. Due to transport challenges, the researcher could not access other female entrepreneurs in other villages who could have contributed relevant data to this study. Given this, thus the researcher ended up with a smaller sample size of 27 study participants. Furthermore, this research was based on necessity-driven female entrepreneurs only. It would be interesting to explore opportunity-driven female entrepreneurs as well. Another limitation is that this study was based on female entrepreneurs only. However, a comparative study with male entrepreneurs would have been useful.

6.4. Contribution to Scholarship

This study contributes to the understanding of female entrepreneurship with a specific emphasis on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region. It is also anticipated that this study will contribute to the body of knowledge and literature on the livelihood strategies of female entrepreneurs in the Afromontane region, particularly in QwaQwa.

The study findings illustrate the significance of understanding entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region from a multi-

disciplinary approach. The study followed a multi-disciplinary approach in identifying and analysing vulnerabilities encountered by female participants in QwaQwa. The identified vulnerabilities are attributed to social, economic, political, cultural, and environmental contexts. Hence, this study presents practical implications for multi-disciplines.

The last objective of this study was to develop an entrepreneurship resilience and vulnerability reduction model for female entrepreneurs in QwaQwa. The proposed model would serve female entrepreneurs in QwaQwa to develop feasible strategies for reducing their vulnerabilities and building or strengthening entrepreneurship resilience. The model would also assist policymakers, development practitioners, and financial institutions in developing comprehensive policies and initiatives that accommodate the resilience of female entrepreneurs in QwaQwa. Through this model, this study highlights various types of capital that female entrepreneurs in marginalised regions like QwaQwa can adopt to reduce their vulnerabilities and build or enhance their resilience capacity.

In summary, the reviewed literature and methodology of this study speak to the findings of this study. Thus, given the presented study findings and limitations, this study recommends the following:

6.5. Recommendations

Given the vulnerabilities experienced by female entrepreneurs in QwaQwa and their low vulnerability reduction and resilience capacity, this study saw it fit to develop a model that can be used by these female entrepreneurs to improve their livelihood strategies. This model is rooted in the multi-theoretical framework, multidimensional vulnerability index, and findings of this study.

6.5.1. Vulnerability Reduction and Entrepreneurship Resilience Model of Female Entrepreneurs in QwaQwa

After analysing the previous theories of resilience and vulnerability, there was a realisation of existing gaps in the literature on the resilience of female entrepreneurs, especially in the marginalised African mountain regions. Thus, to fill this gap, this study developed and proposed a new systematic model for female entrepreneurs in QwaQwa. This model was developed from literature on the resilience strategies suggested by Illu et al. (2021) as well as strategies suggested

by the participants as highlighted in Section 4.6. In addition, the MVI presented in Section 5.3.1, and the multi-theoretical framework employed in this study in Section 2.5.4, and Figure 58 contributed to the development of this model. Though the model was specifically developed for female entrepreneurs in QwaQwa, it is not only limited to the study region. Female entrepreneurs in other regions experiencing similar vulnerabilities can also apply the suggested new model.

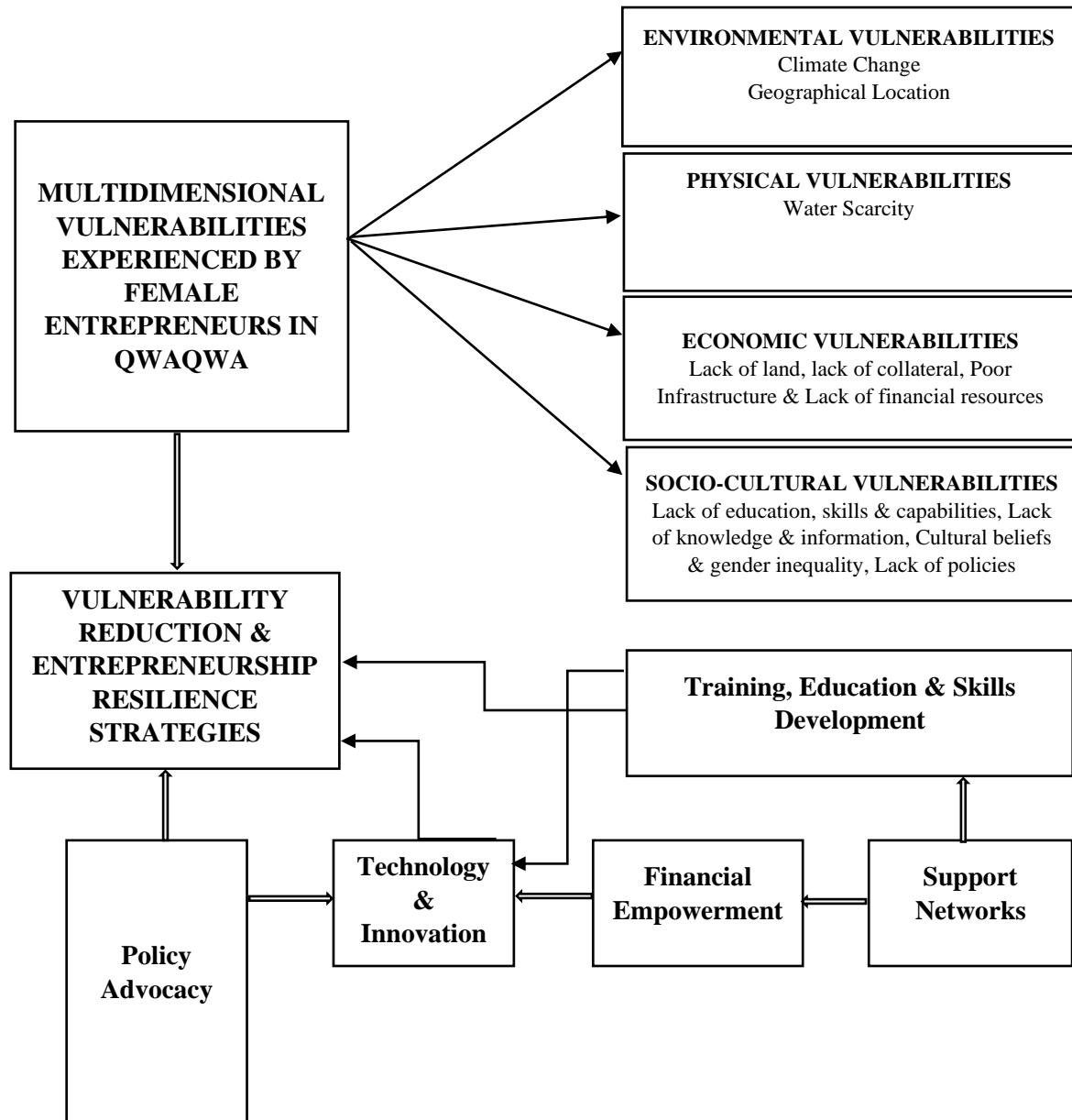


Figure 68: Proposed Entrepreneurship Resilience and Vulnerability Reduction Model for Female Entrepreneurs in QwaQwa.

The theoretical propositions outlined in the next section are considered to be middle-range and bounded by the proposed entrepreneurship resilience and vulnerability reduction model (Figure 68). Furthermore, they provide guidance to female entrepreneurs in QwaQwa on how they can reduce their vulnerabilities and build or enhance their entrepreneurship resilience capacity. They can also be used by future researchers in the field of entrepreneurship and resilience.

6.5.1.1. Theoretical Proposition 1

“Low entrepreneurship resilience exposes female entrepreneurs in QwaQwa to multidimensional vulnerabilities”.

As presented in the proposed vulnerability reduction and entrepreneurship resilience model for female entrepreneurs in QwaQwa (Figure 68), the skills obtained through education, training, and skills development programmes empower female entrepreneurs to mobilise financial resources that can assist them in accessing advanced technology and innovation ideas. Female entrepreneurs in QwaQwa are highly exposed to multidimensional vulnerabilities and have a low vulnerability reduction and resilience capacity. In order to increase their vulnerability reduction and resilience capacity, these female entrepreneurs need to be empowered with adequate education, skills, knowledge and information, financial resources as well as advanced technology and innovative ideas.

6.5.1.2. Theoretical Proposition 2

“Education, training, and skills development opportunities capacitate female entrepreneurs to access knowledge and information, advanced technology, and innovative ideas necessary for reducing vulnerabilities and enhancing entrepreneurship resilience”.

The second proposition stipulates that female entrepreneurs should be provided or seek business education and training opportunities that will enable them to gain skills, information, and knowledge necessary for vulnerability reduction and entrepreneurship resilience. It also encourages female entrepreneurs in QwaQwa to continue using indigenous knowledge of reducing vulnerabilities and building or strengthening entrepreneurship resilience, for example, climate-smart agriculture, and traditional low-cost resilience strategies.

Training and education opportunities should also focus on offering entrepreneurship resilience, self-confidence building, capacity development, resource mobilisation, information, and knowledge-sharing skills. These initiatives should not only focus on established female entrepreneurs but also target non-established female entrepreneurs and encourage them to launch their businesses. The socio-economic situation of QwaQwa needs more women to venture into entrepreneurship so that they can create job opportunities for the less and semi-skilled, improve the economy (SDG 8: Decent work and economic growth), and increase food security (SDG 2: Zero hunger). An increase in food security and job opportunities will assist in alleviating poverty (SDG 1: No poverty) and improving people's health and well-being (SDG 3: Good health and well-being).

6.5.1.3. Theoretical Proposition 3

“Supportive network systems have a significant influence on how female entrepreneurs access financial resources, advanced technology and education, training and skills development opportunities for reducing vulnerabilities and enhancing entrepreneurship resilience”.

Given this proposition, this study emphasises that female entrepreneurs in QwaQwa should be provided with networking opportunities that will allow them to meet other female entrepreneurs, experts, and role models from other Afromontane regions and beyond. Furthermore, support groups and networking opportunities will also improve the capabilities and confidence of female entrepreneurs to collaborate and work together in developing advanced vulnerability reduction and entrepreneurship resilience strategies. Institutions like AGAPE, UFS, SEDA, and other governmental and NGOs should continue providing entrepreneurial support to female entrepreneurs in QwaQwa.

The above-mentioned institutions are encouraged to provide mentorship to female entrepreneurs in QwaQwa. This will be a good opportunity for female entrepreneurs to gain knowledge and skills that are necessary for reducing vulnerabilities and building stronger entrepreneurship resilience. Mentorship in this study is considered a tool for knowledge transfer. For example, the UFS can provide mentors and role models to female entrepreneurs in this region who will assist female entrepreneurs in identifying low-cost strategies for reducing their vulnerabilities.

6.5.1.4. Theoretical Proposition 4

“Access to financial resources has a significant influence on how female entrepreneurs access advanced technology and innovative ideas necessary for reducing vulnerabilities and enhancing entrepreneurship resilience”.

Financial institutions should also join the above-mentioned institutions and provide financial support to female entrepreneurs in QwaQwa and other vulnerable regions. Support can also be provided in the form of business and financial management training, inputs, technical assistance, and equipment. Banks for example should also revisit their requirements for financial loans and credits to accommodate female entrepreneurs in QwaQwa without collateral. Land should be redistributed so that female entrepreneurs without land ownership can also own land that they can use as collateral when applying for loans and credits from banks and other financial institutions. As indicated in the model, female entrepreneurs should invest more in stokvels as they allow them to save and generate profit that can be used in times of adversity. Instead of operating one livelihood strategy, this model proposes that female entrepreneurs in QwaQwa should consider having safety nets that can help generate extra income and profit. Safety nets can also be used to strengthen other livelihood strategies, for example operating on-farm, off-farm, and non-farm livelihood strategies simultaneously.

6.5.1.5. Theoretical Proposition 5

“Access to advanced technology and innovative entrepreneurial ideas increases vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa”.

In order for female entrepreneurs in QwaQwa to be able to reduce their vulnerabilities and build stronger resilience, there should be a strong infrastructure that supports female entrepreneurship. As shown by the study findings, most of these female entrepreneurs operate rain-fed agriculture, thus there is a need for advanced technology. Advanced technology will female entrepreneurs in QwaQwa to adopt climate-smart agriculture practices that are resilient to climate change impacts. The model presented above proposes that if roads are renovated and reconstructed, there will be easy transportation of agricultural inputs from the market to the farms as well as agricultural produce from the farms to the market. It also proposes that if basic service delivery is improved, in terms of electricity, telecommunications, and housing, female entrepreneurs in QwaQwa would

be able to reduce vulnerabilities that affect their resilience, economic growth, and sustainability. Given that, there is a need to revisit policies, rules, and regulations. The government should develop local policies and implement initiatives that will assist female entrepreneurs in mitigating the impacts of climate change and develop adaptation and resilience strategies. For example, female entrepreneurship should be included in the International Labour Organisation's (ILO's) gender policies to redress the existing gender inequalities and imbalances. Policies should also accommodate the needs of female entrepreneurs in marginalised regions like QwaQwa to alleviate vulnerabilities that affect the resilience of female entrepreneurs. Female entrepreneurs should also be involved in decision-making processes that affect their livelihood strategies. Lastly, the produced model proposes that if female entrepreneurs are empowered, they can easily adapt to climate change impacts and improve their resilience and livelihoods.

Infrastructure like roads, telecommunications, electricity, and advanced technology are fundamental to people from rural or marginalised regions like QwaQwa. For instance, improved roads allow a sophisticated transport system that makes it easy for female entrepreneurs from villages to move to urban areas. If roads are to be improved in QwaQwa, female entrepreneurs will be able to access markets outside QwaQwa and access resources and opportunities from other places outside their region. Most, if not all of the female entrepreneurs rely on electricity in their business operations. Hence, electricity or other alternatives to electricity should be made accessible to the people of QwaQwa. These alternatives include the use of solar systems in all houses. This study thus suggests that the government should focus on improving infrastructure in QwaQwa so that female entrepreneurs and everyone can improve their livelihoods and entrepreneurship resilience.

6.5.1.6. Theoretical Proposition 6

“Effective, inclusive and integrated local and national policies are a powerful tool for eliminating cultural biases and gender inequalities that hinder female entrepreneurs from reducing their vulnerabilities and enhancing entrepreneurship resilience”.

As per the findings of this study, female entrepreneurs have a higher vulnerability exposure and lower resilience capacity due to the lack of policies that govern female entrepreneurship, and reduced inequalities induced by gender and cultural beliefs in their region. As a result, this study

recommends the following for increasing vulnerability reduction and entrepreneurship resilience capacity of female entrepreneurs in QwaQwa.

- Policy makers should draft specific female entrepreneurship policies that also accommodate the resilience of vulnerable female entrepreneurs in the marginalised Afromontane communities.
- Imperatively, universities and research institutes in South Africa and beyond, should conduct more participatory research on female entrepreneurship, specifically focusing on their resilience, vulnerability exposure, and strategies for reducing exposure to vulnerabilities in the Afromontane communities.
- Young girls should venture into entrepreneurship at a younger age and adopt different ways of overcoming vulnerabilities and building or strengthening entrepreneurship resilience. This can be achieved through getting enough support from governmental and non-governmental institutions. These institutions should create awareness on entrepreneurship, and use universities, schools, and media to conduct female entrepreneurship awareness campaigns in Maloti-A-Phofung municipality and other regions of the Afromontane. The awareness campaigns will expose young girls who are interested in entrepreneurship to role models, potential funders, and trainers.
- Government should rethink its policies and implement policies that empower women and eliminate cultural, and gender-induced inequalities. This will enable women in the Afromontane to easily access resources, enhance their entrepreneurship resilience, and improve their livelihood strategies.

6.6. Suggestions for Future Research

This study encourages forthcoming researchers to build on this study by focusing on assessing the effectiveness of the entrepreneurship resilience and vulnerability reduction model recommended in Figure 68. Furthermore, as illustrated earlier in this chapter, universities, and research institutes must conduct empirical research on female entrepreneurship, specifically focusing on their resilience, vulnerability exposure, and strategies for reducing exposure to vulnerabilities in the Afromontane communities.

As noted by this study, there are existing knowledge and literature gaps on the livelihood strategies of female entrepreneurs in the Afromontane region. Thus, this study suggests more research work to be conducted to close these gaps. Future research work should also focus on the informal livelihood strategies of female entrepreneurs in the Afromontane region.

Most of the sources reviewed in this study are qualitative, which makes it difficult to establish validity and reliability. Thus, this study encourages future researchers to apply both quantitative and mixed methods approaches to delve into entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region, precisely, QwaQwa. Quantitative studies will allow these future researchers to generalise their results to a wider scope.

6.7. Conclusion

Following a qualitative approach, this study explored entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region, particularly in QwaQwa. The study also analysed the livelihood strategies of female entrepreneurs in QwaQwa. The results from the systematic literature review and bibliometric analysis indicated an existing gap in research on entrepreneurship resilience and vulnerability reduction of female entrepreneurs in the Afromontane region. The reviewed literature of this study uncovered a need to consider entrepreneurship resilience and vulnerability reduction as multi-level processes of interaction between entrepreneurs and their environment, which depend on contextual factors that inhibit or enable resilience of female entrepreneurs.

Based on the study findings, it can be argued that the vulnerability exposure of female entrepreneurs cannot be understood as an elementary issue but should be understood as a multifaceted phenomenon. In this sense, the vulnerability of female entrepreneurs in QwaQwa should be viewed and understood from a holistic approach. In this case, this study analysed the livelihood strategies in relation to their vulnerability exposure through a multidimensional perspective by applying the Multidimensional Vulnerability Index.

The findings of this study indicated a higher vulnerability exposure and a lower resilience capacity of female entrepreneurs in QwaQwa. Moreover, the experiences shared by the female entrepreneurs who participated in this study reflect that female entrepreneurs in this study region have a lower resilience capacity due to their exposure to multidimensional vulnerabilities. Such

high vulnerability exposure and lower resilience capacity indicate the significance of policies and initiatives that support vulnerable female entrepreneurs in QwaQwa. Moreover, it reflects the importance of designing guidelines and frameworks that can be used by female entrepreneurs at local levels to reduce their vulnerability exposure and enhance their entrepreneurship resilience capacity. Though female entrepreneurs in QwaQwa have a lower resilience capacity, the study found that they have the capability to improve their resilience if they are equipped with the necessary skills, resources, support, knowledge and information. In addition to this, policies that empower women to overcome cultural challenges should be designed and implemented in regions like QwaQwa where women are vulnerable to gender inequality rooted in cultural beliefs, values and practices.

Though female entrepreneurs in QwaQwa are experiencing higher vulnerability exposure and lower resilience capacity, this study found that they have a sturdy resilience that makes them continue operating their livelihood strategies in the presence of all the vulnerabilities. The female entrepreneurs who participated in this study demonstrated a stronger zeal for growth and improvement despite the vulnerabilities they are facing. Beyond their high vulnerability exposure and lower resilience capacity, the female entrepreneurs in QwaQwa also demonstrated an agency by implementing strategies that bolstered their resilience, for instance, their reliance on traditional knowledge, rainwater harvesting and networking with other female entrepreneurs to navigate their entrepreneurship commitments. Having found that female entrepreneurs in QwaQwa have a higher vulnerability exposure and lower resilience capacity, this study developed an entrepreneurship resilience and vulnerability reduction model for these female entrepreneurs to reduce their vulnerabilities and improve their resilience capacity (Figure 68 in Section 6.5.1).

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APPENDICES

Appendix A: Research Ethics Approval Certificate



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

24-Oct-2022

Dear Miss Jerit Dube

Application Approved

Research Project Title:

Entrepreneurship resilience and vulnerability reduction in the Afromontane: Analysing the livelihood strategies of female entrepreneurs in QwaQwa.

Ethical Clearance number:

UFS-HSD2022/0985/22

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Please note: You should amend your L5 form with the revised methodology.

Yours sincerely

Dr Adri Du Plessis

Chairperson: General/Human Research Ethics Committee

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Appendix B: Explanatory Statement



EXPLANATORY STATEMENT

Project Title: Entrepreneurship resilience and vulnerability reduction in the Afromontane region: Analysing the livelihood strategies of female entrepreneurs in QwaQwa

Supervisor: Dr Grey Magaiza

Chief Investigator: Jerit Dube

Cluster/Department: CGAS

Student number: 2021468547

Contact Nr: 058 718 5419

Contact Nr: 0824296711

E-mail: magaizaG@ufs.ac.za

E-mail: 2021468547@ufs4life.ac.za

You are invited to take part in this research project entitled: **Entrepreneurship resilience and vulnerability reduction in the Afromontane region: Analysing the livelihood strategies of female entrepreneurs in QwaQwa**. Please read this Explanatory Statement in full before deciding whether or not to participate in this research. If you would like further information regarding any aspect of this project, you are encouraged to contact the researchers via the phone numbers or email addresses listed above.

Purpose of research

This study focuses on entrepreneurship resilience and vulnerability reduction in the Afromontane region, particularly analysing the livelihood strategies of female entrepreneurs in QwaQwa.

Description of participation

Participants have a right to withdraw from the interview if they feel uncomfortable as this is a voluntary study; although this will be a disadvantage to the researcher because the data collected will be insufficient and biased. The data generated from the participant that withdrew, the researcher is unable to use it as it is incomplete.

Duration of participation

The interview will last for less than a 60 minutes per participant.

Benefits to the individual

The results of this study contribute to the existing data regarding the existing vulnerabilities encountered by emerging female entrepreneurs and their resilience strategies. Moreover, it will



CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned,

_____ (participant's full names to be included), (the "Participant")

confirm that I voluntarily agree to participate in the research study referred to as the

_____ (the "Study") in relation to

and which Study is being conducted by Jerit Dube _____, (the "Researcher").

I, the undersigned Participant, further confirm that-

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and deidentified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the interview and focus group discussion.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____ Jerit Dube _____

Signature of Researcher: _____ Date: _____

Appendix D: POPIA Industry Code of Conduct: Public Universities

This Code applies to all processing of personal information by ‘public higher education institutions’ as defined in section 1 of the Higher Education Act, 101 of 1997 (www.usaf.ac.za).

The following definitions in the POPIA are key in determining what activities undertaken by public higher education institutions will be affected by the Code:

<p>Personal Information</p>	<p>‘Personal information’ means information relating to an identifiable, living, natural person, and where it is applicable, an identifiable, existing juristic person, including, but not limited to –</p> <p>(a) information relating to the race, gender, sex, pregnancy, marital status, national, ethnic or social origin, colour, sexual orientation, age, physical or mental health, well-being, disability, religion, conscience, belief, culture, language and birth of the person;</p> <p>(b) information relating to the education or the medical, financial, criminal or employment history of the person;</p> <p>(c) any identifying number, symbol, email address, physical address, telephone number, location information, online identifier or other particular assignment to the person;</p> <p>(d) the biometric information of the person;</p> <p>(e) the personal opinions, views or preferences of the person;</p> <p>(f) correspondence sent by the person that is implicitly or explicitly of a private or confidential nature or further correspondence that would reveal the contents of the original correspondence;</p> <p>(g) the views or opinions of another individual about the person; and</p> <p>(h) the name of the person if it appears with other personal information relating to the person or if the disclosure of the name itself would reveal information about the person.</p>
<p>Special Personal Information</p>	<p>‘Special personal information’ means</p> <p>(a) the religious or philosophical beliefs, race or ethnic origin, trade union membership, political persuasion, health or sex life or biometric information of a data subject; or</p> <p>(b) the criminal behaviour of a data subject to the extent that such information relates to –</p> <p>(i) the alleged commission by a data subject of any offence; or</p> <p>(ii) any proceedings in respect of any offence allegedly committed by a data subject or the disposal of such proceedings.⁵</p>
<p>Data subject</p>	<p>‘Data subject’ means the person to whom personal information relates.</p> <p>Data subjects may include:</p> <ul style="list-style-type: none"> • prospective students • student applicants • South African and international students

Appendix E: Interview Guide

1. Can you please briefly introduce yourself and your business?
2. How long have you been operating this business?
3. What vulnerabilities have you been exposed to since inception?
4. How did you manage to mitigate, cope, or adapt to these vulnerabilities?
5. What do you normally do if you encounter any challenges in your business (Proactively your Plan B)?
6. What factors do you think you need as an emerging female entrepreneur to bounce back from the adversities?
7. How do you think entrepreneurship resilience can be developed when faced with adversities?
8. What factors do you think strengthened your resilience during COVID-19 pandemic?
9. Do you have any business associations or networks that you are associated to? If yes, how beneficial are they in terms of building entrepreneurship resilience?
10. What skills and capabilities do you think one should have as an emerging female entrepreneur in this region?

Thank you for your time and participation. Do you have anything to add or ask?

Appendix F: Focus Group Discussion Guide

1. Discuss your perceptions and experiences of entrepreneurship resilience and vulnerability reduction.
2. Identify and discuss the vulnerabilities that threaten the survival of your businesses
3. Discuss the strengths of your businesses
4. Discuss how your businesses perform the following components of resilience:
 - (a) Detect vulnerabilities
 - (b) Prevent vulnerabilities
 - (c) Cope and adapt to vulnerabilities
5. Discuss the potential and current strategies that help you reduce vulnerabilities and build or enhance entrepreneurship resilience.
6. Discuss how your businesses are or were affected by the COVID-19 pandemic and how you managed to bounce back.
7. How do you think female entrepreneurs can sustain their livelihoods during socio-economic hardships?
8. Discuss how you create business connections and mobilise resources for building entrepreneurship resilience.
9. Discuss any further discussions that you think might be beneficial to this study.

Thank you for your time and participation! Do you have anything to add or ask?

Appendix G: Community Gate Keeper's Letter 1 (Ward Councilor)



WARD 31 COUNCILOR OFFICE

GATEKEEPERS PERMISSION LETTER

NAME & ADDRESS: 390 Molapo Village, Witsieshoek, 9870

CONTACT PERSON: Mr Mongezi Malaoane

CONTACT NUMBER: 0828185769

EMAIL ADDRESS: malaoane.mj@gmail.com

TITLE OF RESEARCH PROJECT: Entrepreneurship resilience and vulnerability reduction in the Afromontane: Analysing the livelihood strategies of female entrepreneurs in QwaQwa.

RESEARCHER: Jerit Dube

DEPT NAME & ADDRESS: The University of Free State, Centre for Gender and Africa Studies, QwaQwa Campus

CONTACT NUMBER: 0824296711

EMAIL ADDRESS: 2021468547@ufs4life.ac.za

Dear Miss Jerit Dube

The purpose of this letter is to inform you that we have reviewed your request to conduct research involving data related to the livelihood strategies of emerging female entrepreneurs in QwaQwa. On behalf of the QwaQwa community, I would like to grant you permission to collect data for this research titled 'Entrepreneurship resilience and vulnerability reduction in the Afromontane: Analysing the livelihood strategies of female entrepreneurs in QwaQwa'.

The following stipulations should be observed when conducting this study:

- *Compliance with COVID-19 Regulations*
- *POPIA ACT*
- *Research Ethics Considerations (Respect and Protection of Participants' Rights)*

Sincerely,

Name: Mr Mongezi Malaoane

Date: 27/05/2022

Signature: MJ _____

WARD 31 COUNCILOR DETAILS

Cllr Mongezi Malaoane
067 606 1450

OFFICE ADDRESS

390 Molapo village
Witsieshoek
9870

Appendix H: Community Gate Keeper's Letter 2 (Maluti-A-Phofung Municipality)



PERMISSION LETTER FROM MALUTI-A-PHOFUNG MUNICIPALITY

Ref: TS Makhele
Contact: 058 718 6567

08 June 2022

University of the Free State, QQ Campus
Kestell Road QwaQwa,
Phuthaditjhaba,
9866.

Dear Members of the Research Ethics Committee:

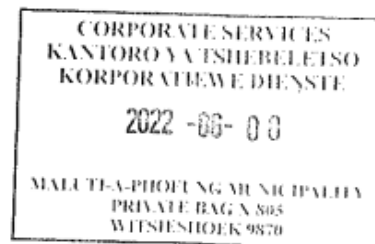
On behalf of Maluti-A-Phofung Municipality, I am writing to formally indicate our awareness of the research proposed by Miss Jerit Dube, a PhD student at the University of the Free State. We are aware that Miss Jerit intends to conduct her research titled 'Entrepreneurship resilience and vulnerability reduction in the Afromontane: Analysing the livelihood strategies of female entrepreneurs in QwaQwa', by involving female entrepreneurs from QwQwa as her study participants.

As Director of Local Economic Development Tourism SMME Agriculture and Rural Development, I grant Miss Jerit permission to conduct her research in our community.

If you have any questions or concerns, please feel free to contact my office at 058 718 6567.

Sincerely,

Mr Makhele TS
Acting Director
Local Economic Development Tourism SMME Agriculture and Rural Development.



Appendix I: Researcher's COVID-19 Vaccine Certificate



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

COVID-19 Vaccination Certificate

ID Document Used: RSA ID
ID Number: 891001*****6
Firstname: Jerit
Surname: Dube
Date of Birth: 01-Oct-1989

Vaccine Received: Comirnaty
Vaccine Date: 12-Oct-2021

Vaccine Received: Comirnaty
Vaccine Date: 04-May-2022

Vaccine Received: Comirnaty
Vaccine Date: 31-Aug-2021



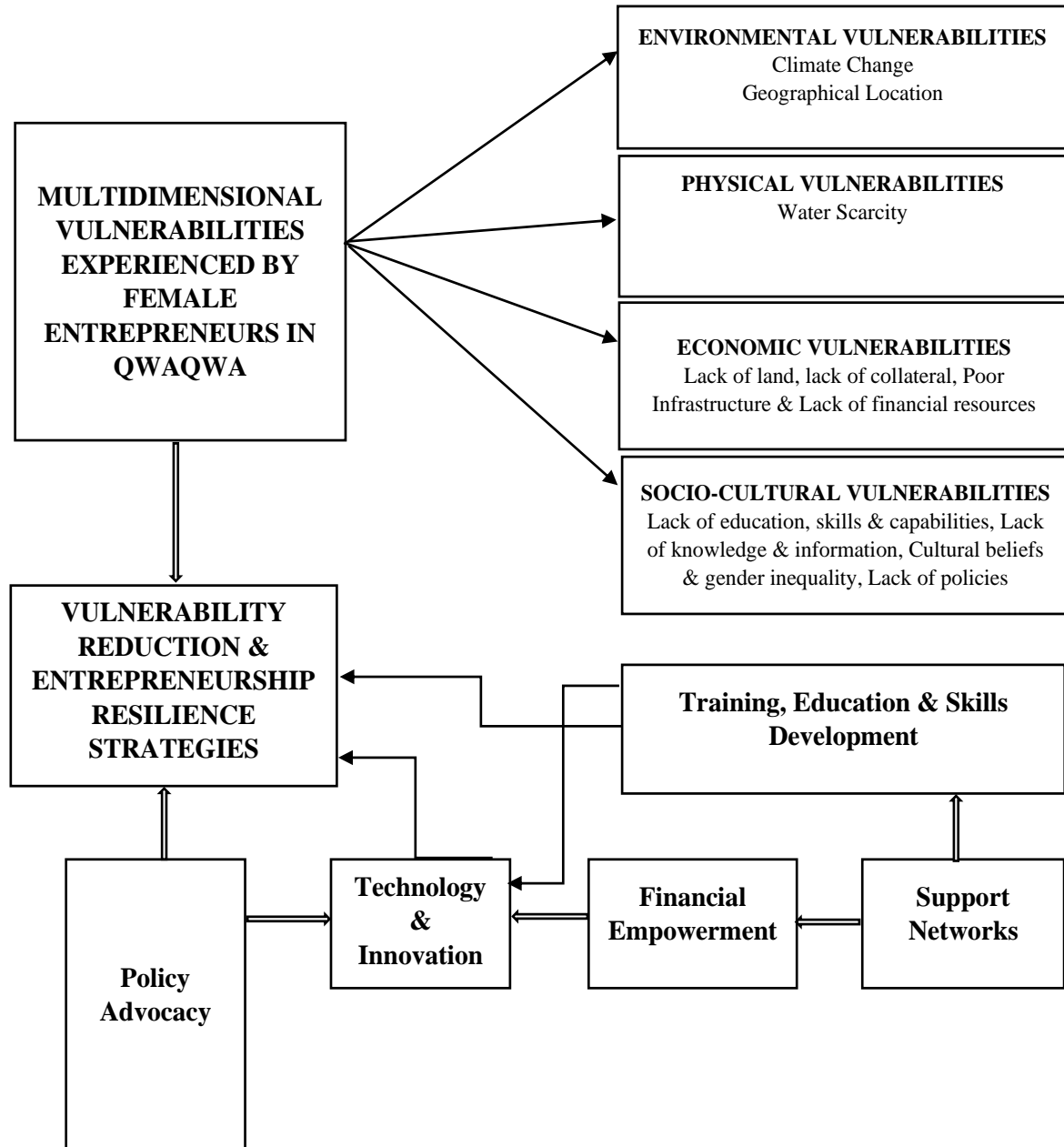
Disclaimer

Congratulations, you have successfully downloaded your Vaccination Certificate Version 2. The design of the Vaccination Certificate will be enhanced to ensure that it remains up-to-date with local and international standards. You will therefore have to download your updated vaccination certificate to ensure that it remains up-to-date. The Department of Health will advise on the availability of newer versions of Covid-19 vaccination certificates as they become available.

The QR Code generated is not intended to be readable by the general public, it is meant to be used by entities requiring to verify the certificate's validity, using a Vaccine Certificate System inbuilt QR scanner.

CONFIDENTIAL – Please report fraud or misuse to evdsfraud@health.gov.za

Appendix J: Vulnerability Reduction and Entrepreneurship Resilience Model



Appendix K: Turnitin Report

Jerit Dube PhD Thesis 2024.docx

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