



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**AN INVESTIGATION INTO FACTORS AFFECTING THE SUSTAINABILITY OF AGRICULTURAL  
COOPERATIVES IN NAMIBIA: A CASE STUDY OF ONGHALULU FARMERS' COOPERATIVE,  
OHANGWENA REGION, NAMIBIA**

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A handwritten signature in black ink, appearing to read 'Agalulu', positioned above a dotted line.

.....  
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## DECLARATION

I, **Wilikeni Nampala Kadhikwa**, declare that this thesis is my original piece of work and, to my knowledge, has not been submitted for a similar degree in any other university.



**Signature**

05 February 2024

**Date**

## **DEDICATION**

I dedicate this thesis to everyone who supported me during my study. Your unconditional support has been the most significant source of strength, encouragement and confidence that keeps me going even in the most trying circumstances. Instantly, your sacrifices made this accomplishment possible, and I will forever be thankful.

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## ABSTRACT

The aim of the study was to investigate factors affecting the sustainability of agricultural cooperatives in Namibia, with the Onghalulu Farmers' Cooperative being a case study. The study addressed external and internal factors that primarily affect the sustainability of agricultural cooperatives in Namibia and that of the Onghalulu Farmers' Cooperative specifically. The problems identified in the study include those related to the market, finances, collaboration, governance, leadership, stakeholder engagement, environmental factors, compliance, mentorship and training programmes, infrastructure development, adoption of advanced technology, investments in research and development, and other issues influencing the sustainability of agricultural cooperatives in Namibia. The study noted that the emphasised problems still plague some Namibian agricultural cooperatives, primarily due to cooperative stakeholders' poor commitment to resolving the issues that they face and their resistance to accepting change. Moreover, some traditional beliefs hinder the commercial operations of agricultural cooperatives, as well as their capacity to follow rules and regulations, and the cooperatives' continued dependence on government support and donors. Additionally, due to the lack of political will, the government regularly allocates insufficient funds for agricultural projects that support cooperative initiatives, thereby financially starving the sector. In addition, climate change continuously impacts cooperative farmers' productivity, and as a result, the marginalised community members, youth, and women are underrepresented in cooperative initiatives. Using a case study design and a qualitative research methodology, the study collected primary data from 15 participants using open-ended questionnaires and semi-structured interviews. A purposive sampling method was used to choose participants as cases with rich and thorough insights about the study constructs. The study was guided by a theoretical framework including collective action and signalling theory to highlight cooperative principles, environmental sustainability governance (ESG), and economic sustainability performance (ESP). The study findings revealed that Onghalulu Farmers' Cooperative practices mixed farming, combining agribusiness with different farming activities. It was found that some internal and external factors impact Namibia's agricultural cooperative's survival ability. Besides, it was determined that efficiently run agricultural cooperatives improve members' quality of life and significantly advance the sustainable growth of the cooperative. The study offered some recommendations to minimise the obstacles identified and enhance the sustainability of agricultural cooperatives in Namibia. As such, the study findings enrich the existing literature about agricultural cooperatives and provide valuable information to cooperative stakeholders about supporting the resilience and sustainability of agricultural cooperatives in Namibia.

## Table of Contents

RELEASE FORM.....	ii
APPROVAL FORM.....	iii
DECLARATION.....	iv
DEDICATION.....	v
ACKNOWLEDGEMENTS.....	vi
ABSTRACT.....	vii
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
LIST OF ABBREVIATIONS AND ACRONYMS.....	xiii
CHAPTER ONE.....	1
INTRODUCTION AND BACKGROUND OF THE STUDY.....	1
1.1. Introduction.....	1
1.2. Background of the study.....	1
1.3 Statement of the problem.....	4
1.4. Research objectives.....	5
1.5. Research questions.....	5
1.6. Significance of the study.....	6
1.7. Limitations of the study.....	6
1.8. Delimitations of the study.....	7
1.9. Thesis outline.....	7
1.10. Summary.....	8
CHAPTER TWO.....	9
LITERATURE REVIEW.....	9
2.1. Introduction.....	9
2.2. Definitions of concepts.....	9
2.3. The potential contribution of agricultural cooperatives to community development.....	15
2.4. Challenges/factors affecting the sustainability of agricultural cooperatives.....	17
2.5. The influence of cooperative stakeholders on the sustainability of agricultural cooperatives.....	22
2.6. The effectiveness of sustainable agricultural cooperatives.....	28
2.7. Strategies for enhancing the sustainability of agricultural cooperatives.....	31
2.8. Empirical literature.....	36
2.9. Theoretical framework.....	39
2.10. Conceptual framework.....	42



2.11. Summary .....	48
CHAPTER THREE .....	49
RESEARCH METHODOLOGY .....	49
3.1. Introduction .....	49
3.2. Research philosophy .....	49
3.3. Research design .....	50
3.4. Research approach.....	50
3.5. Population.....	50
3.6. Sample size and methods .....	51
3.7. Data collection .....	51
3.8. Data collection procedures .....	52
3.9. Credibility and trustworthiness.....	52
3.10. Data analysis .....	52
3.11. Research ethics .....	53
3.12. Summary .....	53
CHAPTER FOUR .....	54
DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS .....	54
4.1. Introduction .....	54
4.2. Data analysis and interpretation of results.....	54
4.3. Data collected through questionnaires and interviews.....	54
4.3.1. Participants' gender .....	54
4.3.2. Participants' age range .....	55
4.3.3. Participants rank or positions in a cooperative .....	55
4.3.4. Participants cooperatives experiences .....	55
4.3.5. Participants level of education .....	55
4.3.6. The main agricultural activities undertaken at Onghalulu Farmers' Cooperative.....	56
4.3.7. Challenges facing agricultural cooperatives in developing nations like Namibia .....	57
4.3.8. Factors affecting the sustainability of Onghalulu Farmers' Cooperative.....	61
4.3.9. The influence of cooperative stakeholders on the sustainability of agricultural cooperatives in Namibia .....	65
4.3.10. The significance of stakeholders on the sustainability of Onghalulu Farmers' Cooperative	66
4.3.11. The obstacles hindering the efficiency of Onghalulu Farmers' Cooperative stakeholders' engagement .....	67
4.3.12. Interventions to be implemented to improve stakeholder engagement at Onghalulu Farmers' Cooperative.....	68

4.3.13. The effectiveness of good cooperative governance in enhancing agricultural cooperatives' sustainability in Namibia.....	69
4.3.14. The effectiveness of cooperatives on the sustainability of Onghalulu Farmers' Cooperative .....	70
4.3.15. Strategies to increase the effectiveness of agricultural cooperatives in Namibia .....	71
4.3.16. Approaches to be implemented to advance the sustainability of agricultural cooperatives in Namibia .....	73
4.3.17. Relevant managerial skills needed to enhance the sustainability of Onghalulu Farmers' Cooperative.....	74
4.4. Relevant literature linked to the study findings .....	75
4.5. Summary .....	78
CHAPTER FIVE .....	79
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....	79
5.1. Introduction .....	79
5.2. Main findings .....	79
5.3. Areas of future research .....	84
5.4. Conclusions .....	85
5.5. Recommendations .....	85
6. REFERENCES .....	87
APPENDIX 1: RESEARCH QUESTIONNAIRE .....	100
APPENDIX: 2 SEMI-STRUCTURED INTERVIEWS.....	104
APPENDIX 3: ETHICAL CLEARANCE LETTER .....	105
APPENDIX 4: PERMISSION LETTER TO COLLECT DATA.....	106
APPENDIX 5: THESIS EDITING CERTIFICATE .....	107

## LIST OF TABLES

Table 4.1: Demographic characteristics of participants.....	57
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## LIST OF FIGURES

Figure 2.5.1: Cooperatives stakeholders that influence the sustainability of agricultural cooperatives.....	23
Figure 2.10.1: Conceptual framework for factors affecting the sustainability of agricultural cooperatives.....	48

## LIST OF ABBREVIATIONS AND ACRONYMS

AGM	Annual General Meeting
R&D	Research and Development
PCLD	Programme for Communal Land Development
ESG	Environmental Sustainability Governance
ESP.	Economic Sustainable Performance
SDGs	Sustainable Development Goals
MDGs	Millennium Development Goals
CAQDAS	Computer-Assisted Qualitative Data Analysis Software
DCDR	Division of Cooperative Development and Regulations
MAWLR	Ministry of Agriculture, Water and Land Reform
NUST	Namibia University of Science and Technology
UNAM	University of Namibia
IUM	International University of Management
ICA	International Cooperative Alliance
OFC	Onghalulu Farmers' Cooperative
HPP	Harambee Prosperity Plan
NDP	National Development Plan
VCF	Veterinary Cordon Fence
NCA	Northern Communal Areas
ROI	Return on Investment
ICT	Information Communication Technology
IT	Information Technology
RC	Regional Councils

## CHAPTER ONE

### INTRODUCTION AND BACKGROUND OF THE STUDY

#### 1.1. Introduction

Cooperatives have long been recognised as crucial in fighting poverty and generating employment in many developed and developing countries (Malapela, 2021). World-wide, cooperatives are understood to be autonomous groups of individuals who come together voluntarily to run democratically run businesses that serve their daily economic, social, and cultural needs (Msuya, 2022). Consequently, such individuals become essential to participatory development, job creation, poverty alleviation, and social development. Farmers who negotiate better prices for seeds, fertilisers, transportation, and storage costs benefit greatly from cooperatives (Msuya, 2022). However, several issues, such as poor member participation in decision-making, high age groups, cooperative sizes, dissatisfaction with member training, and many others, eventually affect their performances.

The Namibian government has supported the growth and development of cooperatives as a strategy to address the country's major socioeconomic problems of poverty and unemployment (Namibia Cooperative Policy, 2017). This has subsequently allowed the locals to organise and improve their living conditions where private enterprises or the government is weak, particularly in rural areas. As a result, a strategy to lessen rural poverty and increase the productivity and income of agricultural cooperatives is promoted through the use of cooperatives in the agricultural sector (Namibia Cooperative Policy, 2017). Remarkably, the government has been working with private partners to support rural communities looking to establish cooperatives by giving them technical and financial assistance (Namibia Cooperative Policy, 2017). This has been accomplished by implementing the Government Green Scheme Policy 2008, which aims to encourage Namibia's agriculture to be commercialised sustainably (Thomas & Vink, 2020).

Therefore, the present researcher sought to investigate various factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers Cooperatives being a case study. This chapter begins by providing the introduction, background of the study, the problem statement, research objectives, and research questions. Following the research questions is a presentation of the significance of the study, limitations, delimitations, thesis outline, and summary.

#### 1.2. Background of the study

Cooperation is essential to human well-being, which is why humankind still remains in existence (Etefa, 2022). The foundation of human survival depends on cooperation, and it is a fact that in early

societies there were divisions of labour among family members based on humans' evolutionary history (Etefa, 2022). Above and beyond, history has since revealed evidence of cooperation among numerous groups, including the Native American and African tribes, the ancient Greeks, Egyptians, Romans, Chinese, Europeans, Persians, Sumerians, Romans, and Babylonians (Khatun & Islam, 2023).

Cooperative initiatives were frequently created to protect the interests of society's less powerful members. The concept of cooperatives first emerged in the late 18th century as a result of property distribution and the freedom of the peasantry, and it has been a strong force ever since and this has resulted in the founding of the International Cooperative Alliance in 1889 (Bercu et al., 2020). According to Katchova and Woods (2013), a cooperative is fundamentally a partnership between members of different societies who work together to increase their chances of surviving by using the same farming, fishing, and hunting techniques and sharing other survival skills. As a result, the first legal credentials of agricultural cooperatives appeared in Britain in 1852, leading to the introduction of the first legal form of agricultural cooperatives (Ajates, 2020). In the modern era, agricultural cooperatives are substantial, as significant changes are anticipated in the organisation of the food supply from producer to consumer. The natural world is changing due to the modern era, resulting in declining resources, a growing population, increased pressure on the environment, shifting societal expectations, new technologies, and climate change's growing impact (Kalogiannidiss, 2020). Significantly, agricultural cooperatives are recognised as essential in expressing rural realities globally, accounting for 40–60% of agricultural trade (Ajates, 2020). One of the fundamental shortcomings of global agriculture and cooperatives is the absence of an adequate strategic programme for the general management and development of the economy, especially in the agriculture sector (Bercu et al., 2020). Their production has directly or indirectly self-destructed, destroying global investments, including agricultural infrastructure (Bercu et al., 2020).

Cooperatives in Africa emerged from the immediate post-colonial period in the 1960s and the mid-1990s, which are recognised as phases of African economic liberalisation (Wanyama, 2009). However, it is estimated that 52% of the world's remaining arable land is in Africa; but the continent is experiencing fierce competition for arable land and water from four main groups: national governments, foreign businesses drawn to Africa's abundant and reasonably priced supply of agricultural land, relatively wealthy urban residents who are investing in the land quickly, and rural communities that are still experiencing population growth (Jayne et al., 2014). The said groups negatively impact the establishment and sustainability of agricultural cooperatives in Africa, particularly for small-scale farmers. In addition, the formation and sustainability of local agricultural cooperatives are consequently affected by controlling land distribution, as acknowledged by African

state leaders for a long time (Jayne et al., 2014). Due to Africa's semi-arid environment, farmers must overcome the formidable challenges and instantly increase production to feed their growing population and support livelihoods.

Before Namibia gained its independence in 1990, the Registrar in Pretoria, South Africa, oversaw cooperative operations there under the antiquated Ordinance No. 15 of 1946, which led to the adoption of the National Cooperative Policy in 1992 (Benisiu & Martha, 2011). Subsequently, cooperative activities are regulated by the Cooperative Act 23 of 1996 and the Namibia Cooperative Policy of 2017, facilitated by the Division of Cooperative Development and Regulation in the Ministry of Agriculture, Water, and Land Reforms. Out of about 219 registered cooperatives in Namibia, 175 of these cooperatives are registered under the agricultural sector. Namibia, which has a growing number of registered cooperatives, is experiencing various issues related to rising food insecurity, the primary reason for declining staple food production and the failure of agricultural cooperatives' sustainability (Jona & Nghixulifwa, 2018). Contrarily, low agricultural productivity results from the lack of incentives for cooperative farmers to participate in optional land management policies that would hasten the need for technological change (Taapopi et al., 2018). Consequently, the cycle of poverty and hunger is unbreakable as the soils deteriorate unchecked. Namibia, which has a small population and a growing number of registered cooperatives, struggles with inefficient agricultural production and markets, which leads to cooperatives' failure (Jona & Nghixulifwa, 2018).

Onghalulu Farmers' Cooperative was established in October 2014 as part of the Local Level Participatory Planning component of the Ministry of Land Reform's Programme for Communal Land Development (PCLD) to provide services and support to its members (Nikodemus et al., 2019). It was formed through collaboration with three villages, Onghalulu, Okambali, and Onane, with 194 registered and paid-up members. The formation of the association was motivated by member benefits rather than profit maximisation through providing inputs, services, and the collective marketing of products (Nikodemus et al., 2019). Livestock farming is the primary agricultural activity of cooperative members within the grazing area, which covers 10,487 hectares. The cooperative's activities offer business opportunities that, if properly implemented, could generate a decent income for the cooperative while also creating employment opportunities for society's unemployed youth (Nikodemus et al., 2019). From the establishment of Onghalulu Farmers' Cooperative, it has persisted in dealing with several issues that have been threatened by several challenges that mainly affected its sustainability, including a lack of capital base to launch new projects and initiatives, unpredictable climate change and poor rainfall, poor governance and leadership, a lack of mentorship and training



programmes, poor cooperation between cooperative farmers, low youth participation in agricultural initiatives, and the conflict between rural farmers and the traditional authority.

Despite the numerous challenges that agricultural cooperatives face globally, regionally, nationally, and locally, they have the potential to make a significant contribution to eradicating poverty, boosting food security, and promoting inclusive employment. In that sense, the Onghalulu Farmers' Cooperative may be an essential resource for reducing poverty, enhancing food security, and fostering inclusive employment in the country. Therefore, the purpose of this present study is to investigate the factors affecting the sustainability of agricultural cooperatives in Namibia, with the Onghalulu Farmers' Cooperative in Okongo West, Ohangwena Region, being a case study. It ideally identified potential interventions to improve the sustainability factors in the whole agricultural sector.

### **1.3. Statement of the problem**

Agricultural cooperatives are globally celebrated for their magnificent impact on the global economy over the last 100-150 years. However, they have been facing several challenges such as eroding member commitment, deprived social capital, member apathy, a lack of incentives to invest risk capital in cooperatives, high agency costs, and influence costs (Iliopoulos & Valentinov, 2018). The continuing ageing of the global population and the depopulation agenda also affect the sustainability of agricultural cooperatives (Bercu et al., 2020). The sustainability of farming cooperatives in Africa is threatened by several problems, including low productivity, a lack of access to sufficient land size, a lack of adequate knowledge and information transfer, a slow return on investment, a lack of improved seed, and a lack of investment in research and development (Abera et al., 2021). Since Namibia gained independence, agricultural cooperative activities have primarily lagged because of a lack of sustainable economic activities, awareness of the potential advantages of cooperatives, and entrepreneurial skills (Namibia Cooperative Policy, 2017). Moreover, cooperatives in Namibia encounter several structural difficulties such as a lack of access to agricultural technology, inefficient and ineffective input use, and a lack of a supply chain based on the market (Kapuka, 2017). Furthermore, several newly formed cooperative farmers in Namibia have access to the farmland but lack title deeds, thereby preventing them from using the allocated land as collateral for loans and working capital.

The sustainability of Onghalulu Farmers' Cooperative faces several challenges, including inadequate infrastructure development in the region, a lack of motivation among members due to reduced membership benefits, financial challenges, a lack of customers due to financial constraints, limited access to water as a result of the drought situation, a lack of access to agricultural technology, limited

institutional and human capacity, poor application of legal and policy frameworks, and limited access to agricultural data by policymakers. The above challenges are common barriers to Onghalulu Farmers' Cooperative which hinder it from benefiting from sustainable farm production and marketing, and widening the income gap between rural and urban residents. Therefore, it is essential to address the above challenges to reduce Onghalulu Farmers' Cooperative's failures and enhance its long-term sustainability. This study was conducted to investigate the factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers' Cooperative in Oshana Region being a case study.

#### **1.4. Research objectives**

##### **1.4.1. The main objective**

The main objective of the study was to investigate the factors affecting the sustainability of agricultural cooperatives in Namibia.

##### **1.4.2. Sub-objectives**

- i. To analyse the influence of cooperative stakeholders on advancing the sustainability of agricultural cooperatives in Namibia;
- ii. To explore the effectiveness of cooperatives on the sustainability of agricultural cooperatives in Namibia; and
- iii. To describe strategies for enhancing the sustainability of agricultural cooperatives in Namibia.

#### **1.5. Research questions**

##### **1.5.1. Main research question**

The main research question for the study was: What are the factors affecting the sustainability of agricultural cooperatives in Namibia?

##### **1.5.2. Sub-research questions**

- i. What are the influences of cooperative stakeholders on advancing the sustainability of agricultural cooperatives in Namibia?
- ii. What is the effectiveness of cooperatives on the sustainability of agricultural cooperatives in Namibia?

- iii. What are the strategies for enhancing the sustainability of agricultural cooperatives in Namibia?

### **1.6. Significance of the study**

The study contributes to knowledge about the factors affecting the sustainability of agricultural cooperatives in Namibia, particularly the Onghalulu Farmers' Cooperative. It offered solutions to the enduring problems the farm industry has been experiencing and can help to shape agricultural policy and practices. It provided other guidance on making agricultural cooperatives more sustainable in Namibia. Moreover, it provided crucial tips and knowledge to increase food security in the country, thereby enhancing Namibia's ability to become a sustainable food-producing nation. The study's findings advanced the understanding of agricultural cooperatives. The findings can enable the stakeholders to make informed decisions regarding future investments when provided with a complete picture of the sector's potential opportunities, strengths, threats, and weaknesses. The study can foster the significance of public and private sector participation in agricultural cooperatives as a dynamic strategy to address the country's social, economic, and environmental problems. The study incorporated collaboration and trust between the researcher and the community, ultimately ensuring the study's relevance and worth to the community. The study embraced guidance on making agricultural cooperatives more sustainable and it supports future research and interventions aimed at enhancing the sustainability of farming cooperatives in Namibia and contributing to a more robust and resilient agricultural sector. Furthermore, the study gave the Onghalulu Farmers' Cooperative stakeholders a commendable opportunity to learn new methodological skills to improve their cooperative's sustainability and achieve preferred market competitiveness.

### **1.7. Limitations of the study**

The study was limited to one distinct aspect of the factors affecting the sustainability of agricultural cooperatives in Namibia, with the Onghalulu Farmers' Cooperative being a case study. As a result, the researcher had limited access to the entire statistical population of agriculture cooperatives, partly because covering a large population was prohibitively expensive and time-consuming. Consequently, the researcher struggled to gain the cooperation of the entire population to participate in the study, thus resulting in data collection or quality limitations. Other research limitations included participant ignorance and a lack of knowledge and expertise in identifying the sustainability factors of the agricultural cooperatives. In addition, the results of this study were hampered by participants' inexperience in accurately identifying the causes of underperforming cooperatives and poor support during the data collection session. Notwithstanding the fact that the researcher could not explore

further information from extended initiatives due to the lack of essential resources needed to broaden the study horizon. All these limitations were considered during the study to achieve its intended objectives.

### **1.8. Delimitations of the study**

The study investigated the factors affecting the sustainability of agricultural cooperatives in Namibia, with the Onghalulu Farmers' Cooperative being a case study. The study was limited to a particular time frame to ensure that the information gathered was up-to-date. Primary data were collected from participants using open-ended questionnaires and semi-structured interviews. Secondary data were gathered from the Ministry of Agriculture, Water, and Land Reform, the Namibia National Farmers Union, and various works of literature focusing on topics equivalent to the study's goals. Additionally, the study gathered information from 15 participants, as determined by the sample size, and that information was collected through surveys, interviews, or published research. The study employed a purposive sampling technique, and participants' responses were limited to those that reflected their sentiments and experiences as they were expressed in self-assessment questionnaires about the factors affecting the sustainability of agricultural cooperatives in Namibia, particularly the Onghalulu Farmers' Cooperative.

### **1.9. Thesis outline**

This study is outlined in five (5) chapters as explained below.

**Chapter one:** This chapter covers the study's introduction and background, the problem statement, the research objectives, the research questions, the study's limitations, its delimitations, its significance, and the thesis outline.

**Chapter two:** Chapter two components comprise this chapter's literature review: theoretical literature, empirical literature and the conceptual framework. The critical terms discussed under the three components allude to the factors affecting the sustainability of agricultural cooperatives.

**Chapter three:** The study's methodology is discussed in this chapter. The terms population, sample size and procedures, research instruments, data collection procedures, credibility and trustworthiness, data analysis, research ethics, and a summary are all included in the methodology.

**Chapter four:** The data analysis and conclusions are presented in this chapter. It discusses the study's findings and presents the data and how the analysed data was interpreted.

**Chapter five:** This chapter discusses the study's contributions, recommendations, critical findings in summary form and suggestions for future researchers.

### **1.10. Summary**

In this chapter, the factors affecting the sustainability of agricultural cooperatives were covered. The chapter uncovered the constant challenges affecting Onghalulu Farmers' Cooperative's sustainability. Moreover, the context of the study background, statement of the problem, research objectives, research questions, the significance of the study, limitations, delimitations, thesis outline, and a summary were covered in this chapter. Following the study's main objectives, the next chapter covers the empirical literature, theoretical literature, theoretical framework, and conceptual framework.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1. Introduction

This chapter examines the literature gap and defends the study's theoretical underpinnings by making general allusions to the related and existing literature about it. It logically showcases the study's available literature, connects this to the theoretical, empirical, and conceptual framework, and presents the overall literature drawn from the secondary data source. The literature review as a logical process includes identifying published and unpublished works from secondary sources on the topic of interest, evaluating works about the problem, and documenting the study.

#### 2.2. Definitions of concepts

##### 2.2.1. Cooperative

The word cooperative comes from the Latin word "cooperari," which means cooperating with others or, in other terms, cooperation is a process of giving and receiving from one another while working towards a common goal (Tiwari & Nepal, 2017). According to Malapela (2021), a cooperative is an autonomous association of individuals who come together voluntarily to address their shared needs and aspirations in the economic and social spheres through a jointly owned and democratically run business that is structured and operated according to cooperative principles. Cooperatives are frequently compared to inclusiveness linked to other institutional innovations such as contract farming because they are regularly linked to collective actions and social capital (Fasakin & Popoola, 2019).

##### 2.2.1.1. Cooperative principles

According to Sambuo (2023), cooperative principles have historically been developed based on the need for economic growth and the members' perception, and their membership and governance are the engines of cooperatives that adhere to the sustainable development plan. The principles embrace market competitiveness by adhering to the effects of market competition and reviewing policies, regulatory bodies, and cooperative support institutions (Sambuo, 2023). It is predominantly recognised that any business organisation's four types of interests are the starting point for developing cooperative principles: the users' enthusiasm, the ownership stakes, the controlling stake, and employees' interests. Often, all business types are defined by the relationship between the abovementioned four interests, and the activities of cooperatives are therefore guided by the principles as outlined below:

#### **2.2.1.1.1. Voluntary and open membership**

Co-operatives are voluntary organisations that are open to anyone who wants to use their services and is willing to accept the responsibilities of membership without regard to gender, social, racial, political, or religious affiliation (Guzman et al., 2020). Notably, in Namibia, anyone who is a resident or a citizen of Namibia and is at least 18 years old has the right to join or participate in forming a cooperative (Namibia Co-operative Policy, 2017).

#### **2.2.1.1.2. Democratic member control**

Guzman et al. (2020) claim that cooperatives are democratic organisations that are run by their members who actively participate in setting policies and making decisions. The primary cooperative principle allows each member to vote only once, regardless of the number of shares they own in the organisation, and cooperative members serving on boards are accountable to their membership.

#### **2.2.1.1.3. Member economic participation**

The cooperative's capital is funded equitably by the membership, who also exercise democratic control over it (Namibia Co-operative Policy, 2017). In that vein, a portion of the cooperative's capital must be its common property, and any surplus generated should be used in accordance with the members' agreement, such as for the expansion of the cooperative's business or service (Namibia Co-operative Policy, 2017).

#### **2.2.1.1.4. Autonomy and independence**

Cooperatives are self-help enterprises owned and operated solely by their members (Guzman et al., 2020). However, they do so on terms that guarantee democratic control by their members while also maintaining their cooperative autonomy when entering into agreements with other organisations such as governments, or raising money from outside sources (Namibia Cooperative Policy, 2017).

#### **2.2.1.1.5. Education, training, and information**

Cooperatives provide members, elected officials, managers, and employees with training and education on administration, member rights, liabilities, and obligations so that they can effectively contribute to developing their co-operatives (Namibia Cooperative Policy, 2017). Subsequently, their main goal is to educate the general public, particularly young people and leaders, about the nature and advantages of cooperation.

#### **2.2.1.1.6. Cooperation among cooperatives**

Guzman et al. (2020) contend that cooperatives serve their members more effectively and advance the cooperative movement by collaborating through local, national, regional, and international structures.

#### **2.2.1.1.7. Concern for the community**

Cooperatives use rules that their members endorse to advance sustainable community development (Guzman et al., 2020).

### **2.2.3. Categories of cooperatives**

#### **2.2.3.1. Workers' cooperative**

A worker cooperative is a cooperative that is owned and managed by its employees (Preluca et al., 2022). Through control, every employee participates in democratic decision-making as management is chosen by each worker-owner, who has one vote (Preluca et al., 2022). As such, a worker's cooperative generates jobs for its members because at least 70% of workers must be cooperative members (Namibia Cooperative Policy, 2017).

Examples of workers' cooperatives are cooperatives for agricultural workers, Construction cooperatives, Brick-making cooperatives, Car repair cooperatives, Shoe repair cooperatives, Sewing cooperatives, Bread-baking cooperatives, Handicraft cooperatives, Restaurant or catering cooperatives, Mining or fishing workers cooperatives, and Security guards' cooperatives.

#### **2.2.3.2. Service cooperative**

Service cooperatives are one kind of consumer cooperative that aims to satisfy the needs of their members (Wadsworth et al., 2021). For a service cooperative to provide services to its members, at least 50–70% of the services must be carried out on behalf of the members (Namibia Cooperative Policy, 2017).

Examples of services cooperatives are marketing and supply cooperatives, Consumer cooperatives, Housing cooperatives, Savings and credit cooperatives, Multi-purpose cooperatives, and many more.



## **2.2.4. Levels of cooperatives**

### **2.2.4.1. Primary cooperative**

The primary cooperative is an organisation whose members are all individuals (Namibia Cooperative Policy, 2017). The main goal of a primary cooperative is to facilitate community development while offering its members employment or services (Mazzarol et al., 2018). A minimum of five natural persons, two juristic persons, or a combination of natural and legal persons must form the cooperative before it can be appropriately registered with the Cooperatives Development Authority (Mazzarol et al., 2018).

### **2.2.4.2. Secondary cooperative**

The Namibia Cooperative Policy (2017) states that pre-existing cooperatives combine to form a secondary cooperative. In order to provide its members with sectoral services, the secondary cooperative is typically created by two or more operational primary cooperatives, and it may also contain legal entities (Mazzarol et al., 2018). On the other hand, a secondary operational cooperative holds its annual general meeting and files its annual report, audited report, or independently reviewed report with the Registrar during the most recent fiscal year (Mazzarol et al., 2018).

### **2.2.4.3. Tertiary/Higher cooperative**

A higher-level or tertiary cooperative is formed when two or more operational secondary cooperatives merge (Namibia Cooperative Policy, 2017). A tertiary cooperative is a sectoral or multi-sectoral cooperative whose members are secondary cooperatives and whose objectives are to advocate and engage state, private, and stakeholder organs on behalf of its members under its sectoral or geographical mandate (Mazzarol et al., 2018).

## **2.2.5. Agricultural cooperative**

Dhakal et al. (2021) define an agricultural cooperative as a producer-owned and controlled organisation that enhances farmers' livelihoods by resolving market inequalities. Generally, agricultural cooperatives support collective actions where individual incentives fall short of generating public goods. In that vein, an agricultural co-operative is an independent group of farmers who have come together voluntarily to address their shared social, cultural, and economic needs and aspirations through a jointly owned and democratically controlled business run under a strict code of ethics (Malapela, 2021). United farmers who practise agriculture and raise living organisms for food or raw materials are the joint owners of the agricultural cooperative (Msuya, 2022). Notably, the term

typically refers to unified farmers who raise field crops, poultry, or other livestock; they may be the owners of the land they farm or work as labourers on land that belongs to others (Msuya, 2022). Agricultural cooperatives are essential for improving the income of rural residents, which will eventually improve their quality of life and productivity, the critical indicators for reducing poverty, promoting the standard of living in general, and improving member satisfaction with their members' well-being (Fasakin & Popoola, 2019).

#### **2.2.6. Sustainability**

Sustainability is conducting business without harming the environment, the community, or society (Spiliakos, 2018). A sustainable enterprise has little to no adverse effects on the local or global environment, community, society, or economy (Mahajan & Bose, 2018). On the contrary, a business strives to balance profit, the environment, and people (Mahajan & Bose, 2018). A sustainable business can achieve sustainability by addressing the needs of the present generation without compromising the ability of future generations to address their own needs (Bansal & DesJardine, 2014). Therefore, sustainability entails balancing environmental issues with developmental goals while fostering interpersonal bonds within the community (Msuya, 2022). Notably, organisations should prioritise planning, organising, directing, and managing cooperative resources for cooperatives to be sustainable without harming the environment. By addressing the two categories listed below, sustainability in business can be achieved.

##### **2.2.6.1. Business impact on the environment**

Businesses typically have an immense effect on the environment, so they need to adopt sustainable practices that can help reduce their environmental footprint (Spiliakos, 2018). Such impacts can be eliminated by prioritising sustainable land use practises, making significant investments in renewable energy, lowering waste production, and conserving natural resources to mitigate the impacts (Spiliakos, 2018). Consequently, businesses can reduce their environmental impact and contribute to a more sustainable future by implementing these strategies, and more sustainable business practices will result from avoiding terrible activities like greenhouse gas emissions, waste generation, resource depletion, land pollution, and deforestation.

##### **2.2.6.2. The social impact of business**

Businesses significantly affect society, and they must adopt sustainable and socially responsible practices that minimise adverse effects and maximise positive effects (Spiliakos, 2018). By upholding moral standards, encouraging social responsibility, creating jobs, fostering economic growth, reducing environmental impacts, and investing in sustainable practices, businesses can maintain a positive

social impact by supporting thriving communities' growth (Spiliakos, 2018). Besides, positively influencing at least one of the aforementioned areas is the primary objective of a sustainable business strategy (Spiliakos, 2018). Therefore, businesses that refuse to take accountability could create social injustice, inequality, and environmental degradation (Bansal & DesJardine, 2014). Sustainable businesses closely monitor the effects of their operations to ensure that short-term profits do not become long-term liabilities, as they consider a wide range of environmental, economic, and social factors when making business decisions (Bansal & DesJardine, 2014).

### **2.2.7. The importance of sustainability**

To reduce global challenges, sustainability can boost business success (Spiliakos, 2018). Investors evaluate an organisation's ethical impact and sustainability practises using environmental, social, and governance metrics in the twenty-first century (Spiliakos, 2018). Subsequently, investors prioritise factors like a company's board diversity, water usage, carbon footprint, and community development initiatives. Moreover, sustainability initiatives can support financial performance while fostering public support, enhancing brand reputation, satisfying customer expectations, and creating new growth opportunities (Spiliakos, 2018). Worth noting is that humanity will have no future if businesses destroy the environment and extract all the available resources (Bansal, 2022). Henceforth, businesses must think about the future and its broad societal impacts, and the entity will experience tangible benefits from organisational practices through attracting and retaining employees, particularly in a world where people seek greater meaning in their work, building more resilient supply chains because there are fewer supply disruptions, and increasing customer loyalty as increasing consumers seek products and experiences from companies that are conscious of their broader impact (Bansal, 2022). In addition, the biggest concern is that many distractions such as shareholder pressure for short-term outcomes will result in businesses losing sight of sustainability despite mounting evidence that these businesses perform better over the long term (Bansal, 2022).

### **2.2.8. The development of a more sustainable business strategy**

A more sustainable business strategy can be developed when the organisation's purpose is translated into performance in various ways. The following sustainable business tactics are essential for an organisation:

#### **2.2.8.1. Assess the problem and define objectives**

According to Bansal (2022), to adapt and assess what sustainability means for the team, organisation, industry, and clients, it is necessary to consider the more significant issues, which the team should prioritise to steer the entire process to achieve sustainability. Therefore, to save time and resources,

the organisation should define all workable sustainability goals that are precise, measurable, attainable, pertinent, and time-bound after determining the main problem (Bansal, 2022).

#### **2.2.8.2. Establish your mission**

After establishing specific organisational goals, clarify the organisation's purpose by creating a clear mission statement that will catalyse achieving more long-term objectives. The organisation's mission statement should be clear and used to answer questions like who, what, when, where, and why (Bansal, 2022). It should also demonstrate the organisation's core values and purpose. Formulating a mission statement will help an organisation embrace its internal innovation capabilities, keep up with market changes, and avoid disruptions (Bansal, 2022).

#### **2.2.8.3. Craft your strategy**

A compelling mission statement affects how prepared the organisation is to implement a sustainable business strategy (Bansal, 2022). As long as the organisation adheres to the triple bottom line regarding how its actions affect the planet, people, and profit, it will continue to be profitable. This is because a suitable organisational strategy considers internal and external opportunities to generate value in line with the organisation's mission (Bansal, 2022). The organisation-specific strategy will also boost internal and external value while enhancing operational effectiveness, which is ultimately advantageous for both the organisation and the environment.

#### **2.2.8.4. Implement strategy and assess results**

It is time to implement strategies and determine whether the desired outcomes will be obtained. To that end, it should be noted that to promote rapid progress and collaboration with reputable players to increase credibility, the established objectives, mission, and progress must be viable and remain aligned (Bansal, 2022).

### **2.3. The potential contribution of agricultural cooperatives to community development**

According to its guiding principles, agricultural cooperatives show the capacity to compromise, reach a decision by a majority vote, share responsibility for teamwork, and value the ideas and contributions of each team member from a position of solid self-identity. From this point forward, a prosperous cooperative can offer employment opportunities for investments, collaborative growth, and even the distribution of wealth, among other factors, as listed below:

### **2.3.1. Self-help community development**

The concept of self-help community development embraces assisting community members to become subjective rather than objective, and allowing them to act on their situations rather than simply reacting to them (Christenson, 2019). It creates enterprises with widespread community support and serves the interests of many people through education, access to finance, and connection to more extensive community development programmes (Desai & Joshi, 2014). Subsequently, self-help community development empowers people to use appropriate tactics to plan, implement, and sustain changes and promote social unity, thereby addressing the problem of high coordination costs among the poor (Desai & Joshi, 2014). Having said that, Christenson (2019) argues that encouraging renaissance self-help efforts among all segments of society is the only way to sustain community participation in community development.

### **2.3.2. Asset-based community development**

According to Nel (2015), a community's assets typically include human, social, physical, financial, environmental, or both assets combined to form community capital, which is developed, owned, and controlled locally. Asset-based community development, exclusive to diaconal community development, harnesses people's talents, resources, and skills to create local economic opportunities and enhance community well-being (Rakotoarison et al., 2019). Empowered communities prioritise environmental conservation efforts in the ecological, economic, and socio-cultural aspects of sustainable development, thereby resulting in a community's willingness to develop well-being awareness, knowledge, and skills (Ramadani et al., 2021).

### **2.3.3. Self-development**

According to Pfeifer and Peake (2012), self-development includes personal and social or group identity, cognitive and socioemotional processes, and an extensive network of brain regions that broadly promote self-development. It is a reflective approach for the community to reclaim control of the local economy which operates for the entire community's benefit while encouraging collective management and ownership of the enterprises (Pfeifer & Peake, 2012). The essence of self-development ability realises the optimal allocation of resources by relying on one's strength in three areas: factor gathering, which includes attracting and condensing production factors; resource utilisation, which includes pretty allocating production factors and converting them into economic value; and public service, which aims to provide services to meet social demands (Bai et al., 2021).

#### **2.3.4. Social and environmental responsibility**

According to Asmara et al. (2023), agricultural cooperatives are social enterprises. Their primary objectives are to advance social and environmental responsibility through adopting sustainable business practices that lessen environmental impact, support charitable causes, and uphold moral standards (Asmara et al., 2023). As a result, they contribute to a more socially and environmentally conscious community.

#### **2.3.5. Economic growth**

Agricultural cooperatives can support economic growth by encouraging entrepreneurship, innovation, and investment in local businesses and industries through developing new goods and services, higher productivity, and increased competitiveness in domestic and international markets (Halilintar, 2018).

#### **2.3.6. Job creation**

Agricultural cooperatives help local communities, particularly those in rural areas where employment opportunities may be scarce by creating employment opportunities, which in turn helps to lower poverty and raise community members' standards of living (Sulistianingsih et al., (2022).

### **2.4. Challenges/factors affecting the sustainability of agricultural cooperatives**

The following list of difficulties confronted by agricultural cooperatives can limit their growth and adversely affect the livelihoods of farmers and rural communities:

#### **2.4.1. Insufficient funds for research and development**

There are unending challenges with food security and the lowest growth of agricultural cooperatives cannot be solved by simply restricting extension and research development in the agricultural sector but rather by providing adequate funding for research and development (Raidimi & Kabiti, 2017). Inadequate funding for research and development increases the difficulty of resolving the sector's food security issues (Hajirostamlo et al., 2015). As a result, sustainable business strategies will be realised when cooperatives' strong knowledge and insights result in enhancements to current procedures where efficiency can be raised, and costs can be diminished (Hajirostamlo et al., 2015). In contrast, research and development enable cooperatives to create novel goods and services to help them thrive in cutthroat markets, thereby increasing agricultural output and total production (Hajirostamlo et al., 2015). Therefore, the efficiency of research and development rises, and on the other hand, providing fresh insights into inputs and production techniques that increase the potential for agricultural products and diminish the strain on the environment (Hajirostamlo et al., 2015).

#### **2.4.2. Climate change and environmental degradation**

Environmental deterioration and climate change are two issues that agricultural systems must contend with, which can potentially lower agricultural output (Foguesatto et al., 2019). Due to decreased productivity, the depletion of natural resources, and increased production costs, climate change and environmental degradation can present severe problems for agricultural cooperatives (Foguesatto et al., 2019).

#### **2.4.3. Low participation of members and lack of awareness**

The low participation of members and lack of awareness raise severe concerns as some cooperative members do not participate in regular cooperative meetings, including voting of their leaders (Etefa, 2022). Members do not attend regular meetings for various reasons, including poverty and illiteracy, and because most of them are from rural areas, they cannot read or write and are, therefore, hesitant to attend meetings (Etefa, 2022). Contrary to that, members lack awareness and training on cooperative-related issues, thus making it challenging to participate actively in decision-making, planning, and implementing cooperative business activities (Debeb & Yenesew, 2019). Most primary cooperatives often started without setting up appropriate cooperative educational programmes to develop enough knowledge and abilities in cooperative aspects. As a result, most participants lack sufficient understanding of the movement's goals, contributions to societal reconstruction, and cooperative institution rules and regulations (Etefa, 2022). Members become unaware of their obligations and consequently fail to act according to them, thereby making it challenging to implement the cooperative principle of democratic member control (Debeb & Yenesew, 2019).

#### **2.4.4. Inadequate governance**

Most organisations had governance difficulties which caused operational problems and significantly influenced the bankruptcy of most businesses (Basterretxea et al., 2022). Besides, for any cooperative organisation to succeed, it is crucial to prioritise improving governance to combine democratic control with economically sound governance (Basterretxea et al., 2022). In essence, cooperatives frequently appoint individuals to their Internal Audit Committees who cannot fulfil their obligations, which weakens their governance (Etefa, 2022). Additionally, the appointment of well-known individuals to positions on the boards of cooperatives is causing them to fall short in carrying out their responsibilities following best governance practices. Moreover, this causes them to mismanage the cooperatives' resources and cause them to fail in their infancy stage (Etefa, 2022). In addition, cooperative governing bodies must assess their capabilities and collaborate with management to make challenging strategic decisions to increase accountability and transparency (Etefa, 2022).

#### **2.4.5. Absence of professionalism**

Most agricultural cooperatives struggle to maintain professionalism in their business operations through record-keeping, communication, product quality, customer service, competitive pricing, and all business dealings (Poudel, 2018). Besides, cooperative management committee members often lack a thorough understanding of their cooperative's business dealings and frequently find it challenging to appoint competent management staff to uphold a higher standard of professionalism (Etefa, 2022). Consequently, they struggle to hire qualified professionals and invest in their staff members' training to become more professional, ultimately leading to the agricultural cooperatives' failures (Etefa, 2022). As a result, they lack the necessary skills to exert total control over the cooperative's management, and their committee members are uninformed (Etefa, 2022).

#### **2.4.6. Inability to access to arable land**

The main issue facing African agricultural cooperative development is the limited availability of arable land for crop production and livestock farming development, thereby directly affecting livelihood outcomes (Ndlovu & Masuku, 2021). Africa is known to be the second largest continent in the world, making up about one-fifth of the earth's surface; and land issues continue to be a strong emotional attachment in the continent (Malapela, 2021). Contrary to that narrative, due to the skyrocketing land prices, small farmers in Africa are forced to form cooperatives to access a limited number of extensive arable lands (Ndlovu & Masuku, 2021). However, they only had access to land in the rural areas that are communally owned and run by the traditional authorities and only owned less than 2 hectares of that land (Ndlovu & Masuku, 2021). Similarly, due to a lack of resources to acquire land ownership, most agricultural cooperatives with access to arable land in urban areas do not have land ownership rights to use as collateral security to access agricultural loans and grants; as a result, they are leasing it from the municipality (Ndlovu & Masuku, 2021). Lack of access to sizeable arable land sizes and insecure land tenure will lead to unsustainable farming practices and severe resource competition, thereby contributing to chronically low income and persistent food insecurity. In addition, a typical production barrier that many agricultural cooperatives face is a lack of access to arable land, which makes it difficult for them to meet market demand because they lack the land necessary to produce an adequate annual food supply (Malapela, 2021).

#### **2.4.7. Inadequate agricultural inputs and mechanisation technologies**

Farmers should learn more about the current trends in the sector and that modern technologies are significant to the sustainability of the agricultural industry, specifically the agricultural cooperatives (Malapela, 2021). However, most agricultural cooperatives face numerous challenges in their daily



operations due to inadequate agricultural inputs such as better seeds, fertilisers, crop protection chemicals, and machinery (Malapela, 2021). Modern agricultural inputs and mechanisation technologies are essential for agricultural cooperatives to be profitable and productive, and thereby increase sustainable production.

#### **2.4.8. Inability to access financial support**

Most agricultural cooperatives are not as progressive as they should be because they have limited access to agricultural inputs and technologies, mainly because they lack financial resources (Mersha & Ayenew, 2018). In that vein, they have limited access to funding, including grants and loans. Consequently, securing capital to purchase agricultural inputs, investing in agricultural machinery and technologies, and paying for transport to sell agricultural outputs are significant challenges agricultural cooperatives encounter every harvest season (Mersha & Ayenew, 2018). This is because agricultural cooperatives lack the collateral security financial institutions typically require to access loans (Malapela, 2021). Similarly, agricultural cooperative members cannot afford to fund their organisations through regular contributions, thereby making their operations unsustainable.

#### **2.4.9. Limited access to market and market information**

Market participation is the first step towards gaining market access (Lantz, 2019). Agricultural cooperatives use modern communication technology to improve information and electronic systems that allow cooperatives to access the market digitally and obtain the necessary market information (Lantz, 2019). However, considering the agricultural cooperatives' income channel, limited market access opportunities are preconditions for agricultural cooperatives to generate low revenue and slow business growth (Lantz, 2019). Typically, supermarkets buy products from big farms that satisfy their supply-demand needs, hence leaving agricultural cooperatives without customers because their quality and quantity do not meet their standards (Lantz, 2019). Due to a lack of funding, cooperatives cannot afford to own a processor market to guarantee refrigeration and a steady stream of customers for their produce, which impacts the quality of the produce (Malapela, 2021). Agricultural cooperatives, on the other hand, cannot export their products to other countries due to a lack of market access. In addition, cooperatives cannot produce high-value-to-weight products due to marketing difficulties and a niche customer base. Henceforth, the challenges of limited market access for many agricultural cooperatives are caused by their inability to produce large quantities at specific quality levels and low levels of collaboration between cooperatives (Malapela, 2021).

#### **2.4.10. Inadequate support and weak regulation and supervision**

The lack of distinct specialised units at the international, national, and regional levels that promote, supervise, and regulate various cooperatives' activities remains the core challenge to cooperatives' success (Tesfamariam, 2015). Notably, the issues with constrained staff mobility are brought on by the failing agricultural cooperatives' high associated costs and lack of dependable transportation (Etefa, 2022). Prior to that, there is poor coordination to address agricultural cooperatives' issues due to insufficient structures to address the growing challenges that cooperatives face (Etefa, 2022). Therefore, cooperatives with stakeholders, especially research institutes, have weak links and interaction with support institutions is necessary for learning and improving technical capability (Etefa, 2022). As such, policymakers and analysts must consider how their decisions relate to the more extensive national system (Tesfamariam, 2015). Additionally, since some policy instruments are not entirely based on research, a lack of institutionalisation and coordination are two issues that affect the formulation and implementation of integrated regional development policies (Etefa, 2022).

#### **2.4.11. Low stakeholders' participation, particularly in the policy formulation process**

In agricultural cooperatives, those with technical expertise, sufficient funding, and political influence to impact decisions are the only ones allowed to negotiate policy (Yami et al., 2019). Consequently, the space for negotiating competing claims and interests by public and private actors actively involved in agricultural development, production, processing, and trade is limited (Yami et al., 2019). Due to the lack of methods that encourage co-design and co-ownership of the policies, attempts to achieve good governance in policy processes are ineffective (Yami et al., 2019). Therefore, only those who had participated in the process as committee members or by attending workshops appeared to understand what was involved, and the majority of stakeholders in the agricultural cooperatives did not know the procedures involved in forming policies (Etefa, 2022). Typically, the national and regional government policies and structures are influenced by the political roles and ideology of the party in power, which leads to the dominance of specific ideas and interests (Etefa, 2022). Nevertheless, in theory, representatives of the people, experts, and academics should also be involved in policy-making. This is especially true in the current era of the administrative state, where the scope of governmental powers is rapidly expanding, and administrative discretion is frequently used (Etefa, 2022).

#### **2.4.12. Poor infrastructure**

Farmers in developing countries deal with various problems, such as limited access to efficient modes of transportation, inadequate road systems, energy, equipment for processing agricultural products,

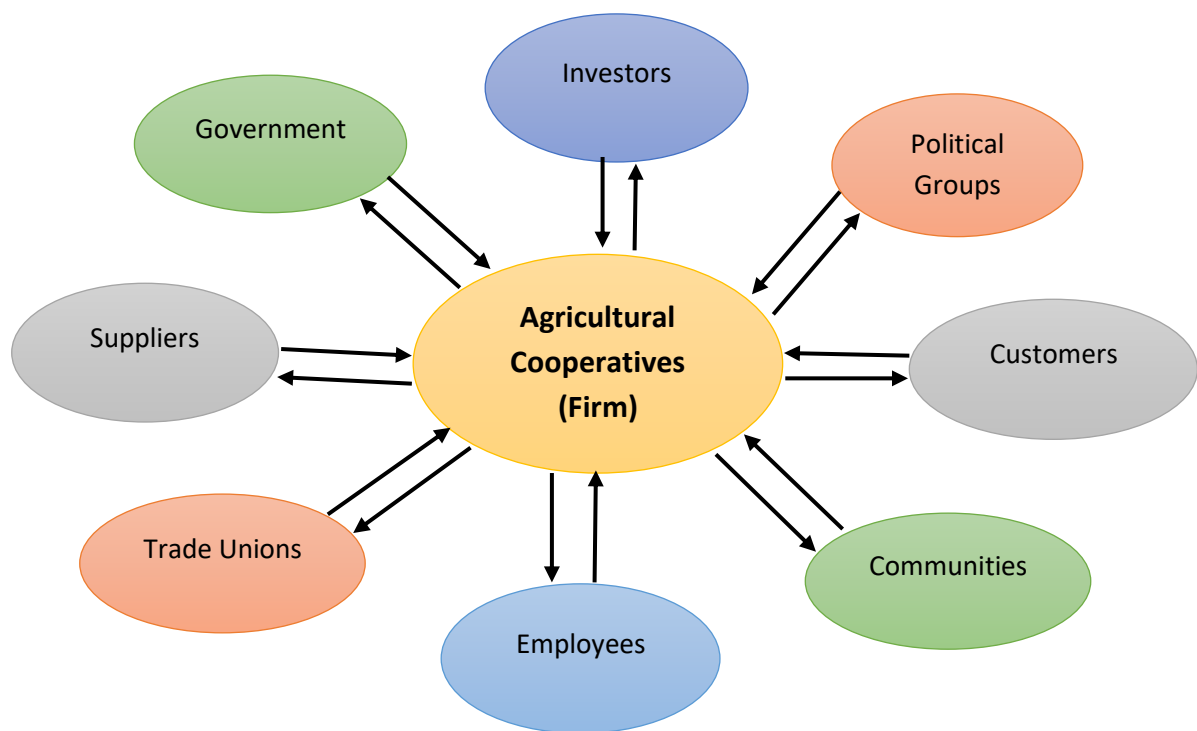
banks, and other necessities (Etefa, 2022). According to Ebewore (2021), infrastructure development is crucial to agricultural advancement because it aids in increasing farmers' output while, on the other hand, posing many worries for rural farmers. Most agricultural cooperatives are found in rural areas with underdeveloped infrastructure, thereby negatively impacting agricultural productivity (Ebewore, 2021). The poor road network connectivity in rural areas prevents farmers from reaching the potential market to sell their goods, and insufficient access to storage facilities to maintain their agricultural products may result in a loss of income. In addition, corruption, a lack of community commitment, and unequal distribution of resources for infrastructure development in rural areas are the leading causes of poor infrastructure development (Ebewore, 2021). However, due to the lack of infrastructure development in rural areas, farmers' cooperatives find it extremely challenging to sell their goods because they lack up-to-date and accurate market information and connections (Etefa, 2021).

## **2.5. The influence of cooperative stakeholders on the sustainability of agricultural cooperatives**

While many studies on stakeholder engagement have concentrated on high-power stakeholders, little attention has been given to the engagement of low-power stakeholders, who are vulnerable because of their limited ability to influence agricultural cooperatives (Civera et al., 2019). By improving the conventional cooperative view of the corporate-stakeholder relationship, agricultural cooperatives are intended to empower strategies that can result in more effective stakeholders becoming active business partners (Civera et al., 2019). Consequently, the idea that stakeholder empowerment and engagement are intertwined with creating value is frequently reinforced by a theory-based view based on the logic of cooperative partnerships. Stakeholders are crucial in deepening the transformational orientation towards more sustainable business models, where innovations play an important strategic role (Fiore et al., 2020). Depending on their authority or legitimacy in a particular political context, they typically impact the cooperatives' decisions to adopt sustainable behaviour, even though defining a legitimate stake can be challenging (Fiore et al., 2020). On the other hand, different stakeholder classifications have been divided into primary and secondary or internal and external stakeholders depending on how much influence they have over the governance of cooperatives. Stakeholders are typically involved in cooperative activities and they have the power to influence corporate decisions to meet various expectations (Fiore et al., 2020). Therefore, the value created within the business model addresses these expectations, giving the cooperative an advantage over its competitors. Agricultural cooperatives should primarily shape relations with various stakeholders to avoid market failure and ensure sustainable development. As a result, since sustainable development can only be achieved by balancing the interests of multiple parties, agricultural cooperatives must work to meet

their stakeholders' needs. Overall, stakeholders significantly impact agricultural cooperatives' sustainability, and this influence is based on the kind and calibre of support they offer. Therefore, agricultural cooperatives can increase their chances of long-term sustainability by engaging with stakeholders and developing strong relationships to improve their financial support, market access, technical expertise, advocacy and outreach, governance, and leadership.

### 2.5.1. Cooperative stakeholders that influence the sustainability of agricultural cooperatives



**Figure 2.5.1: Cooperative stakeholders that influence the sustainability of agricultural cooperatives**

**Source:** Researcher (2023)

#### 2.5.1.1. Government

As a stakeholder in agricultural cooperatives, the government formalises and institutionalises financial and technical support, mediating between farmers and businesses and attracting investors to expand agricultural cooperatives' market channels (Teng et al., 2022). It substantially establishes fundamental organisational structures and provides guidelines for selecting and legally registering agricultural cooperatives and developing policies and rules supporting farmers' cooperatives' growth and sustainability (Dhakal et al., 2021). The formulated policies and rules involve creating laws that give agricultural cooperatives legal recognition and protection by establishing rules that support fair competition in the market, and offering cooperatives financial and technical support (Dhakal et al.,

2021). The government predominantly provides financial support to agricultural cooperatives through subsidies, assisting them in overcoming obstacles to maintaining their operations through financial means to facilitate market access, training and capacity building, and infrastructure development (Teng et al., 2022). Being a prominent stakeholder in the sector, it further helps improve agricultural cooperatives' access to the market by giving them preference to participate in public procurement, establishing connections between markets, and encouraging fair trade principles (Teng et al., 2022). In this vein, governments promote the interests of agricultural cooperatives and represent their needs and concerns at both the national and international levels by advocating for laws and regulations that support farmers' cooperatives and defending their interests in trade negotiations and other international forums (Teng et al., 2022).

#### **2.5.1.2. Investors**

According to Zlati et al. (2023), collective investments are a crucial model for delivering higher value-added, integrated production and processing chains and quality products at competitive prices to the final consumer. As the primary source of capital investment that the corporation needs to grow its operations, develop new products and services, and improve its infrastructure, investors play a significant role in the sustainability of agricultural cooperatives (Mirón-Sanguino & Daz-Caro, 2022). The capital investments are beneficial for the agricultural cooperatives' research and development efforts, as well as for the purchase of new machinery and hiring of new personnel (Mirón-Sanguino & Daz-Caro, 2022). Investors bring a variety of skills and knowledge that help agricultural cooperatives expand and become more sustainable, and in doing so, those experts are crucial in providing the team with what is needed by assisting in the development of business plans, training employees, and granting access to networks and resources (Mirón-Sanguino & Daz-Caro, 2022). In addition, investors support sustainability goals by ensuring that agricultural cooperatives have met several environmental and social standards, labour standards, and other ethical requirements, as well as providing access to distribution networks, creating new market strategies, and assisting cooperatives in building solid relationships with customers (Mirón-Sanguino & Daz-Caro, 2022).

#### **2.5.1.3. Political groups**

Political influences are critical in understanding and resolving business-related issues and preventing organisational financial losses (Rafiq et al., 2021). Political groups play a crucial role in cooperatives by developing laws and rules governing how agricultural cooperatives operate (Rafiq et al., 2021). The laws and regulations give cooperatives legal recognition and protection, encourage fair market competition, and give cooperatives financial and technical support (Rafiq et al., 2021). They essentially

advocate for the needs and interests of agricultural cooperatives at both the national and international levels by promoting laws and regulations that support these organisations and representing their concerns in trade talks and other international forums (Rafiq et al., 2021). Political groups frequently have a positive and negative impact on the sustainability of agricultural cooperatives. As a result of their political authority, they may occasionally contribute to political unrest by engaging in corruption and promoting conflicts of interest, which can primarily threaten the sustainability of agricultural cooperatives by fostering an atmosphere of risk and uncertainty (Ai et al., 2021). On the other hand, political groups might prioritise immediate gains more than cooperatives' long-term sustainability, which could result in unsustainable practices and regulations (Ai et al., 2021). Political unrest and conflicts can primarily disrupt market linkages, thereby impacting agricultural cooperative operations and policy uncertainty (Rafiq et al., 2021). Besides, political interference consequently has the potential to undermine the autonomy and independence of agricultural cooperatives, thus leading to unsustainable practices (Rafiq et al., 2021). Contrary to that view, political parties prioritising conflicts of interest favour some stakeholders over others, resulting in unfair competition and a lack of access to the market for agricultural cooperatives. Their influence frequently encourages laws and policies that favour big agribusinesses at the expense of smallholder agricultural cooperatives (Rafiq et al., 2021).

#### **2.5.1.4. Customers**

Customers' purchase intentions are essential to the sustainability of any business, notwithstanding agricultural cooperatives in particular, as they are the drivers of the circular business model (Mostaghel & Chirumalla, 2021). Customers are the critical component of the food chain and should be considered during all stages of developing new procedures and products because they are crucial to the long-term sustainability of businesses (Mostaghel & Chirumalla, 2021). In contrast, customers' perspectives must be considered from the beginning of product development and process design for the business to meet their demand to the greatest extent possible; hence, more information about the production systems is significant to them (Zhu et al., 2017). Customers naturally impact the market demand for goods and services offered by agricultural cooperatives by choosing which goods or services to buy (Mostaghel & Chirumalla, 2021). As a significant player, customers must insist on high-quality goods and services by pushing the cooperatives to uphold strict sustainability and quality standards. Therefore, they are a crucial component of the production systems and processes. Having mutual communication with agricultural cooperatives and giving them feedback will enable them to enhance their operations, become more sustainable businesses, and boost customer satisfaction in general (Mostaghel & Chirumalla, 2021). Customers also contribute significantly to supporting and

advocating agricultural cooperatives by promoting their goods and services, participating in cooperative activities and events, and supporting laws and regulations supporting cooperative sustainability (Zhu et al., 2017). In conclusion, customers will primarily collaborate with cooperatives to support sustainability initiatives, show loyalty, and help create sustainable business practices that support the development and expansion of agricultural cooperatives (Zhu et al., 2017).

#### **2.5.1.5. Community**

According to Matzembacher and Meira (2019), community-supported agricultural initiatives are gaining popularity because of the potential changes they could bring about regarding eating habits and health outcomes. The general community encourages agricultural cooperatives to conduct their business in a socially and environmentally responsible way by promoting more sustainable practices, supporting local communities, and protecting natural resources (Matzembacher & Meira, 2019). The community provides market access for agricultural cooperatives by promoting local goods and services, supporting neighbourhood businesses, establishing connections between markets, taking part in cooperative events and activities, and advocating for laws and regulations that support the sustainability of the cooperatives (Ordonez-Ponce et al., 2021). This has a significant impact on the long-term sustainability of agricultural cooperatives as the community becomes knowledgeable about the sustainability practices used by agricultural cooperatives, and this will result in making wise decisions about the goods and services they are purchasing and encourages the creation of sustainable supply chains. The community further contributes financial support and other resources to agricultural cooperatives to have access to the market, develop infrastructures, and provide training and capacity building that, in the end, contribute to the growth and development of the agricultural sector (Ordonez-Ponce et al., 2021).

#### **2.5.1.6. Employees**

According to Abbas and Dogan (2022), employees are the most valuable asset for an organisation, and organisational culture is the primary factor shaping their work relationships, processes, and satisfaction. They are consciously indoctrinated into the tenets of the organisation's culture, and their success depends on how they feel about the activities. They substantially impact the sustainability of agricultural cooperatives because they intentionally have a direct stake in the organisation's success, thus making them part of the organisational owners (Abbas & Dogan, 2022). Employees are consequently directly involved in routine decision-making processes and they are frequently allowed to give their voice about the company's direction, hence making them imperative in supporting an organisation's sustainable operation (Ahmed et al., 2020). As a result of their daily involvement in the

organisation's operations, employees play a significant role in promoting sustainable practices by helping cooperatives identify areas where waste needs to be reduced, energy efficiency needs to be improved, and the most sustainable agricultural practices need to be adopted (Abbas & Dogan, 2022). Agricultural cooperatives can support a sustainability culture that is advantageous to the organisation and community by involving employees in sustainability initiatives and offering opportunities for training and education (Ahmed et al., 2020). On the other hand, agricultural cooperatives' sustainability is mainly dependent on employee satisfaction and retention. As a result, promoting a favourable work environment and providing opportunities for professional growth and development are two ways agricultural cooperatives can help retain skilled workers and ensure the organisation's long-term success (Abbas & Dogan, 2022). Therefore, cooperatives are more likely to succeed if they promote staff participation and involvement in cooperative activities.

#### **2.5.1.7. Trade unions**

Trade unions primarily influence corporate social responsibility, which is seen as a relevant and sustainable factor to meet the various demands of the organisations surrounding the firm (Chun & Shin, 2018). They typically participate in organisational decision-making by directly obtaining representation on boards through share ownership or informally by participating in activities like strikes and political lobbying as part of the collective bargaining process (Chun & Shin, 2018). To improve the situation, trade unions have the authority to interact with stakeholders internally, such as employees, and externally, such as suppliers and customers. By supporting fair labour practises and advancing the rights of agricultural cooperative employees, trade unions ensure organisational sustainability and the long-term success of cooperatives (Chun & Shin, 2018). Following that, they bargain for fair pay, secure working conditions, and other necessary benefits for cooperative workers; proper treatment increases job satisfaction and lowers labour turnover (Chun & Shin, 2018). Agricultural cooperatives' sustainability over time and long-term success can be enhanced by treating employees fairly. Moreover, trade unions advance sustainable farming practices, thus making them crucial allies for agricultural cooperatives in building a more just and sustainable agricultural sector that benefits workers and the border community (Thomas, 2021).

#### **2.5.1.8. Suppliers**

Engaging in a cooperative buyer-supplier relationship is crucial because organisations can benefit from it by influencing the performance of the supply chain through proactive relationship management techniques (Benton et al., 2020). Suppliers directly impact agricultural cooperatives' sustainability as the primary source of inputs like seeds, fertiliser, equipment, machinery, and other materials (Zhang



et al., 2021). Consequently, for agricultural cooperatives to collaborate with suppliers, there must be agreements from all parties to uphold the environmental and social sustainability of the entire supply chain (Zhang et al., 2021). Supplying agricultural cooperatives with the necessary inputs can support sustainability (Benton et al., 2020). In contrast, suppliers prioritising social responsibility and fair labour practises can support cooperatives in ensuring that their operations are socially sustainable (Zhang et al., 2021). Furthermore, suppliers and agricultural cooperatives can also work together to cut waste, boost productivity, minimise environmental impact, and advance sustainability by offering cooperatives the resources and tools they need to optimise their operations (Zhang et al., 2021).

## **2.6. The effectiveness of sustainable agricultural cooperatives**

According to Ribauskien et al. (2019), developing a sustainable agricultural sector will promote cooperative activities to aid the societal and economic advancement of rural communities, farms, and farmers. As a type of social economy model, cooperatives can be seen as the outcome of social innovation aimed at addressing social needs and achieving systemic change confined to member-owned, member-controlled, and member-operated dealings that seek to meet their shared economic, social, and cultural needs as well as to create a better community and ecosphere through cooperation (Moon & Lee, 2020). Cooperatives are value and principle-based organisations that prioritise the interests and well-being of their members and the community's prosperity (Moon & Lee, 2020). They subsequently react and gain the consent of the locals more quickly than national, regional, and international organisations, thus giving them easy access to community resources. Agricultural cooperatives, which are some of the most significant and enduring business entities, are resilient in crises because they develop appropriate survival mechanisms and play a crucial economic role in providing independent and small agricultural firms around the world with market access and competitive returns (Kontogeorgos et al., 2018). Having said that, cooperatives are created under the rural community development agenda as a free and legal economic business model made up of local, regional, and international community members and led by aid organisations to use cooperatives as a tool for eradicating poverty and fostering economic development (Moon & Lee, 2020). Being social and economic development entities, cooperatives are predominantly designed to help members build their skills, make a profit, provide the services they need, and reinvest their profits into their businesses. Governments around the world have promoted cooperatives as a way to address a variety of socio-economic and environmental issues, including reducing poverty in rural and underdeveloped areas, changing market structures, supplying lagging rural areas with essential goods, addressing energy and environmental security issues, addressing the infancy of the financial markets, addressing

social inequality, testing new business organisation structures and their effects on the existing market structure, and restructuring the economy (Ribauskien et al., 2019).

The sustainability of agricultural cooperatives is deeply ingrained in the agenda for environmentally sustainable agricultural development as a crucial component of the United Nations Sustainable Development Goals (Liang et al., 2023). Agricultural cooperatives mainly impact farmers' farming practices and benefits by providing them with various information and technologies and monitoring their production processes (Liang et al., 2023). They are predominantly noted to encounter several difficulties in successfully promoting the adoption of environmentally sustainable farming methods. It is, therefore, on this distinct identity that the quality of the partnership and the benefits that the agricultural cooperatives can obtain determine the effectiveness of the collaboration between members to endorse the sustainability of farmers' cooperatives (Alotaibi & Kassem, 2022). Encouraging collaboration and cooperation can help farmers access resources, technical assistance, and markets that can improve their sustainability (Alotaibi & Kassem, 2022). Cooperatives, on the other hand, are a successful business model that helps farmers reach broader markets and more varied customers, which can boost demand and stabilise prices for their products and allow them to increase their profitability, which is crucial for their sustainability (Alotaibi & Kassem, 2022). Henceforth, cooperatives give farmers access to substantial technical and managerial support for improving their production process, increasing efficiency, lowering costs, and enabling them to be more competitive. In contrast, cooperatives also help farmers increase their financial and investment capital, allowing them to grow their operations and upgrade their infrastructure (Alotaibi & Kassem, 2022).

Farmers' cooperatives modify their structural characteristics, resulting in various structural types, including traditional, collectively organised, equality-based, and restructured models (Kontogeorgos et al., 2018). The restructured cooperative model involves individualised equity, non-member funding, proportional decision control, and the allocation of benefits through personal shares and price differentiation. Consequently, the traditional agricultural cooperative model has exclusive member ownership, democratic control, and a uniform pricing policy (Kontogeorgos et al., 2018). Adopting the proper competitive strategies necessitates significant financial investments and organisational innovations to aid farmers' cooperatives using hybrid business structures that share various traits with investor-owned firms to draw in risk capital (Kontogeorgos et al., 2018). As a result, farmers' cooperatives cannot raise enough risk capital to finance lucrative investment opportunities or make the necessary investments to expand and continue to function as sustainable organisational units. Subsequently, agricultural cooperatives fail to establish a distinct strategic orientation, thereby

preventing them from rearranging their corporate and strategic attributes (Moon & Lee, 2020). Therefore, scholars and business leaders have begun to doubt the capability of traditional cooperative businesses due to their inability to adapt to market changes (Moon & Lee, 2020).

Prominently, cooperatives are now the lifeblood of their members worldwide, who largely depend on the activities that increase agricultural productivity in production, distribution, marketing, and financial assistance for capital or equipment (Darma et al., 2020). Agricultural cooperative development clarifies the organisational structure of family farming and its economic viability. However, small farmers in developing countries suffer systemic disadvantages due to adopting agricultural technology, the efficiency and effectiveness of input use, modern-based supply chain access, and some uncertainties (Darma et al., 2020). Frequently, agricultural cooperatives continue to play a significant economic role in providing independent producers and small agricultural businesses worldwide with competitive returns and market access (Kontogeorgos et al., 2018). Nevertheless, the food industry's weak agricultural cooperatives face enormous difficulties due to the economic crisis instigated by their low liquidity, which results in fewer investment opportunities, lower profitability, and a staffing shortage (Moon & Lee, 2020). As a result, cooperatives are currently attempting to resolve this situation by aiming to penetrate the international food market, which calls for the transformation of cooperatives from production-oriented to market-oriented, as well as the adoption of various business management strategies and methods (Kontogeorgos et al., 2018).

Establishing a cooperative improves the welfare of members and society in general (Majid et al., 2020). Agricultural cooperatives typically focus on interconnected community issues based on social welfare, such as rural or local economic development (Bianchi & Vieta, 2020). They significantly contribute to developing a more balanced economy through a multifaceted approach that enables members to perform in market economies by providing various tangible and intangible benefits to improve their socioeconomic position and voice (Musson & Rousselière, 2020). Often, humans rely on one another to progress, so cooperatives are substantial as they serve as a pillar and backbone of the national economy while empowering social and psychological aspects (Majid et al., 2020). Cooperatives improve the living standards of their members, particularly those with low incomes and living in rural areas, by identifying economic opportunities for the poor, empowering the disadvantaged to protect their interests, providing security to the poor by converting individual risks into collective risks, marketing farmers' products, and delivering savings and credit facilities to farmers (Ishak et al., 2020). In addition, it improves social conditions by encouraging interpersonal relationships, increasing community participation, providing employment, and enhancing individuals' management skills and facilities.

## **2.7. Strategies for enhancing the sustainability of agricultural cooperatives**

According to Li et al., (2021), there is growing concern about how agricultural practices are causing the environment to deteriorate. However, farmers have proven over the years that they must manage their farms appropriately due to intensifying climate change, sharp price swings for agricultural commodities, stricter quality standards, new environmental regulations, debates over genetically modified crops, extreme weather events, demand for energy crops, revisions to the standard agricultural policy, and the effects of financial crises, which all create uncertainty regarding the future of agriculture (Li et al., 2021). Farmers are thus urged to deal with unforeseen circumstances to adapt to new developments that strengthen their capacity quickly. They are encouraged to do this by diversifying their operations to spread risks and build buffers, learning through experimentation and monitoring the results, and ensuring a flexible farm organisation to increase the options for new activities by the farm family (Li et al., 2021). By implementing the strategies above, farmers will be better able to mobilise outside resources, participate in group activities, and start reorganising resources and renewing the farm's organisation and activities (Li et al., 2021). Contrarily, putting these strategies into practice has a price, so farmers must deal with the inescapable trade-offs between efficiency and adaptability. Commonly, through smart cooperatives, smart members, the smart economy, smart governance, providing market access, financing, technical assistance, and support for sustainability practices, research and development, agricultural cooperatives can significantly contribute to addressing issues relating to the sustainability of farming cooperatives (Alotaibi & Kassem, 2022). Nevertheless, a multifaceted strategy that promotes market linkages, improved access to finance and technical assistance, more robust governance and management structures, and sustainable practices that diminish the effects of environmental degradation and climate change on agricultural cooperatives is required (Alotaibi & Kassem, 2022). Listed below are the deliberate strategies chosen to enhance the sustainability of agricultural cooperatives.

### **2.7.1. The smart cooperatives**

Implementing smart cooperatives in agricultural cooperatives enhances firms' efficiency, service quality, and management (Chawviang & Kiattisin, 2022). Smart cooperatives are simply cooperatives that use smart technologies and are defined as the ability of cooperatives to provide better services and increase management efficiency to meet the firm's goals through the use of ICT, smart concepts, the cooperative business aspect, business models, and innovation (Chawviang & Kiattisin, 2022). They use information and communication technology to develop innovative ways to serve their members and facilitate smart governance through the interaction and collaboration of all stakeholders in decision-making processes by combining the cooperative business process model with ICT cooperative

firms (Chawviang & Kiattisin, 2022). As a result, improved collaboration, participation, and community empowerment will ensure transparency, the efficiency of management processes, and trust in cooperative management. Smart cooperatives connect business and ICT through leveraging technology, and cooperative services will become more affordable, transparent, and efficient; thus, good IT governance immediately increases productivity and service quality while improving organisational performance management. Technology has meaningfully impacted individuals' lives and the cooperative sector, and various types of cooperatives have benefited from technological advancements in administration (Chawviang & Kiattisin, 2022). This is because the adoption of new technologies has resulted in an improvement in service quality, a reduction in communication barriers among stakeholders, and cost savings. Furthermore, smart cooperatives aid in risk management by recognising and incorporating risk responses into their plans to create good governance and a sustainable organisation (Chawviang & Kiattisin, 2022). As a result, the quality of cooperative governance has been demonstrated to be the key player in assisting an organisation in meeting its regulatory, legal, and management objectives.

### **2.7.2. The smart members**

According to Chawviang and Kiattisin (2022), smart members are the people who make up the smart cooperative, which is an extension of the smart people concept and focuses on technology, level of qualification and education, and the quality of social interactions related to the integration of citizens as the main driver of the organisation with the quality of life. Typically, smart people are concerned with the development of digital skills to improve participation and efficient use of services, such as e-skills in using ICT applications and services in a city; thus, members play an essential role in driving the success of a smart cooperative (Charles et al., 2020). For a cooperative to have smart members, it should implement financial efficiency training and educate its members about laws, policies, systems, and services (Chawviang & Kiattisin, 2020). This will assist cooperative members in better understanding the benefits available to them, leading to a greater embrace of productivity and efficiency. As a result, ICT can be used to investigate and meet members' needs, as well as provide meeting services and products, and smart members incorporate new technologies for knowledge management by establishing channels for improving knowledge, awareness, democracy, communication, and member participation (Charles et al., 2020).

### **2.7.3. The smart economy**

The smart economy concept includes economic competitiveness and innovation, which involve the application of ICT to economic growth and establishment and promote innovation, contributing to

functional improvements and competitiveness while increasing efficiency (Azkalhaq & Amani, 2018). Cooperatives are classified according to their purpose of providing goods and services to their members, and digital technology plays a vital role in cooperative business in terms of developing digital capabilities, increasing business value, and creating a competitive advantage through technological innovation (Chawviang & Kiattisin, 2022). On that note, using technology and innovation enables cost reduction, administrative expenditure reductions, and the improvement of business processes, as well as success in re-designing business models in alignment with organisational objectives, business processes, technology, and competencies (Chawviang & Kiattisin, 2022). Digital transformation affects the business architecture by focusing on critical issues of sustainable development and their ability to deliver value to their members, and IT-based tools can result in participation in the cooperative culture of value, smart operations, smart service, and smart administration (Azkalhaq & Amani, 2018). The smart economy challenges should be systematically developed using systematic digital business modelling methodology and business IT comprehension. Therefore, the smart economy leverages the capacity of innovation and technology for collaboration and decision-making by integrating e-administration with organisational processes to create business value and improve services and productivity (Chawviang & Kiattisin, 2022). Nevertheless, knowledge and skills are critical for enhancing cooperative performance and using ICT to generate more information for risk management decision-making, allowing one to avoid making the same mistakes. Therefore, the smart economy concept leads to a smart business that uses ICT to create smart business processes for beneficial economic outcomes and productivity improvements (Azkalhaq & Amani, 2018).

#### **2.7.4. Smart governance**

Smart governance refers to good governance with transparency of governance systems and participatory democratic decision-making supported by ICT to mediate governance interactions, also known as "e-governance" and "e-democracy" in cooperatives (Nazzaro et al., 2022). ICT empowers people and maintains transparency in decision-making and execution by improving citizen participation and services to support democratic decision-making processes and the enhancement of transparency in governance (Chawviang & Kiattisin, 2022). Similarly, e-governance is a tool that promotes collaborative administration to make strategic, practical, credible, and achievable decisions. It is critical to recognise that the key to successful cooperative corporate governance is an effective social system with feelings of ownership that contribute to success, and to engage and motivate member representatives and board members (Nazzaro et al., 2022). However, the performance of cooperatives is plagued by several governance issues such as accounting crises and democratic failures

(Chawviang & Kiattisin, 2022). However, corporate governance is a driving force in high-tech enterprise innovation, improving the accuracy and effectiveness of decision-making and encouraging the responsible provision of financial information (Nazzaro et al., 2022). Auditing, duty segregation, and the control committee are all strategic tools for monitoring governance in cooperatives that are based on controlling the quality of accounting information and promoting effective management (Chawviang & Kiattisin, 2022). Henceforth, ICT as a smart governance tool allows participation and collaboration in supporting governance mechanisms, incorporating knowledge from diverse actors as part of ICT development and implementation, and contributing to a collaborative environment within an organisation.

#### **2.7.5. Facilitating market access**

Market access was less of an issue during the era of the marketing boards, roughly from 1940 to 1990, as it essentially included the ability to obtain necessary farm inputs and farm services as well as the ability to deliver farm products to customers (van Tilburg & van Schalkwyk, 2012). However, emerging farmer cooperatives sought access to the market while still lacking the experience to operate in a competitive free market environment. Market access improves due to small marketing cooperatives networking and negotiating with essential players in the public and private sectors and enhanced relationships between small marketing cooperatives and other kinds of farmer organisations (Gouët & Van Paassen, 2012). Farmers' cooperatives can predominantly help agricultural cooperatives gain access to broader markets and customers by leveraging their networks, expertise, and resources to increase their income (Shiferaw et al., 2016). Notwithstanding, facilitating agricultural cooperatives' access to markets is crucial for advancing sustainable agriculture, lowering poverty, enhancing livelihoods, and fostering economic growth in rural areas. Henceforth, through improved market access, agricultural cooperatives may sell their produce at a healthier price, thereby increasing revenue, lowering poverty, and improving farmer livelihoods (Shiferaw et al., 2016). Subsequently, this can help farmers' cooperatives to increase product demand and stabilise prices. As a result, farmers can make more money from selling their products, achieve economies of scale, and ensure enough food for everyone. Besides, facilitating market access for agricultural cooperatives helps promote food security and relieves rural areas' economic development, as farmers are more likely to spend their increased income locally, which boosts the local economy (Shiferaw et al., 2016).

#### **2.7.6. Providing financial and technical assistance**

Ample financial investments and other forms of technical support made available for agricultural cooperatives that jointly use the fixed assets under a previously established schedule, ensuring

complete and efficient use of these assets and a proper amortisation of the initial investments, can help to support agricultural sustainable production (Zlati et al., 2023). Collective financial support and technical assistance could result in integrated production and processing chains with higher value-added and quality products at affordable prices for the end users (Zlati et al., 2023). Therefore, increased favourable financial and technical support for agricultural cooperatives would help them capitalise through new investments, which is essential for advancing investments' financial and technological methods (Zlati et al., 2023). Farmers' cooperatives can jointly offer financial and technical support to farmers, thereby assisting them in enhancing their operations, boosting productivity, and lowering costs, thus ultimately improving farmers' competitiveness and sustainability over time (Tiwari & Nepal, 2017). Cooperatives will eventually be able to increase their production capacity by purchasing machinery and inputs when they have access to capital for investments (Tiwari & Nepal, 2017). In contrast, technical support can help cooperatives enhance their management procedures, adopt better farming methods, and implement more effective processes to boost output and profitability. In that vein, financial and technical support help farmers' cooperatives to become more competitive and gain access to higher-value markets, and this helps farmers to build stronger relationships with buyers and access new markets by supporting quality control and certification (Tiwari & Nepal, 2017). Farmers, on the other hand, can benefit from producing fresh goods and services to meet consumers' shifting needs. Furthermore, as demonstrated by Tiwari and Nepal (2017), financial and technical support can assist agricultural cooperatives in creating more robust networks and partnerships, thereby developing cooperative strategies for resolving shared problems, enhancing shared knowledge and resources, and taking advantage of economies of scale.

#### **2.7.7. Supporting sustainable practices**

According to Bijman and Höhler (2023), sustainable agriculture has long focused on farm production processes, but recently, attention has expanded to include the entire food chain. Reducing detrimental effects like using pesticides and leaching minerals from manure is the primary goal of increasing sustainability in agriculture (Bijman & Höhler, 2023). Over time, the idea has expanded in scope, covering sustainable practices like organic farming, conservation agriculture, and agroforestry, thereby enabling agricultural cooperatives to meet the rising demand for sustainable products while also becoming more environmentally and socially responsible (Bijman & Höhler, 2023). Supporting sustainable practices for farmers' cooperatives is, in essence, multidimensional and temporal, encompassing four critical interrelated dimensions: ecological, economic, social, and institutional sustainability (Bose et al., 2017). The long-term sustainability of agricultural cooperatives will eventually ensure their contribution to the national strategic plans' goals of improving rural



communities' living standards and creating jobs, and thus reducing poverty, ensuring food security, and alleviating hunger. The farmers and society in rural areas will subsequently benefit as a significant outcome as best practices will lead to the management and control of natural resources and the control of chemicals used in production due to the economic gains that are achieved through the support of sustainable practices in the agricultural sector (Bose et al., 2017).

### **2.7.8. Collaborating on research and development**

Alston (2010) asserts that it takes a while for research and development to influence production, and once it does, it continues to have an impact. The entire agricultural sector's ecosystem dynamic is primarily influenced by research and development, which also causes changes in producer surplus for producer benefits and consumer surplus for consumer benefits (Alston, 2010). Typically, public entities bounded by geopolitical boundaries provide the majority of funding for research and development (Alston, 2010). This resulted in the agricultural economists paying more attention to accounting for the knowledge produced within a given geopolitical entity with implications for technology and the potential effects on both the creators of the spill outs and the recipients of the spill-ins (Alston, 2010). Farmers in the modern era are often expected to produce more quantities of better-quality products at lower costs sustainably with less reliance on the labour force (Shamshiri et al., 2018). On the other hand, research and development on agricultural cooperative automation span various applications, from automated harvesting using specialised manipulators integrated with unique mobile platforms and innovative grippers to autonomous targeted spraying for pest control in commercial greenhouses. This leads to the autonomous de-leafing of plants, simultaneous localisation and mapping techniques for plant tracking, vision-based control, advanced image processing techniques, and gripper design for automated harvesting of valuable produce (Shamshiri et al., 2018). Agricultural cooperatives also assist farmers in working together on research and development to improve novel products and services that cater to shifting consumer needs, which is vital for farmers to stay on top of trends and remain competitive in the market (Alston, 2010). Despite this, research and development support cooperative governance and management structures, enhance access to funding and technical support, foster market connections, and support sustainable practices that lessen the effects of climate change and environmental degradation on farmers (Alston, 2010).

## **2.8. Empirical literature**

### **2.8.1. The empirical literature on factors affecting the sustainability of agricultural cooperatives**

A study conducted by Candemir et al., (2021) investigated the significant influence that agricultural cooperatives had on the sustainability of farm cooperatives prior to the trade-off between economic

and environmental sustainability in cooperatives. The study aim was to determine whether cooperatives impact farm sustainability in the European Union, and offering a thorough analysis of the literature that connects cooperative membership and farm sustainability in terms of economic, environmental, or social dimensions. Thus, more precisely, it concludes that at least one of the three pillars of sustainability (economic, environmental, or social) is aligned to describe the advantages and disadvantages of agricultural cooperatives for farm sustainability. The study adopted a qualitative methodology and searched the EconLit and Google Scholar databases using the terms "agricultural cooperatives," "cooperative membership," "farm practises," "innovation," "environmentally friendly," and "farm sustainability." Most of the recent literature used in developing countries was screened for this study, and the study only included studies that dealt with social or environmental issues and were published in the agricultural economics literature. The study also demonstrated the importance of well-cooperative governance issues when member heterogeneity is high, consumers value specific fair trade or environmentally friendly practices, and their willingness to pay for a product falls within an environmental or social attribute. As agricultural cooperatives have a sizable impact on farm economic sustainability and the adoption of environmentally friendly practices, the study recommended that both public policies and private initiatives in cooperatives be complementary.

### **2.8.2. Empirical literature on the influence of cooperative stakeholders on the sustainability of agricultural cooperatives**

A research published by Fiore et al., (2020) examined how stakeholders can contribute to the innovation processes generated in this ecosystem while streamlining the daily cooperative business model. A sustainable business model and the different roles that cooperative stakeholders play in co-creation were highlighted in the study's theoretical assumption or investigation, which centred on the primary cooperatives in Poland's ecologically agricultural Green Lungs. Perceptively, the research found that different cooperative stakeholders work together to develop innovative solutions that satisfy consumer needs and, in turn, contribute to creating social, environmental, and financial value. Business models were incorporated into the theoretical presumptions from the literature review with empirical support by looking at the roles of stakeholders who help cooperatives' core operations to innovate, take responsibility, and incorporate sustainability. The study adopted a pragmatic approach to arrive at insights and solutions for practical problems. It also contained constructivism, which focused on subjective realities and meanings attributed by stakeholders in the context of sustainable business models, and positivism, which sought to establish empirical generalisations. The study employed quantitative and qualitative research methods, allowing the researcher to gather and examine empirical data to comprehend the sustainability campaigns. The random sampling technique

was then employed to address every constraint and immediately accomplish the overall research objectives. In contrast, while quantitative analysis or statistical methods were used to evaluate regression analysis, t-tests, or ANOVA to analyse numerical data, grounded theory was utilised in qualitative data analysis to interpret textual or qualitative data. In conclusion, the study recommended promoting stakeholders' involvement to advance sustainable practices. This would encourage cooperation between industry partners, government agencies, cooperatives, and local communities to generate favourable social, economic, and environmental results in Poland's everyday cooperative sector.

### **2.8.3. Empirical literature on the effectiveness of cooperatives on the sustainability of agricultural cooperatives**

According to research by Petrushenko et al. (2022), establishing agricultural cooperatives was intended to be an efficient means of promoting sustainable development in Ukraine's rural areas. The study narrates that creating a mechanism and an economic tool that fosters the development of social capital in communities and encouraging citizens to adopt a sustainable development-focused way of thinking is essential. In contrast to the study assumptions, agricultural cooperatives are regarded as a noble econometric model that affects local development. The study demonstrated the beneficial effects of farming cooperatives on sustainable development, which may serve as the foundation for developing national, regional, and local policies to encourage the formation of farming cooperatives in Ukraine's rural communities. These policies can then be extended to other nations to support the growth of cooperative movements globally. In essence, the research involved gathering and evaluating empirical data to determine the effectiveness of agricultural cooperatives on the sustainable development of rural communities. This was accomplished using a pragmatic research philosophy to extract valuable conclusions and solutions for real-world problems. Following a mixed research design, the study concluded that agricultural cooperatives play a significant role in rural development and recommended that successful cooperative programmes be adopted, as well as sustainable policies and practices that are essential to advancing the cooperative development agenda.

### **2.8.4. Empirical literature on strategies for enhancing the sustainability of agricultural cooperatives**

The factors and strategies enhancing European Union farmers' adoption of sustainable farming practices widely include organic farming, manure treatment technologies, manure fertilisation, and soil and water conservation techniques (Serebrennikov et al., 2020). The study was carried out by Serebrennikov et al., (2020) and it intended to provide a thorough systemic review of recent literature

to explore the factors and conditions that typically affect implementing sustainable farming practices. The study used information and numerical data from peer-reviewed journal publications and concentrated on various technological systems of sustainable farming in Europe. It used a qualitative study, a methodological approach, which has some benefits but also limits the research to a small set of chosen results that might not accurately reflect the entire research landscape. Furthermore, it was instructive for future reviews to consider other relevant output types like conference papers or book chapters, which addressed the sustainability of geographical locations. The result is a lack of numerical data, which restricts the possibility of a more in-depth statistical analysis. Subsequently, various issues arise from the increased selectivity of literature sources.

The study's findings showed that although there is little evidence of their influence on the adoption of manure treatment and conservation measures, farmers' attitudes towards the environment, their economic situation, and their informational sources significantly impact the adoption of organic farming. The adoption of organic agriculture is found to be systemically influenced by farmers' age and education rather than by the adoption of other reviewed technologies. The study also showed that although other factors such as farm physical characteristics or technological attributes may be significant adoption determinants, it is challenging to identify clear patterns of their impact across technologies due to a lack of empirical evidence. As a result, the study advised conducting enough research using standardised surveys and analysis techniques to create qualified guidelines and approvals for policymakers. The study's conclusion suggested that future investigations look into other environmentally friendly farming practices connected to successful nutrient management such as precision agriculture.

## **2.9. Theoretical framework**

### **2.9.1. Collective action theory**

The concept of collective action theory is used in sociology, economics, and political science to describe how groups can cooperate to accomplish shared objectives, mainly when individual action is insufficient or ineffective (DeMarrais & Earle, 2017). The theory was developed in the social sciences, and rational social actors regularly evaluate other people's behaviour to guide their own cooperative decisions (DeMarrais & Earle, 2017). The theory explains why people should work together to solve social problems by shifting their focus from self-interest to group interests (Paulo et al., 2020). Remarkably, anthropological archaeology uses collective action theory to investigate the dynamics of ancient and large-scale institutions (DeMarrais & Earle, 2017). Moreover, proponents of collective action theory contend that the population's agency in negotiating public benefits increase in

proportion to how dependent the principals were on them for labour, tribute, or other sources of income (DeMarrais & Earle, 2017).

According to Gram et al., (2019), collective action theory offers a thorough ethical framework for analysing these participation dilemmas. It specifies that a single cooperative member has little personal influence compared to the cost of participation when many members are needed to achieve a shared goal (Gram et al., 2019). Subsequently, even if no benefits result from no participation, individuals will eventually be interested in foregoing their contributions to collective action and free-riding on those of others. The non-excludable nature of the benefits produced frequently creates member conflicts as cooperative members may have a personal interest in refraining from collective action and free riding on others' contributions, but no benefits are produced if nobody participates (Gram et al., 2019).

Substantially, individual behaviour in the group is influenced by the incentives and costs that each person faces, and groups of individuals with common interests are expected to act in the same way that each individual is likely to work in their interests (Paulo et al., 2020). Therefore, an individual's decision to free-ride or shirk is heavily influenced by the extent of personal benefits gained from the group, with little regard for the group benefits gained. Nonetheless, freeriding or shirking can be avoided in small groups by increasing internal control and transparency mechanisms, but it is challenging to increase efficiency in large groups where new sub-structures such as committees and boards, are required (Paulo et al., 2020). In contrast, as the group grows, it is likely to run into issues such as a lack of individual incentives, free-riding, and a scarcity of collective goods. The cooperative's success, therefore, heavily depends on its ability to meet the needs of its members. On the other hand, collective action theory is substantial for strengthening institutional makeup, particularly cooperatives, which plays an essential role in the social and solidarity economy (Gattmann, 2021). Supporting cooperative principles allows cooperatives to envision tangible connections between commons and cooperatives as complementary models of anti-capitalist organisations. Nevertheless, collective action can increase cooperative revenues by bargaining for higher margins and economies of scale by making joint decisions to address problems and lead to sustainable production, thereby making this theory more relevant (Elsler et al., 2022).

### **2.9.2. Signalling theory**

Corporate sustainability has developed into an economic and strategic imperative that can potentially present business opportunities and risks (Rezaee, 2017). Subsequently, corporate sustainability initiatives can convey the business's dedication to social and environmental responsibility to

interested parties, including clients, employees, investors, and regulators. Besides, business literature has hotly debated the narrative, but a clear-cut conclusion has yet to be achieved, thus bringing this conception to explore this substantial signalling theory.

The signalling theory explains management incentives for achieving both the non-financial or environmental sustainability governance (ESG) and financial or economic sustainability performance (ESP) magnitudes of sustainability performance and investors' responses to the disclosure of sustainability performance information (Rezaee, 2017). According to the theory, cooperatives disclose good news through a variety of required financial reports on their economic sustainable performance (ESP) and voluntary reporting of non-financial or environmental sustainability governance (ESG) performance to set themselves apart from less sustainable businesses (Rezaee, 2017). Signalling theory can predominantly offer insights into how cooperatives can use their sustainability efforts to demonstrate their commitment to stakeholders and make these signals credible and expensive to change stakeholders' perceptions of the cooperative's sustainability commitment (Cheng & Katchova, 2017). Such commitment helps the cooperatives to reduce their carbon footprint and promote sustainability, which may enhance stakeholders' perceptions of its brand and reputation.

Consequently, cooperative businesses can set themselves apart from less sustainable businesses by voluntarily disclosing non-financial sustainability performance in governance, social responsibility, and environmental sustainability, with various financial reports that must be filed on their economic sustainability performance (Rezaee, 2017). Therefore, cooperatives should promote positive sustainability stories and communicate effectively with all stakeholders to develop brand recognition and a positive reputation. Furthermore, the signalling theory supports the growth of cooperatives and directly reflects successful firm development, thereby encouraging potential investors to invest in the business, thus enhancing their value, and increasing members' return on investment (ROI) (Putri, 2023). Institutional growth in assets and sales is subsequently highly expected for the firm's development and growth (Putri, 2023). Cooperative members have more detailed knowledge about their cooperative than outsiders, and they can close this information gap by using dividend pay-outs to share internal information with investors and information about the cooperative's potential future earnings (Sugiyanto & Dewi, 2023). In that vein, Nashar (2023) claims that signalling theory explains signals that are purposefully sent out by cooperatives with high profits in the hope that the market will eventually differentiate between high-quality and low-quality cooperatives. These indications are linked to information that cooperatives disclose in their annual report. Therefore, to achieve both the financial ESP and non-financial ESG dimensions of sustainability performance, businesses are urged by signalling theory to communicate with all stakeholders, including supply chain partners, about the

synergy, integration, and resource dependency of various supply chain management components (Rezaee, 2017).

## **2.10. Conceptual framework**

A conceptual framework is a structure that a researcher believes will best illuminate the natural development of the phenomenon under investigation (Adom et al., 2018). Junior and Wander (2021) state that factors affecting the sustainability of agricultural cooperatives can differ depending on the internal management aspects, the competitive environment, the location, and the particular production chain of the cooperative. Based on the aspects above, it is recognised that the following elements affect the sustainability of agricultural cooperatives: social and economic objectives, professionalisation of management, the interests of numerous stakeholders, transactional cost management, risk and volatility management, improved commercialisation, competitiveness against traditional companies, technology adoption, sustainable development, and social responsibility (Junior & Wander, 2021). According to a study conducted by Lui et al. (2022), the sustainability of agricultural cooperatives depends on the adoption of new technologies based on individual and cooperative characteristics, which are directly influenced by cooperative members' age, educational levels, attitudes towards risk, member preferences, farm size, technology perceptions, and membership in farm cooperatives. Additionally, institutional and governance issues frequently affect the sustainability of agricultural cooperatives. Institutional problems affect the amount of equity and debt capital, reliance on public funding, investment level, and membership decline. Governance issues are subsequently influenced by a lack of a secret ballot, low levels of education, a lack of training in production management, and poor marketing strategies, resulting in low returns for members as investors or customers.

### **2.10.1. Description of variables**

This study's conceptual framework established that the factors affecting the sustainability of agricultural cooperatives are the independent variables towards the sustainability of agricultural cooperatives. It demonstrates that internal and external factors positively or negatively influence agricultural cooperatives' sustainability. Ultimately, agricultural cooperatives' sustainability is notably influenced by economic, socio-cultural, environmental, legal, educational, managerial, marketing, infrastructure, individual, and cluster characteristics (Nouri et al., 2019). Besides, the factors' direct and indirect interactions describe the situation much more accurately than the factors themselves do, and persistent agricultural cooperatives have more experience running the cooperative, which limits its ability to grow.

### **2.10.2. Sustainability of agricultural cooperatives**

The sustainability of agricultural cooperatives is defined as the ability of farmers' cooperatives to operate and thrive over the long term while balancing their economic, social, and environmental factors, thereby ensuring that the well-being of their members, local communities, the ecosystem, and overall the development of the agricultural sector is maintained (Candemir et al., 2021). Notably, as reflected below, the economic capability, members' engagement and empowerment, market access and competitiveness, social responsibility, environmental protection, and corporations of farmers' cooperatives are vital factors that determine farmers' cooperatives' sustainability.

**2.10.2.1. Economic capability:** Under this dimension, agricultural cooperatives should sustain their operations by generating enough revenue to cover all expenses, thus making wise investments, and maintaining financial stability (Ada et al., 2022). They must create successful business plans, diversify their product lines, and fluctuate their market conditions to ensure long-term economic sustainability.

**2.10.2.2. Member empowerment and engagement:** According to Do (2020), member empowerment and engagement are significantly crucial for the long-term sustainability of agricultural cooperatives as it warrants that all members should be involved in the critical decision-making process, give them access to pertinent information, and provide them with a chance to develop their skills, and help them to make a significant contribution on cooperatives sustainability. Subsequently, the overall sustainability of the cooperative will eventually improve, and empowered cooperative members will essentially contribute their skills and knowledge to the cooperative development (Do, 2020).

**2.10.2.3. Market access and competitiveness:** Market access and competitiveness are crucial for agricultural cooperatives to remain sustainable by supporting them in building strong customer relationships, thereby creating efficient distribution networks, and setting themselves apart from market rivals (Mouzam, 2020). Agricultural cooperatives should follow unique marketing trends and consumer preferences to ensure a rising demand for products produced locally or organically.

**2.10.2.4. Social responsibility:** To ensure sustainability, agricultural cooperatives must prioritise the welfare of their members, employees, and local communities. This primarily includes ensuring that everyone is paid relatively, has a decent working environment, is included in social and gender equality initiatives, and receives support for local community development projects (Candemir et al., 2021). Fundamentally, cooperatives actively participating in social responsibility initiatives eventually cultivate more robust relationships with stakeholders and improve their long-term sustainability.



**2.10.2.5. Environmental protection:** According to Juszczuk et al., (2020), agricultural cooperatives should implement environmentally sustainable practices to reduce their ecological footprint. This can be achieved by employing sustainable farming methods, such as integrated pest management or organic farming, conserving water and energy resources, and promoting biodiversity preservation to support the overall sustainability of the agricultural sector (Juszczuk et al., 2020).

**2.10.2.6. Collaboration and partnerships:** Collaboration between agricultural cooperatives and partnerships with other stakeholders can strengthen sustainability efforts by sharing resources, knowledge, and best practices, which can improve efficiency, innovation, and overall impact (Alotaibi & Kassem, 2022). As a result, cooperatives should collaborate with research institutions, governmental organisations, and non-governmental organisations to access technical know-how and support for sustainable practices.

### **2.10.3. External factors**

External factors significantly impact the agricultural cooperatives' operations, competitiveness, and sustainability, especially in developing nations where cooperatives are still underdeveloped. As deliberated below, these factors include governmental policies, market factors, regulatory frameworks, climate change, infrastructure development, social responsibility, technological development, and market factors.

**2.10.3.1. Market factors:** The market factors significantly impact the agricultural cooperatives' competitiveness and sustainability, including shifts in consumer preferences, the demand for particular goods and services, and market competition (Candemir et al., 2021). To remain competitive and sustainable, agricultural cooperatives should adjust to these market dynamics by adopting new technological trends, diversifying their product offerings, and exploring new market opportunities to meet the fluctuating consumer demands (Candemir et al., 2021).

**2.10.3.2. Climate change and environmental factors:** Farmers' perceptions of environmental issues and climate change are crucial to the sustainability of agricultural cooperatives (Foguesatto et al., 2019). Agricultural systems face enormous challenges, including environmental degradation and climate change, which can reduce agricultural production. Particularly challenging for agricultural cooperatives are climate change and environmental factors. The productivity of farms can be impacted by changes in weather patterns, resource availability, and natural disasters (Foguesatto et al., 2019). Cooperatives must, therefore, adapt to these environmental challenges by implementing sustainable farming practices, spending money on infrastructure that can withstand climate change, and diversifying their production techniques.

**2.10.3.3. Government policies and regulations:** Government policies and regulations significantly impact agricultural cooperatives. Unfavourable policies and regulations can act as barriers to the development and sustainability of cooperatives, while supportive policies and regulations encourage cooperative growth, embrace the provision of financial incentives, and foster fair competition, among other elements enhancing the sustainability of agricultural cooperatives.

**2.10.3.4. Infrastructure development:** Infrastructure improvement in rural areas boosts the standard of living, which in turn lifts agricultural productivity. Consequently, developing rural infrastructure encourages sustainable farming, reduces poverty, and hastens the economic rates of return on investments in rural infrastructure (Hakimovich & Khudayberdiyevna, 2020). Therefore, having a sound infrastructure contributes to increasing productivity, which, when combined with functioning domestic markets, appropriate institutions, and access to right technology, is a powerful driver of economic growth and poverty reduction (Hakimovich & Khudayberdiyevna, 2020). However, the development and productivity of agricultural cooperatives may be significantly hampered by insufficient infrastructure.

**2.10.3.5. Social and cultural factors:** According to Mojo et al., (2015), the sustainability of agricultural cooperatives can be influenced by social and cultural factors such as fluctuating demographics, consumer preferences, and societal values. Agricultural cooperatives must comprehend and react to these social dynamics to meet customer expectations, interact with the local community, and ensure that their goods and services remain relevant (Mojo et al., 2015).

**2.10.3.6. Social and environmental responsibility:** According to Castellon-Polo Sánchez-Hernández and Gallardo-Vázquez (2017), social and ecological responsibility has grown in importance on the strategic agenda of competitive agricultural cooperatives. Therefore, reputation in cooperatives and social and environmental responsibility are significant factors affecting the viability of agricultural cooperatives. Accordingly, agricultural cooperatives ought to prioritise enhancing society's social and environmental sustainability while building up their human and social capital to support and facilitate future group efforts to protect the environment and future generations (Castilla-Polo Sánchez-Hernández & Gallardo-Vázquez, 2017).

**2.10.3.7. Technological advancements:** Technological advancements may significantly influence agricultural cooperatives' operations and sustainability (Hakimovich & Khudayberdiyevna, 2020). However, having access to new technologies like data analytics, digital platforms, and precision farming can boost output, improve efficiency, and cut costs. Therefore, cooperatives that adopt technological advancements can enhance their long-term sustainability and gain a competitive edge.

**2.10.3.8. Global trade and market integration:** Ajates (2020) contends that market integration, trade agreements, and international trade policies can all have favourable and unfavourable effects on agricultural cooperatives. The main reason cooperatives are losing their ability to transform is because they are under constant pressure to remain competitive, which impacts their members' social justice and environment. Therefore, access to global markets can open up new business expansion and diversification possibilities. Agriculture cooperatives' sustainability, however, may also be threatened by heightened foreign producer competition and erratic commodity prices (Ajates, 2020).

#### **2.10.4. Internal factors**

Internal factors can significantly impact the operation and sustainability of agricultural cooperatives. As a result, for farming cooperatives to function better and improve their sustainability, they should operate within the cooperative's objectives and support its success by regularly evaluating and addressing all internal factors. The deliberate internal factors listed below typically have an impact on the sustainability of agricultural cooperatives.

**2.10.4.1. Cooperative governance and leadership:** The operation and sustainability of agricultural cooperatives depend on essential elements such as governance and leadership. Effective governance establishes open guidelines and controls, directs leadership, and aligns the interests of shareholders, members, management, and employees (Junior & Wander, 2021). In contrast, good governance entails having accountable structures, strong leadership, and transparent decision-making processes. Thus, cooperatives must have clearly defined roles and responsibilities for their members and a governance structure encouraging active member participation and engagement to foster trust among investors, the public, and public officials (Junior & Wander, 2021).

**2.10.4.2. Member commitment and participation:** The cooperative members' behaviours or attitudes can be used to measure their commitment and involvement (Hao, 2018). Having said that, cooperative members' commitment and active participation are crucial for the success and sustainability of agricultural cooperatives because they provide the cooperative with essential inputs, especially in the early stages of collective action. Prior to that, members must actively participate in the cooperative's activities, attend meetings, offer expertise, and support cooperative initiatives. This is necessary because active participation by members fosters a sense of ownership and group responsibility, which improves decision-making and increases the cooperative's sustainability overall (Hao, 2018).

**2.10.4.3. Financial management:** Junior and Wander (2021) contend that agricultural cooperatives must practise sound financial management to remain sustainable and provide members with adequate returns based on the cooperative's earnings. To track cash flow, manage debt, and

guarantee financial transparency, cooperatives must have sufficient financial planning, budgeting, and accounting systems (Junior & Wander, 2021). Because of this, agricultural cooperatives should consider diversifying their sources of income and look for ways to cut costs and boost efficiency to embrace their long-term sustainability.

**2.10.4.4. Cooperative culture and values:** The essential coordination mechanisms for agricultural cooperatives are culture and values (Rieger & Klarmann, 2022). They contribute significantly to building a solid culture of mutual respect, cooperation, and support and typically have more satisfied and committed members. In a circular process where values are seen as the result of success, a cooperative culture either drives performance or performance drives culture (Rieger & Klarmann, 2022). Cooperatives should henceforth encourage a culture that values diversity, equity, and moral conduct, which can help ensure the cooperative's long-term sustainability.

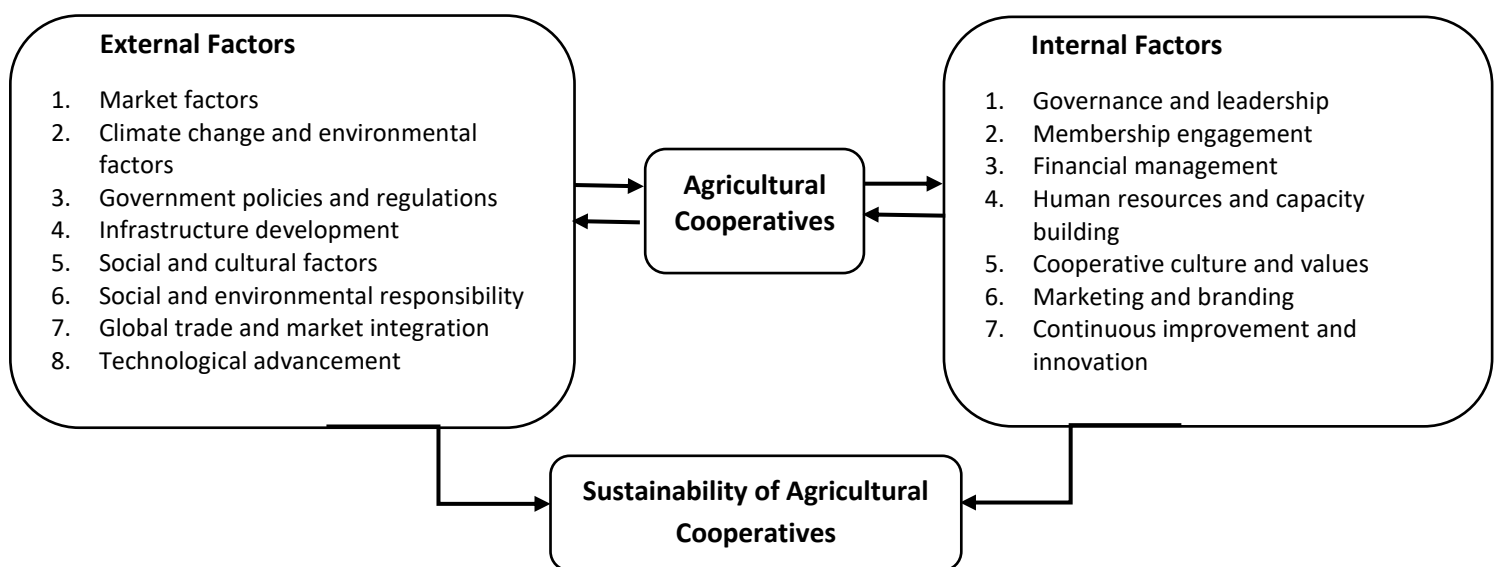
**2.10.4.5. Human resources and capacity building:** According to Obiageli (2023), human resources and capacity development refer to improving an employee's knowledge, skills, and abilities. It involves providing employees with a range of knowledge, skills, and access to information, knowledge, and education, enabling them to perform effectively and enhancing the overall sustainability of agricultural cooperatives. The operation and sustainability of agricultural cooperatives depend on having a skilled and motivated workforce; so, cooperatives should invest in capacity-building initiatives, training opportunities, and knowledge transfer to improve their members' and staff's abilities and skills (Obiageli, 2023). Building an organisation's capacity is a process that increases the connections between its vision, purpose, and goals and the likelihood that it will deliver services sustainably. As a result, this will guarantee that the cooperative possesses the knowledge necessary to adjust to shifting market conditions and adopt new technologies.

**2.10.4.6. Marketing and branding:** The success and sustainability of agricultural cooperatives depend on effective marketing and branding strategies. To increase their sustainability, cooperatives must pinpoint areas for development in their product offerings, sales techniques, marketing approaches, and promotional efforts (Terech, 2018). Therefore, cooperatives must create distinctive brand identities, communicate value propositions, and successfully market their goods or services. Subsequently, cooperatives should prioritise conducting market research, differentiating products, and forming trusting bonds with clients and stakeholders to improve their sustainability (Terech, 2018).

**2.10.4.7. Continuous improvement and innovation:** To remain competitive, enhance their offerings, and maintain sustainability, agricultural cooperatives must adopt a culture of continuous innovation

and improvement (Lizarelli et al., 2021). As a result, they should consider staying current with industry trends, adopting new technologies, and looking for opportunities to improve processes and develop new products. Cooperatives should continuously work to prioritise innovation because both continuous improvement and IT deal with things that already exist, thus making them more adaptable and resilient to outside changes (Lizarelli et al., 2021).

The factors affecting the sustainability of agricultural cooperatives have been streamlined into independent variables for this study's conceptual framework, as illustrated in Figure 2.10 below. It clarified the explanation of the elements that contribute to agricultural cooperatives' sustainability.



**Figure 2.10.1: Conceptual framework for factors affecting the sustainability of agricultural cooperatives**

**Source:** Researcher (2023)

### 2.11. Summary

This chapter scrutinised various theories and literature that focus on different aspects influencing the sustainability of agricultural cooperatives. The chapter presented the necessary literature from books, journals, and other research reports; focused on the key terms and concepts, and identified the research gap. It then discussed the study's conceptual framework, illustrating the connections between independent and dependent variables. The chapter also discussed the overall comprehension and discernment regarding the factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers' Cooperative being a case study. The next chapter presents the research methodology of the study.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1. Introduction

This chapter describes the methodologies used to investigate the factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers Cooperatives being a case study. The research plan was established using various research techniques and methods, allowing for data collection and analysis. The following are the main elements which this chapter covered: research philosophy, research design, research approach, population, sample size and methods, data collection, data collection procedures, credibility and trustworthiness, data analysis, presentation tools used, and ethical considerations. The techniques and methodologies used in the study were driven by its objectives.

#### 3.2. Research philosophy

The interpretivism research philosophy was applied in the study. The interpretivism research philosophy highlights the meaning of interpretation and understanding in studying social phenomena by examining the meaning individuals attribute to their experiences and comprehending the social context in which those experiences occur (Pham, 2018). This philosophy allowed the researcher to acknowledge the subjectivity of human experiences before offering their distinctive viewpoints on the variables influencing the sustainability of agricultural cooperatives in Namibia. As a result, the researcher could thoroughly understand an individual's thoughts, feelings, and behaviours through observation, interviews, and other data collection techniques (Alharahsheh & Pius, 2020). The philosophy predominantly allowed the researcher to concentrate on subjective interpretations of social phenomena to understand better the perspectives and experiences of the cooperatives' sustainability. Interpretivism recognises the significance of the social, cultural, and historical context of the cooperative and its community, which is essential when examining agricultural cooperatives' sustainability factors for Onghalulu Farmers' Cooperative. Besides, this study aimed to investigate factors affecting Onghalulu Farmers' Cooperative sustainability among Namibia's agricultural cooperatives. In contrast, interpretivism is essential in evaluating complex and distinctive issues in a dynamic environment rapidly changing due to several factors. Therefore, substantial components found in the context of this study might not be comparable to those examined in other contexts, thus making it unique and making it easier to better understand reality. The research tracked how individual perceptions, knowledge, and understanding affect sustainability components.

### **3.3. Research design**

The study used a case study research design. The case study research design is used to comprehensively investigate a particular case, organisation, or phenomenon within its actual setting, which is beneficial for examining complex phenomena or circumstances with little published research (Ridder, 2017). A case study research design involves a thorough and intensive analysis of a specific event, circumstance, organisation, or social unit in a typically defined space and timeframe, with regards to a phenomenon around the bounded context (Schoch, 2020). This substantially enabled the researcher to thoroughly examine the elements influencing the sustainability of agricultural cooperatives at Onghalulu Farmers' Cooperative in the context of actual real-world situations. The case study research design allowed the researcher to analyse the variables affecting the sustainability of agricultural cooperatives and gather information from various sources, including interviews, focus groups, and document analysis (Hancock et al., 2021). Above and beyond, in terms of scope, an in-depth analysis of a contemporary phenomenon within its real-life context relies on various data sources for support (Schoch, 2020).

### **3.4. Research approach**

The study employed a qualitative research approach. This is because the study's objectives and research questions were designed to gather descriptive information from participants regarding their perceptions and knowledge about the factors affecting the sustainability of agricultural cooperatives in Namibia. Subsequently, the qualitative research approach helped explore and understand complex phenomena sensitive to individual experiences and groups' perspectives (Busetto et al., 2020). This mainly deepens the understanding of the research questions and helps create interventions and guidelines that are more sensitive to the needs and experiences of the population (Hennink et al., 2020). Therefore, participants and other crucial stakeholders were subjected to interviews and focus group discussions as part of the research's qualitative component. This showcased the social and cultural elements influencing agricultural cooperatives' operations and their management, governance, and member participation difficulties.

### **3.5. Population**

The study's population consisted of 207 participants, including 194 participants from Onghalulu Farmers' Cooperative and 13 staff members from the DCDR within the MAWLR. The study population involved one (1) Cooperative Chairperson, one (1) Vice-Chairperson, ten (10) Cooperative Advisory Boards, six (6) Cooperative Supervisory Committees, one hundred and seventy-six (176) Cooperative Members, one (1) Registrar for Cooperatives in Namibia, and twelve (12) Cooperative Business

Analysts. The study's target population ensured that the results reflected the participants' traits, behaviours, and attitudes by generating pertinent, significant, and applicable results to the intended audience (Howe & Robinson, 2018). Therefore, the target population was chosen for the study based on the participants' traits and the fact that they had sufficient experience working in the agricultural industry, particularly within farming cooperatives, and that their contributions are linked to the study constructs.

### **3.6. Sample size and methods**

The study used a purposive sampling technique that enabled the researcher to choose cases most pertinent to the research questions and provide the most decadent and detailed information about the phenomenon being studied (Campbell et al., 2020). Therefore, the study's sample size was 15 participants, including one (1) Cooperative Chairperson, two (2) Cooperative Advisory Boards, three (3) Cooperative Supervisory Committees, four (4) Cooperative members, one (1) Registrar for Cooperatives in Namibia and four (4) Cooperative Business Analysts. Subsequently, the study's sample size was determined by Dworkin (2012), who denoted that in qualitative studies, a sample of 15 – 30 is considered adequate to reach saturation and redundancy in narrative theory studies that use in-depth interviews. Therefore, the sample size of 15 participants was sufficient to meet the study's goals and enhance the data and findings' validity, reliability, dependability, confirmability, and trustworthiness. The participants provided the data required to achieve the study's objectives.

### **3.7. Data collection**

The study used semi-structured interviews to collect qualitative data by conducting detailed interviews with the Registrar, Cooperative Chairperson, and Cooperative Advisory Boards. Semi-structured interviews mainly allow the researcher to investigate a specific topic or phenomenon (Magaldi & Berler, 2020). This permitted participants to express their thoughts and experiences in their own words, resulting in rich and detailed data gathered and analysed using qualitative data analysis techniques like narrative or grounded theory (Magaldi & Berler, 2020). In addition, the researcher used open-ended questionnaires to compile in-depth data about the participants' perspectives, experiences, and opinions. Semi-structured interviews were conducted through phone calls and face-to-face interviews which were recorded and transcribed for analysis, allowing the researcher to adjust the methods to the research questions and context. Moreover, document analysis was used to extract information from existing documents.



### **3.8. Data collection procedures**

Semi-structured interviews used in the study involved having one-on-one or group discussions with participants to collect specific information and in-depth responses about factors affecting the sustainability of agricultural cooperatives of Onghalulu Farmers' Cooperative. According to Malapela (2021), a semi-structured interview significantly increases the flexibility between the interviewer and interviewee to discuss pertinent topics by allowing the interviewer to probe and expand the interviewees' responses. Open-ended questionnaires were physically distributed to participants via mail or online to gather crucial data. Open-ended questionnaires helped participants express their attitudes and opinions in their own words without the researcher's interference. Moreover, they elicited underlying thoughts, feelings, sentiments, and suggestions that the researcher may not have had considered. On the other hand, document analysis was used to examine existing documents with historical aspects of the research topic. Therefore, to answer the research questions and fulfil the study's objectives, semi-structured interviews and open-ended questionnaires were used to collect primary data. Document analysis helped to gather secondary data from the published literature. Overall, this gave the researcher access to detailed information that helped investigate and comprehend the operational efficiency of the Onghalulu Farmers' Cooperative.

### **3.9. Credibility and trustworthiness**

The study ensured that the techniques used increased credibility and trustworthiness in the analysis and representation of findings (Rose & Johnson, 2020). Credibility, transferability, dependability, and confirmability are typically components of trustworthiness in qualitative research, reflecting the study's validity and reliability. Hence, the researcher ensured that there was no data contamination and that the participants understood the questions before giving their answers. The data were collected using questionnaires, interviews, and documentary reviews, and the data collection plan directed questionnaire and interview schedules to relevant themes. As a result, the study conducted a pilot study to verify the research questions and eliminate any inconsistencies in the questionnaire.

### **3.10. Data analysis**

The study employed narrative analysis. Narrative analysis in qualitative research interprets intricately detailed life stories from interviews or written documents, examines people's voices through their narrative data, and focuses on how people interpret their life experiences (Josselson & Hammack, 2021). Malapela (2021) states that narrative analysis is used in a study to reduce data to an understandable and interpretable form so that the relationships of research problems can be studied, tested, and drawn. As a result, data were transcribed, translated, interpreted, and coded before being

classified according to themes and codes. The Computer Assisted Qualitative Data Analysis Software (CAQDAS) was primarily used for this study's data analysis to facilitate transcription analysis, explanation writing, coding, discourse analysis, data mapping, and grounded theory methodology (Reis et al., 2016). Consequently, the software was used to contrast data from various categories such as data management and organisation, data annotation, search and query capabilities, data visualisation, and import and export potentialities (Reis et al., 2016). NVivo version 12 was used for the study's organisation, analysis, visualisation, and data coding, and further analysed journal articles, unstructured text, and audio from interviews.

### **3.11. Research ethics**

The study's research ethics include respecting participants' dignity and considering their cultural and social norms when the study was conducted. Participants were fully informed about the nature and purpose of the study, and they were provided with a voluntary and informed consent form to complete for them to participate in the study. The study further considered the virtues of beneficence and nonmaleficence (Azoury et al., 2018). Therefore, before the researcher collected participant data, the institutional (NUST) review committees or boards reviewed and approved the study to ensure that it complies with ethical standards and guidelines. Participants' identities were kept confidential or anonymous to avoid self-identifying statements and information and to protect them from potential harm. Other issues such as plagiarism were avoided to maintain academic integrity and honesty.

### **3.12. Summary**

This chapter discussed the study's research design. The research methodology used in the empirical study was analysed based on why specific methods were appropriate for the study. As a result, research ethics were discussed. Furthermore, the methods and approaches used in the study influenced the study's primary objective, which is to investigate factors affecting the sustainability of agricultural cooperatives in Namibia, particularly for Onghalulu Farmers' Cooperative in Okongo West, Ohangwena Region. The detailed analysis of qualitative data and discussion of the findings are covered in more detail in the following chapter.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1. Introduction

This chapter covers an analysis, presentation, and interpretation of the study's findings, as well as contrasting its objectives and methodology. The empirical research methods and procedures used to gather information about the factors affecting the sustainability of agricultural cooperatives in Namibia, specifically Onghalulu Farmers' Cooperative, were utilised for the interpretation, presentation, and data findings. The researcher used purposive sampling techniques to select cooperative stakeholders for surveys as the study was mainly centred on the Onghalulu Farmers' Cooperative. The study is built on narrative analysis, with the Computer Qualitative Data Analysis Software (CAQDAS) and NVivo version 12 utilised to organise, visualise, and code the data. The study's secondary data were acquired from pre-existing data sources, while primary data were collected through semi-structured interviews and open-ended questionnaires. The data analysis and interpretation of the results enabled the researcher to promptly reach appropriate conclusions and recommendations that answered the research questions. Ultimately, a review of the findings was presented, and the chapter ends with a summary.

#### 4.2. Data analysis and interpretation of results

The information gathered from the fifteen (15) participants entails an empirical investigation of the factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers' Cooperative being a case study. As a result, the data enlightened the researcher about the study constructs through which participant responses are analysed and tabulated.

#### 4.3. Data collected through questionnaires and interviews

This section presents data collected through open-ended questionnaires and interviews from fifteen (15) participants. Table 4.1 below indicates the frequencies, percentages, and total frequency of participants and the data analysis thereunder the tables.

##### 4.3.1. Participants' gender

As outlined in Table 4.1 below, the study found an imbalance of gender representation between male and female participants. Only five (5) of the 15 participants in the study represented 33.33% of the female participants, and ten (10) of the 15 participants represented 66.67% of the male participants. The male gender overrepresented the female gender because they undertook the most crucial tasks

performed at Onghalulu Farmers' Cooperative, including caring for the livestock, clearing brushes, making charcoal, and other labour-intensive tasks. Nonetheless, the female gender is underrepresented in cooperative activities because they work primarily in occasional agricultural duties, including agronomy, horticulture and poultry farming.

#### **4.3.2. Participants' age range**

The study discovered that no participants between 18 and 25 years old were represented. Out of fifteen (15) participants, two (2) or 13.33% of participants were between 25 and 35 years old; three (3) or 20% of participants were between 35 and 45 years old; three (3) or 20% of participants were between 45 and 55 years old; six (6) or 40% of participants were between 55 and 65 years old; and only one (1) or 6.67% of participants were 65 years old or more. The study concluded that the youth group was underrepresented in cooperative activities and this shows little interest in agricultural activities at Onghalulu Farmers' Cooperative (see Table 4.1 below).

#### **4.3.3. Participants rank or positions in a cooperative**

According to Table 4.1 below, the study indicated that only one (1) or 6.67% of participants was in the position of a Cooperative Chairperson; two (2) or 13.33% were Cooperative Advisory Boards; three (3) or 20% were in the position of Cooperative Supervisory Committee; four (4) or 40% were Cooperative Members; one (1) or 6.66% was a Registrar for Cooperatives; and four (4) or 26.67% were Cooperative Business Analysts.

#### **4.3.4. Participants cooperatives experiences**

The study simplified that no participants with six (6) months or less of cooperative experience were represented. Insightfully, one (1) or 6.67% of participants have experience in cooperatives for six (6) to twelve (12) months; four (4), or 26.67% of participants, have experience in cooperatives for one (1) to four (4) years; three (3), or 20% of participants, have experience in cooperatives for four (4) to eight (8) years; and seven (7), or 46.66% of participants have experience in cooperative activities for eight (8) years or more (see Table 4.1 below).

#### **4.3.5. Participants level of education**

Table 4.1 below shows none of the participants was without formal education among the 15 individuals who participated in the study. Also, there were no participants with adults and primary education being represented. However, out of the 15 participants, three (3), or 20% of participants,

have Secondary Education, eleven (11) or 73.33% of participants have Tertiary Education, and only one (1) or 6.67% of participants with Vocational Education.

**Table 4.1: Demographic characteristics of participants**

Variable	Category	Frequency	Percentage (%)
<i>Participant's Gender</i>			
	Male	10	66.67
	Female	5	33.33
<i>Participant's Age Range</i>			
	18-25 Years	0	0
	25-35 Years	2	13.33
	35-45 Years	3	20
	45-55 Years	3	20
	55-65 Years	6	40
	Above 65 Years	1	6.67
<i>Participant's Ranks or Positions</i>			
	Cooperative Chairperson	1	6.67
	Cooperative Advisory Board	2	13.33
	Cooperative Supervisory Committee	3	20
	Cooperative Members	4	26.67
	Cooperative Registrar	1	6.67
	Cooperative Business Analyst	4	26.67
<i>Participant's Experience Level</i>			
	6 Months	0	0
	6-12 Months	1	6.67
	1-4 Years	4	26.67
	4-8 Years	3	20
	Above 8 Years	7	46.66
<i>Participant's Education Level</i>			
	None	0	0
	Adult Education	0	0
	Primary Education	0	0
	Secondary Education	3	20
	Tertiary Education	11	73.33
	Vocational Education	1	6.67

**Source:** Researcher (2023)

#### **4.3.6. The main agricultural activities undertaken at Onghalulu Farmers' Cooperative**

To determine the overall sustainability factors of the Onghalulu Farmers' Cooperative, the study identified the sole agricultural activities undertaken at the cooperative. According to the participants' perspectives, Onghalulu Farmers' Cooperative is primarily involved in developing the value chain from unwanted bush encroachment, which is essentially processed into charcoal production, bush feed, droppers, and poles for commercial purposes. The cooperative expanded its operations beyond the wood-based industry by participating in small-scale poultry farming, livestock farming, agronomy, and horticulture. Other activities, including marketing members' livestock and other agricultural products and providing farming inputs, are the primary functions of the cooperative's supply and marketing

services. The cooperative also offers other land-based economic activities incidental to commercial farming. Accordingly, the cooperative's main activities are raising livestock for marketing and breeding and horticultural work, which includes growing various crops and other vegetables using cutting-edge farming methods to maximise crop yields such as high-quality seeds, fertilisers, and irrigation systems. Participants briefly highlighted the activities of the Onghalulu Farmers' Cooperative, which are illustrated below:

#### **4.3.6.1. Livestock farming**

Livestock farming forms two-thirds of the agricultural production of the Onghalulu Farmers' Cooperative, which essentially dominates these businesses. Livestock, including cattle, sheep, goats and pigs, are the most economically viable to raise in the Oshana Region due to the cooperative's excellent coordination of livestock management and the region's advantageous geographic location. In addition, poultry farming is practised by the Onghalulu Farmers' Cooperative, including raising chickens for meat, eggs, and broilers.

#### **4.3.6.2. Agronomy and horticulture farming**

Onghalulu Farmers' Cooperative grows many crops, including tomatoes, potatoes, carrots, onions, cabbage, butternuts, beans, groundnuts, watermelons, melons, and other irrigations. It also grows cereal crops such as sunflowers, wheat, maize, and millet (mahangu).

#### **4.3.6.3. Charcoal**

The production of charcoal is crucial to the cooperative's operation as its primary responsibility is controlling bush encroachment while also restoring rangeland. The bush harvesting procedure is strictly regulated, and the charcoal value chain is kept in good condition.

#### **4.3.6.4. Marketing and supply services**

The Onghalulu Farmers' Cooperative engages in marketing and supply services and activities that include the distribution and promotion of livestock products produced by its members as well as the acquisition and provision of inputs like equipment, seeds, and fertiliser to increase the cooperative's competitiveness and market access.

#### **4.3.7. Challenges facing agricultural cooperatives in developing nations like Namibia**

To ensure the long-term sustainability of agricultural cooperatives in Namibia, participants were required to provide an instantaneous justification of the challenges that generally impact such

sustainability in the country. Based on their explanations, the challenges identified include a lack of sufficient capital to initiate projects and initiatives, heightened resilience to the country's increasingly unpredictable climate and unreliable rainfall, and declining soil fertility due to interrelated social, economic, and ecological factors on land with land degradation, deforestation, and desertification being the main factors. The lack of regular mentorship and follow-ups on training, evaluation, and monitoring of programmes, inadequate knowledge and awareness creation on crucial and relevant policies or legislation on cooperatives, unbalanced relationships between agricultural cooperatives and associations which leads to competing interests and sources of social disharmony, and lack of interest by youths in active participation are the consequences of deficiencies in governance and leadership of cooperatives caused by low levels of motivation, skills, and knowledge dispensation. Uchezuba et al., (2016) support the notion as they point out that the characteristics and nature of Namibia's agricultural system have been blamed for the lack of trust, non-transparency, and dysfunctional issues within agricultural cooperatives, which in turn affects the sustainability of the sector.

Participants further indicated that the competing and conflicting interests between agricultural associations and cooperatives regarding available funding and resource opportunities, conflicting interests and roles of traditional authorities in memberships and management roles of farming associations and cooperatives, limited organisational and business capacity, skills training and technical know-how on managing agricultural undertakings as viable and profitable enterprises, as well as low levels of awareness on credit availability, are what lead to the lack of sustainability and benefits sharing mechanisms in the available funding support. Many Namibians are unaware of the commercialised cooperative initiatives and do not see any advantages to participating in such initiatives due to a lack of knowledge. As a result, those living in rural areas believe that working for a reputable company in an urban area is the only way to survive financially; thus, community initiatives like cooperatives, which pay no salaries, are not worth considering. Given that there is enough arable land to produce food in rural areas, it remains undeveloped and unproductive, which causes many young people to migrate to urban areas to search for employment. As towns grow beyond the limits of villages, some cooperative farmers lose their productive land and loyal customers due to locating to a new place of business. Most cooperatives have many expectations from donor funds and government aid, thus making it difficult to function independently. Maladministration practices, including corruption, also harm the long-term sustainability of cooperative initiatives. Subsequently, cooperatives have difficulties finding cheap financing options to invest in infrastructure, technologies, and modern farming equipment, which limits their ability to grow and increase productivity. The increases in the price of fuel, water, and electricity, as well as the erratic state of the economy, cause

the repo rate to rise and this instantly impacts interest rates, thereby resulting in the reduction of cooperative borrowing power and the availability of reasonably priced financing options. In relation to that, participant 15 indicated that:

***P15:** Most cooperative members in Namibia, especially those living in rural areas, do not have collateral security to enable them to access available financing options to support the operational expansion of their cooperatives. Furthermore, some members are employed full-time and thus they have little time for cooperative activities, which impacts their sustainability.*

On the challenges of the appointment of Cooperative Board Members, Chairperson and the Cooperative Supervisory Committee, participant 15 explained that:

***P15:** Cooperative members typically elect well-known business people to serve on their boards due to the influence they have in the community. This is suddenly detrimental to a cooperative since the business people who are elected to serve on the board are busy individuals who, at the same time, must take care of their families and businesses. These individuals are not interested in the cooperative's activities and are thus elected because they will prioritise their business' responsibilities over the cooperative's. As a result, the cooperative suffers significantly because the board members who are supposed to protect its interests are absent at crucial times.*

Participants further narrated that because the willing-buyer, willing-seller policy did not succeed in providing most Namibians with land as per the government's objectives of giving land to its people effectively and efficiently, agricultural cooperatives in Namibia are basically without access to land owing to the slow pace of resettlement, and the policy has proven to be too costly for the government. In addition, the sustainability of agricultural cooperatives is mainly affected by the lack of renewable energy in the sector. This is because modern agricultural operations require a careful balance between maximising productivity, preserving economic sustainability, and minimising the use of limited natural resources and adverse environmental effects. According to participant 12 and 15 as demonstrated below:

***P12:** Hence, the Namibian government has implemented a substantial policy known as the willing buyer-willing seller principle, which calls for voluntary transactions between buyers and sellers; many Namibians who want to purchase land cannot afford it due to the exorbitant land prices, which hampers the policy's effectiveness. Therefore, willing buyers cannot afford to*



*purchase land from those willing to sell it to them, even when there are many sellers willing to sell their land to those willing to buy it.*

**P15:** *The state owns land in the Northern Communal Areas (NCAs), so agricultural cooperatives do not have a title deed to the land they farm. As they do not own such land, they are prohibited from using it as collateral when they want to borrow money from a bank. Subsequently, they are leasing the land from the state for 99 years.*

**P15:** *Farmers in the Northern Communal Areas are also compromising the quality of their livestock by failing to vaccinate them against diseases and to add nutrients to their livestock feeds to maintain their health. Hence, their quality cannot be compared with the quality of the livestock from beyond the NCAs. Furthermore, the narrative that the Veterinary Cordon Fence (VCF) between the two markets is also said to prevent the livestock market in the Northern Communal Areas from accessing the commercial market is not factual. As a result, there is a good market within the NCAs, but farmers cannot compete because their livestock are of low quality. This is because the farmers within the NCAs only feed their livestock with the old Mahangu stock and do not supplement them with the proper nutrient feeds bought from the shops (Agra and Kaap Agra).*

#### **4.3.7.1. Why do the challenges mentioned above continue?**

Participants were requested to assess the reasons behind the challenges that still affect the sustainability of agricultural cooperatives in Namibia. They highlighted that the challenges that continue to affect the cooperatives' sustainability were members' unwillingness to accept change and lack of commitment from some members. Cooperatives' incapacity to follow their bylaws, dependence on funding from the government and donors, and the influence of their traditional beliefs all obstruct commercial operations. Some cooperatives are not holding Annual General Meetings as required by law to discuss various issues that affect their cooperatives and eventually come up with resolutions. In addition, the insufficient allocation of funds from the government for agricultural projects that support cooperative initiatives impacts cooperative sustainability, as does poor support from external stakeholders such as banks, sponsors, and foreign donors. Participant 13 as per below said that:

**P13:** *Due to insufficient efforts from the cooperative's stakeholders, cooperative activities in Namibia are poorly coordinated and inadequately managed. Since there is no political will to support these initiatives, it is difficult for cooperatives to thrive even though we have favourable laws and policies and supportive economic and societal mechanisms.*

#### **4.3.7.2. How can the challenges mentioned above be resolved?**

Participants were also asked to propose ways to address the issues raised to improve the sustainability aspects of farming cooperatives in Namibia. They pointed out that it is crucial to hold workshops to reaffirm and educate members on the fundamental principles of cooperatives, and this can be achieved by offering training to improve members' comprehension of cooperative engagements. By giving members this training, cooperative members will be more motivated and have better access to networks, thereby facilitating the sharing of important ideas, knowledge, and necessary adjustments with members of other cooperatives. A significant amount of capital must be invested in cooperatives to progress infrastructure developments that will improve the functioning of cooperatives and, eventually, obtain the necessary tools, supplies, and equipment. Since agriculture is often the only way to maintain the nation's welfare, it should be prioritised to meet national developmental agendas. As outlined below, Participant 15 remarked that:

*P15: In contrast to individuals with competing interests, cooperatives are strongly advised to choose devoted individuals entrusted with their responsibilities who can move a cooperative from one point to another and improve it. Cooperatives are additionally advised to prioritise training their members to ensure that executives and board members have the necessary skills. Moreover, mobilisation campaigns should be launched to disseminate information, and donor organisations should take a leading role in offering cooperatives all kinds of support, including technical help augmented by real-world experience to deepen their understanding.*

Participant 15 further emphasised that:

*P15: To avoid conflicts of interest, cooperative members should refrain from choosing business people to serve on their boards since they have no stake in cooperatives over their businesses.*

#### **4.3.8. Factors affecting the sustainability of Onghalulu Farmers' Cooperative**

The researcher requested the participants to indicate the main factors influencing the sustainability of Ongalulu Farmers' Cooperative for the study to achieve its primary objectives. They emphasised that the difficulties in keeping members motivated in the face of the current national economic hardships when there is generally less money in circulation affect the buying power of customers and this is one of the factors affecting the sustainability of the cooperative. The limited capital resources impact the project's scope, thereby reducing benefits streams and ultimately impacting the execution of the cooperative's intended range of programmes that can effectively engage its members.

Furthermore, the cooperative is confronted with the issue of scarce water resources because of insufficient rainfall, which is often necessary for livestock and irrigation needs. This further impedes the cooperative's access to a more rewarding market outside of the Veterinary Cordon Fence as the cooperative's livestock marketing pattern is widely prevented from accessing the market outside the VCF. Subsequently, the market beyond the Veterinary Cordon Fence stays formal, and consumers outside the Red line cannot access it because of political and economic constraints meant to protect the formal market. Therefore, the Northern Communal Areas (NCAs), where Onghalulu is based, cannot access the formal market to sell and market their livestock. Participant 14 added on the above notion by pointing that:

***P14:** Due to insufficient rainfall in the Northern Communal Areas in recent years, some Onghalulu Cooperative members moved their livestock to a neighbouring country, Angola, to search for better grazing conditions. As a result, the cooperative cannot keep a large number of livestock due to the limited grazing for its livestock, instantly affecting its ability to supply enough livestock to the local market.*

Participant 14 further simplified the usage of the cooperative's boreholes by the surrounding community member's challenges:

***P14:** Moreover, the cooperative members share their boreholes with the surrounding community members of Onghalulu. This affects the water supply to Onghalulu as community members do not contribute to the upkeep and repair of boreholes when due. However, once boreholes stop working, it causes conflict between members as none is willing to take up the responsibility to repair them, thus negatively affecting the cooperative's crops and livestock production.*

Participants further indicated that restricted access to vital information is the cooperative's other main issue. As a result, to obtain crucial information necessary to advance cooperative operations, cooperative members must travel long distances to access the Cooperative Offices in Windhoek. A significant obstacle that Onghalulu faces is its inability to access the auction kraals, which are far from the cooperative, thus making it extremely difficult for the cooperative to take their livestock to the auction kraals due to the long distance between the cooperative and the auction kraals.

It is primarily a challenge to the socio-economic development of the impoverished community of Okongo in the Ohangwena Region that the Northern Communal Areas lack efficient marketing institutions, thus causing a barrier to the growth of the livestock sector. As agriculture cannot be

possible without the cooperation of farmers, Onghalulu Farmers' Cooperative's objectives are hampered by the higher percentage of members refusing to work together. Besides, due to poor rainfall, some Onghalulu Farmers' Cooperative members moved from rural to urban areas to seek employment due to a lack of economic activities at the cooperatives. The cooperative struggles to attract new members from the youth group, who are typically attracted by enormous incentives and pay over a short period, of which the cooperative cannot sustain. In addition, wealthy members essentially commit to buying luxurious properties for themselves as a status symbol instead of making this kind of investment in the capital investment portfolio of the cooperative. Managing the cooperative's grazing area and water point (borehole) is a significant source of contention among the members who frequently fail to cooperate. On the other hand, theft of vital cooperative infrastructure, including irrigation pipes, solar panels, and borehole parts, has increased. This has further led to a rise in the theft of crops, vegetables, livestock, and stock. Besides, cooperative members are unwilling to cooperate with the Division of Cooperative Development and Regulation (DCDR) and they purposefully withhold important information during the yearly monitoring visits due to a lack of cooperation among members. According to Amunyela and Moyo (2019), Onghalulu Farmers' Cooperative, like any other cooperative, encounters various challenges in terms of economic, social, environmental, and internal organisational issues, and subsequently the state of the economy contributes to poor quality agricultural products by increasing production costs, thereby causing livestock diseases, and decreasing soil fertility.

#### **4.3.8.1. Internal factors affecting the sustainability of Onghalulu Farmers' Cooperative**

Beyond the narrated issues influencing the sustainability of Onghalulu Farmers' Cooperative above, participants were asked to simplify the internal factors influencing its sustainability. They indicated an ongoing conflict among members within the cooperative, which affects the cooperative's capacity building, decision-making processes, resource allocation towards projects, and coordination of the cooperative's functionality. The inability of members to cooperate and display commitment towards the objectives of the cooperative results in low engagement with external stakeholders and internal increases of infighting between the board and ordinary members. Given the endless infighting between members and the lack of cooperation with stakeholders, the welfare of employees and members is disregarded, and no funds are reserved for human resource development to provide staff and members with the necessary skills and to support the cooperative's sustainable growth. Additionally, a lack of engagement among members and a toxic cooperative atmosphere is caused by poor leadership, and such factors push the cooperative into the highest risk category and this impact its sustainability. Other adverse effects include poor supply chain management, low innovation,

noncompliance with the law, inadequate infrastructure development, and the inability of the cooperative to provide adequate data for reporting purposes. Participant 13 outlined that:

***P13:** The Onghalulu Farmers' Cooperative is not managing its finances in a way that supports its main objectives. They are making the wrong investments hence they are faced with a drought situation, and there is not enough grazing for the livestock; they did not purchase an advanced bush-crushing machine to prepare livestock feeds.*

Participant 13 further reinforced that:

***P13:** The lack of motivation among members to accomplish Onghalulu's goals makes the cooperative unsustainable, undermining their already terrible reputation in the agricultural cooperative ecosystem. This puts the cooperative's future in jeopardy. The cooperative is also on its own and should immediately coordinate its operations because the government does not subsidise them.*

Participant 14 emphasised on member's unity by indicating that:

***P14:** There is doubt about the unity of some cooperative members; those wealthier than others do not value those less fortunate, and they frequently disparage other members' perspectives and opinions when they contribute to the cooperative discourses during meetings. This divide eventually deters other members from attending crucial meetings, which ultimately leads to their boycott.*

#### **4.3.8.2. External factors affecting the sustainability of Onghalulu Farmers' Cooperative**

Participants were required to provide an insightful narrative about the external factors influencing the sustainability of Onghalulu Farmers' Cooperative. They emphasised on some traditional beliefs that the Okongo community holds to be primarily consistent with the cooperative's sustainability. The primary regulator, the Ministry of Agriculture, Water, and Land Reform, had to directly intervene with the cooperative to address general non-compliance with the Cooperative Act 23 of 1996 and the Namibia National Cooperative Policy of 2017 as a result of the incapacity of external involvement in cooperative affairs. Most significantly, a decrease in the amount of money in the economy caused a significant shift in customer demand, thus immediately impacting the cooperative's financial situation. Additionally, the cooperative could terminate operations due to insufficient rainfall because of altered weather patterns; the drought negatively impacts its operations because all its activities depend on heavy rainfall. As a result, due to the introduction of advanced technologies, the cooperative's financial constraints affected its ability to make significant investments in cutting-edge technology

needed to maintain its operations, hence being unable to sustain its competitive advantage over its rising competitors. Participant 15 in this regard indicated that:

***P15:** To maintain their traditional farming methods, Onghalulu Farmers' Cooperative members keep many livestock for status rather than commercial purposes. This is common in the Aawambo community, which only keeps livestock for slaughter at essential family events like weddings and funerals. Consequently, most livestock housed in cooperatives, such as Onghalulu Farmers' Cooperative, are kept purely for status, not commercial purposes. Moreover, some livestock kept in the cooperative post are inherited and thus belong to the member's families. Hence, members cannot sell those livestock without their authorisation. Generally speaking, you find one cooperative member with a hundred (100) cattle in the kraal, but of the hundred (100) cattle kept, only five (5) are owned by the member.*

#### **4.3.9. The influence of cooperative stakeholders on the sustainability of agricultural cooperatives in Namibia**

According to Uchezuba et al., (2016), the legal parties recognised as the primary stakeholders in the cooperative ecosystem, play a significant role in ensuring that cooperatives operate in a favourable environment within Namibia. However, the unsatisfactory stakeholders accelerate the failure of the cooperative market by undermining the development of the cooperative's physical, legal, and logistical infrastructure, which makes it challenging for cooperatives to control prices, reduce transaction costs, and enforce contracts and anti-competitive laws (Uchezuba et al., 2016). This will suddenly result in high operating costs, non-compliance, and poor performance of agricultural cooperatives. Through the participants' sentiments, they demonstrated the significance of cooperative stakeholders in shaping the cooperative sector and promoting the importance of addressing socio-economic issues collectively. Since different stakeholders are the cornerstones of agricultural cooperative sustainability, they provide direction to cooperative affairs and all the support required to keep the cooperatives operating in the country. Consequently, the lack of stakeholders in the cooperatives makes the non-existence of cooperative initiatives easier to understand. Furthermore, cooperative initiatives cannot be implemented without stakeholders' approval because they are heavily dependent upon them. Subsequently, their presence contributes to the reduction of poverty and inequality, the provision of economic opportunities for their entities, the maintenance of production, and the encouragement of sustainable agricultural practices. They subsequently play a fundamental role in sustaining agricultural cooperatives by offering significant financial support, policy formulation, training and capacity building, marketing assistance, and capital investments. These comprise a range of critical cooperative stakeholders, such as governmental bodies, political

organisations, financial institutions, regulatory bodies, international organisations, and local communities. All of these affect the cooperative's ability to survive while preserving its autonomy.

The participants further emphasised that the government and other agricultural industry stakeholders support cooperative movements and provide adequate financial incentives, training, and logistics support to agricultural cooperatives' development. Specifically, the government offers direction to agricultural cooperatives regarding the long-term development goals enshrined in Vision 2030, the Harambee Prosperity Plan, and the National Development Plans as primary stakeholders. This is supported by Uchezuba et al., (2016), who proffer that since Namibia's independence, the government has provided more extensive financial support to the agricultural industry, thereby transforming the formation and development of agricultural cooperatives in the country. Furthermore, participants indicated that the immediate management, development, and promotion of forestry, water, and agricultural resources fall under the purview of the Ministry of Agriculture, Water, and Land Reform, for coordinating information sharing and production processes, thereby ensuring consistency in supply and quality. Promoting local sales of institutions, guaranteeing security, mobilising investment potential and optimising leverage and profit are among the shared interests of other stakeholders. Participant 15 emphasised that:

***P15:** To enhance stakeholders' engagement within the agricultural cooperatives, the DCDR collaborates with the Regional Councils countrywide to disseminate information within the community and educate people about the significant impact of agricultural cooperatives on the development of the economy and societal wellbeing, and improving people's standard of living.*

#### **4.3.10. The significance of stakeholders on the sustainability of Onghalulu Farmers' Cooperative**

The study provided substantial evidence regarding the importance of Onghalulu Farmers' Cooperative stakeholders concerning the overall sustainability of the association. Participants affirmed that they mattered, emphasising that stakeholders play a critical role in the cooperative's success and assuring sustainability by ensuring that the relationships among stakeholders are acknowledged. Due to the cooperative size, stakeholders play a significant role in bringing attention to sustainability issues and inciting Onghalulu members to participate in the association's general operations. Joint stakeholders are critical and have a substantial part in advancing the agenda that represents the priorities of the people who matter in ensuring the long-term sustainability of the Onghalulu Farmers' Cooperative strategy. Additionally, the cooperative's stakeholders engage in economic activities like improving the community's standard of living by purchasing livestock from them and utilising any other required

services the association provides. One such service is drilling boreholes to guarantee the community's continued access to water, which is made possible by the Ministry of Agriculture, Water and Land Reform's assistance to the cooperative. Thus, their involvement can significantly impact the cooperative's success in achieving sustainable agricultural practices, economic stability, and community development. In summary, Onghalulu Farmers' Cooperative stakeholders provide essential support, resources, and guidance for the cooperative's operations and growth.

#### **4.3.11. The obstacles hindering the efficiency of Onghalulu Farmers' Cooperative stakeholders' engagement**

The researcher sought to explore obstacles hindering the efficiency of the Onghalulu Farmers' Cooperative from engaging stakeholders as effectively as possible. Participants in the study indicated that poor communication among stakeholders has a detrimental impact on stakeholder engagement. Because cooperative organisations depend on effective communication, low commitment to cooperative endeavours primarily leads to stakeholders needing more support to maintain the significance of teamwork in attaining Onghalulu Farmers' Cooperative's long-term sustainability. Some cooperative stakeholders have self-serving interests that conflict with their goals; they are greedy and only care about themselves rather than furthering the cooperative's development. As a result of their inability to collaborate with others to find solutions to the cooperative's shared problems, some stakeholders need more teamwork skills as they come across as selfish. Onghalulu Farmers' Cooperative further faces several obstacles that hinder effective collaboration and support from stakeholders, including miscommunication, resource constraints, a lack of trust among stakeholders, conflicts of interest, and a lack of awareness of cooperative goals and initiatives. Participant 15 indicated some of the issues as follows:

***P15:** Some institutions are capacitated to provide a variety of assistance to the agricultural cooperatives in Namibia; cooperatives, including Onghalulu Farmers' Cooperative, continue to face financial difficulties as they cannot obtain loans from the banks due to the negative reputation of other cooperatives defaulting on loans. Therefore, state and commercial banks are unwilling to support them financially. The Agricultural Bank of Namibia, which is exclusively responsible for supporting agricultural initiatives in the country, can likewise not provide financial assistance to the Onghalulu Farmers' Cooperative since they lack collateral security that would cover loan repayments if they become insolvent and face financial difficulties.*



The Agricultural Bank of Namibia, as a critical stakeholder in the agricultural sector, is not financed through the government budget; hence, it operates like any other bank that should generate its revenue and, therefore, has to charge interest on loan repayments. Consequently, the state bank (Agribank) cannot finance ineffective projects for cooperatives such as Onghalulu Farmers' Cooperative, as they fail to meet bank loan repayment obligations. Participant 15 further supported the notion by adding that:

*P15: In the past, a certain agricultural cooperative took out loans from the Agricultural Bank of Namibia to purchase livestock for breeding and reselling purposes. However, after the loan was granted and livestock were purchased, the cooperative began slaughtering the livestock for consumption instead of raising, breeding, and selling them to make a profit and instantly pay back the loans.*

The DCDR of the Ministry of Agriculture, Water, and Land Reform is responsible for coordinating all functions from Windhoek and centralising cooperative functions. Given that the DCDR Office is limited to Windhoek and there are no DCDR Offices in the Regions to assist agricultural cooperatives, it further complicates cooperatives including Onghalulu Farmers' Cooperative, access to the DCDR. Furthermore, the DCDR division is understaffed, with only 13 employees to handle all of the cooperatives' problems and promptly interacting with them during their Annual General Meetings (AGM). The few staff members at the DCDR Office's disposal must travel to the Regions regularly to serve all 219 registered cooperatives nationwide, which places additional strains on the DCDR. Therefore, the DCDR Office must be decentralised to the Regions to enhance stakeholder engagement in the country. Other challenges affecting the efficiency of cooperative stakeholder engagement, according to Participant 15 are as follows:

*P15: Thus, the government has been funding campaigns and community education regarding cooperatives; individuals receiving training or information are not implementing it. Nonetheless, the importance of cooperatives remains unclear to many people in rural areas and they are excluded from the Namibian education curriculum that is meant to prepare students and learners up front.*

#### **4.3.12. Interventions to be implemented to improve stakeholder engagement at Onghalulu Farmers' Cooperative**

The study established a foundation for obstructing the efficient coordination of stakeholder engagements at Onghalulu Farmers' Cooperative in the previous section, bringing the researcher to request participants to provide achievable interventions that should be implemented to enhance

stakeholder engagement within the cooperative. They pointed out that increasing stakeholder engagement requires regular communication and cooperative meetings, which can be accomplished by establishing clear communication channels, offering capacity-building initiatives, resolving conflicts of interest, and significantly involving stakeholders in decision-making processes. Furthermore, enhancing stakeholder engagement and support can be accomplished by educating them about the cooperative's values, mandates, objectives, and benefits. Effective stakeholder engagements can be significantly aided by mutual respect, acknowledgement of one another, and effective cooperative governance. Therefore, it is essential to maintain positive stakeholder engagements in order to be inclusive, set clear meeting timeframes, and publicise arrangements with the DCDR to highlight important issues and share information in the local context. As indicated above, straightforward stakeholder engagement can significantly improve cooperative affairs and importantly, the cooperation of all stakeholders will help in the cooperative's pursuit of sustainable growth. Participant 15 supported the notion by adding that:

*P15: The DCDR Office needs to be decentralised to the Regions to enable the government to take the services closer to the people and promptly address issues that affect them if it genuinely wants to support and grow the nation's cooperative sector.*

#### **4.3.13. The effectiveness of good cooperative governance in enhancing agricultural cooperatives' sustainability in Namibia**

The study intended to explore how agricultural cooperatives in Namibia can be improved through effective cooperative governance. Through this, participants indicated that to support a cooperative's sustainable growth and development, good cooperative governance is essential to the cooperative's overall performance. As a result, encouraging integrity, ethics, accountability, and transparency within the cooperatives can boost investor confidence and, in turn, improve the cooperative's competitive position in the marketplace. Complying with the Cooperative Act 23 of 1996 and the Namibian Cooperative Policy 2017 will immediately enhance the cooperatives' overall governance. Henceforth, to ensure excellent cooperative governance, the DCDR should ensure regular yearly cooperative monitoring inspections with all functioning cooperatives to verify that they are all duly registered and fulfilling their legal obligations. Consequently, cooperative stakeholders should be given the necessary training and education to improve their understanding of maintaining cooperatives' operational standard procedures. An annual audit report should be conducted, and all auditing and financial reports should be published to ensure that their affairs are correctly handled with transparency and accountability and to enforce effective decision-making fostered by cooperative solid governance. Furthermore, cooperatives can guarantee good governance by providing financial information to their

stakeholders and the public in general per financial year to promote transparency. This will instantly result in them gaining public trust and attracting potential investors or new members. Accordingly, good cooperative governance will save an association from unnecessary costs, including legal fees, due to non-compliance with the act, law, and policy. Overall, good cooperative governance promotes better utilisation of resources, reduces conflicts, improves financial stability, and contributes to the cooperatives' long-term success and sustainability. A well-managed cooperative with good governance can benefit from receiving all the necessary aid from donors, the government, and society and subsequently gain financial support from financial institutions. Participant 15 added to the notion by indicating that:

*P15: Some cooperatives manage their cooperatives according to their preferences, but there are cooperatives whose members understand the cooperative's guiding principles and follow the policies in place. Yet, cooperatives with forty (40) or more members typically have a supervisory committee and subsequently hold the Annual General Meeting (AGM) per financial year.*

#### **4.3.14. The effectiveness of cooperatives on the sustainability of Onghalulu Farmers' Cooperative**

The effectiveness of the agricultural cooperative in promoting the economic sustainability of the Onghalulu Farmers' Cooperative was significant to this study, and participants attested that cooperatives protect and restore essential habitats, contribute to the preservation of watersheds, and generally enhance soil health and water quality in the community. It expedites agriculture as Okongo is strategically located in Namibia's northeast. During the rainy season, it is an ideal place to plant crops and vegetables and graze livestock, thus making it easy to carry out business activities collectively in a less competitive market. The efficiently run cooperative (Onghalulu) helps members to realise sustainable economic prospects, improve market and resource accessibility, and distribute knowledge among members. Cooperative members eventually pay less for their marketing, distribution, and logistics inputs due to teamwork and the provision of affordable services. Therefore, through their input supply, processing, and marketing services, Onghalulu Farmers' Cooperative mobilises resources, creates jobs, attracts investments, and encourages everyone to participate fully in the economy and social development. Participant 14 added that:

*P14: In Namibia, everything we eat and purchase from Open Markets and Supermarkets comes from agricultural activities. As such, there is no exemption to undermining the importance of the Onghalulu Farmers' Cooperative in the sector's agenda for community development.*

In addition, giving members the necessary goods and services enhances their income or financial situation. In that case, members typically purchase commodities in bulk straight from suppliers, thereby helping Onghalulu to have more negotiating power by pooling the volume of members, strengthening their position when interacting with other companies, and lowering the cost of materials. As a result of producing and obtaining large quantities of products, the cooperative directly gains market access. This will attract more buyers and contribute to member satisfaction, facility, equipment, service improvements, and development or service quality enhancements, thereby attracting private enterprises. Due to shared responsibilities, the cooperation helps the cooperative to lower operating costs, and as a result increasing member income. As a social enterprise, the Onghalulu Farmers' Cooperative significantly reduces poverty and hunger within the Okongo community while fostering economic growth, creating employment, and improving food security. By working together, the cooperative promotes environmentally friendly irrigation methods and smart farming, grows its market and the agricultural sector, customises agricultural machinery and equipment, and provides members with the immediate training opportunities they require.

#### **4.3.15. Strategies to increase the effectiveness of agricultural cooperatives in Namibia**

Participants were requested to outline strategies to boost Namibian agricultural cooperatives' efficacy. The feedback revealed that enticement strategies that help increase sales of new products by creating suitable pricing strategies for the products using cutting-edge technologies could increase cooperative effectiveness and expand the cooperative's market. Agricultural cooperatives can quickly accomplish their goals by leveraging economies of scale through joint efforts, which reduces the cost of hiring services like transportation and storage or purchasing inputs. Enhancing member loyalty is essential to sustaining a robust cooperative operation as it fosters and grows member patronage, a fundamental component of all collaborative strategies. By using a variety of agricultural techniques such as implementing crop rotation plans, planting perennials and cover crops, doing away with tillage, utilising integrated pest management, combining livestock and crops, implementing agroforestry methods, and overseeing entire systems and landscapes, cooperatives can become more effective. The significance of educating cooperative members before they participate in cooperative activities, offering financial support, and equipping members with the necessary skills to participate in cooperative activities is very profound.

To ensure the long-term sustainability of agricultural cooperatives, the Agricultural Bank Namibia, the Ministry of Agriculture, Water and Land Reform, and other stakeholders should collaborate to review and modify the current loan guarantee scheme to benefit small-scale farmers and cooperatives. Furthermore, cooperatives can be sustained by financial support, expertise, and other technical

support. Therefore, sponsors and foreign donors should be invited and encouraged to support the cooperative's initiatives. Subsequently, capacity building should be embraced to enable the cooperatives to access financial assistance and market access, embrace cooperative governance, adopt advanced technologies, obtain government support, promote collaboration efforts, advance risk management strategies, and engage members to increase sustainability factors. Agricultural activities in the Northern Communal Areas (NCAs) should be commercialised to reduce rural-urban migration, and the Veterinary Cordon Fence (VCF) should be removed to provide access to northern farmers' markets and promote inclusivity. Moreover, Namibia should immediately eradicate the dependency syndrome by prohibiting the importation of certain agricultural products and services and encouraging collaborative efforts to raise food production, enhance food security, and open export markets. In addition, it is essential to support and equip young people who participate in cooperative activities with the knowledge and abilities needed to manage agricultural cooperative projects and subsequently enhance their incentives and compensation.

Furthermore, smart farming should be encouraged to upgrade infrastructure and use cutting-edge technology for tracking, monitoring, automating, and analysing processes to improve agricultural efficiency. This will guarantee sustainable agricultural production and sustain Namibia's growing population; smart agriculture will fortify the resistance to climate change and variability. Subsequently, implementing a manufacturing plant that will allow cooperatives to transform agricultural products from raw materials into preliminary products is a necessary step in further implementing agro-processing to bring value to farm products. This strategic role will end the export of raw agro-products and lead to the creation of jobs, revenue, and value addition because of its strong ties to the agriculture industry. Therefore, it is imperative to embrace investments in renewable energy in agriculture to promote sustainable practises, optimise yields, and uphold economic viability, all while reducing the consumption of limited natural resources and adverse environmental effects, reducing production costs and minor ecological impacts, and whereas high efficiencies can be attained. In addition, participant 14 below added that:

***P14:** The agricultural sector, in general, needs to increase investments in research and development to create new agricultural techniques, enhance crop varieties, improve livestock management practices, and implement sustainable farming methods. This will directly help to improve the agricultural sector's competitiveness, identify possible market opportunities, and advance the creation of value-addition to agricultural products using advanced technologies.*

#### **4.3.16. Approaches to be implemented to advance the sustainability of agricultural cooperatives in Namibia**

The study determined the best approaches to be implemented to advance Namibia's agricultural cooperatives' sustainability. In response, participants demonstrated that cooperatives should be pushed to take their commercial endeavours seriously and keep pursuing assistance from different organisations and people both domestically and abroad. Furthermore, to uphold morality and immediately motivate the regular members of their cooperatives, members in executive and management roles are encouraged to set an excellent example by carrying out the cooperative's mandates with integrity and practising a high standard of ethics. Cooperatives should ensure that members can access goods and services without exploitation, and they should subsequently monitor and evaluate their business operations continuously to encourage them to get the support they need when needed or if they run into difficulties. The agricultural cooperatives in Namibia ought to adopt agroecology, nature-inclusive agriculture, permaculture, biodynamic agriculture, organic farming, conservation agriculture, regenerative agriculture, carbon farming, climate-smart agriculture, high-value farming, low external input agriculture, circular agriculture, ecological intensification, and sustainable intensification to enhance the overall sustainability of their operations. To improve sustainability practices within the industry, cooperatives must also prioritise climate resilience, diversify their revenue streams, implement effective water management, increase value-added processing, and focus on water scarcity. Furthermore, they should encourage joint ventures and partnerships, create a market entry support structure, and impact the successful market entry of projects or investment potential, market entry and investment incentives to enhance sustainability factors. The government should increase subsidies for agricultural activities to help cooperatives purchase machinery, seeds, and other agricultural inputs at reasonable prices for efficient land preparation, ultimately contributing to increased agricultural productivity.

Furthermore, participants added that it is necessary to improve information dissemination among the farmers regarding policies and regulations, training and skills enhancement opportunities, credit opportunities available, market linkage processing, and value addition to agricultural goods. Moreover, there is an urgent need to intensify the management of human and wildlife conflicts to address current compensation rates paid to victims due to crop and livestock loss owing to wildlife conflicts and to identify and mitigate common diseases affecting crops and livestock for treatment. As communal areas are susceptible to drought, locating a substitute water source is imperative to guarantee an adequate water supply for agricultural purposes. Therefore, promoting good cooperative governance is vital to assure compliance and prompt and effective leadership

development in managing organised cooperatives to uphold member flexibility and accountability while fortifying the sector's organisational and commercial capabilities. This is substantially crucial to keep farmer associations, cooperatives, and support organisations in harmony so that everyone knows each group's critical roles and responsibilities in leading the way towards the economic liberation of society's marginalised groups. In the knowledge engineering arena, the educational curriculum should be updated to incorporate cooperative education, which should be compulsory for all learners and primary and secondary school students. In addition, local universities like NUST, UNAM, IUM, and many more should offer cooperative management courses to improve students' comprehension of the significance of cooperatives in the Namibian concept. This will directly encourage more students to pursue cooperative endeavours after they graduate.

#### **4.3.17. Relevant managerial skills needed to enhance the sustainability of Onghalulu Farmers'**

##### **Cooperative**

According to Yu et al., (2023), agricultural cooperatives typically offer three primary agricultural managerial skills: technical, executive, and integrated entrepreneurial. However, to guarantee agricultural cooperatives' sustainable growth, cooperative managers and directors must upgrade their knowledge to maximise member benefits and enhance their operational, financial, and strategic performance (Herchenbach et al., 2023). In that vein, for the agricultural cooperative to succeed, its management needs to possess a robust set of behavioural traits that will benefit all of the cooperative's members, as well as financial and business skills, leadership qualities, industry knowledge, and strategic planning abilities (Herzenbach et al., 2023). This is similar to the participants' philosophies, that the sustainable growth of the Onghalulu Farmers' Cooperative can only be maintained when its management is capacitated with strategic planning abilities. This is necessary for successful cooperative managers, executives, and members who strategically think and effectively stimulate others to solve challenging problems. As a result, the Managers and Executives of cooperatives should be able to lead others by example, embrace innovation and create a team that can pioneer change. Proficiency in cooperative and general business management skills is imperative for the successful management of cooperatives. Henceforth, managers should be able to initiate and oversee projects effectively and within the bounds of the budget. Managing finances, including bookkeeping, budgeting, financial analysis, and financial planning, is a crucial skill for management. In addition, strategic planning abilities, critical thinking and the ability to make uncomfortable decisions, teamwork and communication skills, project management abilities, analytical and problem-solving aptitudes, strong negotiation and leadership abilities, and conflict resolution aptitudes are all necessary for an efficient management team for cooperatives. They should display immediate vision

and determination, democracy, a higher degree of integrity, and an immediate understanding of the value of working as a team to accomplish a shared objective. When the leadership or management of the Onghalulu Farmers' Cooperative possesses skills in marketing, negotiation, risk management, communication, and change adaptation and innovation, the cooperative's sustainability can be further improved. In summary, participant 15 below demonstrated that:

*P15: Cooperatives are businesses, just like any other business; they are operated normally to make a profit but are founded on cooperative principles. One can manage a cooperative successfully if he/she possesses business management skills. However, in the case of an agricultural cooperative, regardless of the type of agriculture they engage in, members must have a comprehensive understanding of the agricultural industry and combine all the necessary skills to run the sector.*

#### **4.4. Relevant literature linked to the study findings**

According to Nyawo and Olorunfemi (2023), it is impossible to exaggerate agricultural cooperatives and other community-based organisations' role in supporting sustainable agricultural development. Despite their significance, many countries acknowledge it, indicating that they also face various difficulties that differ from nation to nation and have resulted in both success and failure stories (Wadesango & Mabunda, 2017). The modern era's relationship between farmers, society, and the natural world is evolving due to growing environmental pressures from new technologies, changing societal expectations, declining resources, and the intensifying effects of climate change (Kalogiannidis, 2020). As a result, the sustainability challenge in the agricultural sector is to feed the expanding population while using fewer resources such as water, farmland, and biodiversity to maintain food production. Subsequently, the ecosystems rapidly embrace radical shifts towards sustainability in agriculture, which is significant in strengthening the sustainable use and management of current agricultural systems (Nhemachena et al., 2018).

Consistent with the research findings, among the primary factors affecting the sustainability of farmers' cooperatives in Namibia are members' persistent resistance to change, their lack of dedication, their inability to adhere to their bylaws, the dependence syndrome, customs that hinder business operations, inadequate funding allocation, and poor support from stakeholders. Moreover, while there is typically less money in circulation, cooperative members' motivation is reduced due to the current national economic hardships, which subsequently impacts customers' purchasing power. Farmers are, therefore, encouraged to enhance their ability to respond to power inequalities by pooling resources to maximise their purchasing and selling power, which is the motivation behind



establishing a cooperative to increase the bargaining power of united farmers over small and weak producers (Ajates, 2020). Additionally, various cooperative failures have been exploited for political or ideological ends, thereby creating inadequately developed or unviable cooperatives confronted with the abovementioned problems (Wadesango & Mabunda, 2017).

Wadesango and Mabunda (2017) emphasise that agricultural cooperatives have been a successful means for individuals to exercise control over their economic lives for over 160 years. They drew support from research showing that cooperatives can alleviate several issues, including small producers' limited access to national, regional, and international markets. Above and beyond, as influential organisations in developed and developing nations, cooperative institutions nurture a more equitable redistribution of wealth, promote employment growth, and advance socioeconomic development, notably addressing the gaps left by the private industry and the public sector and giving significant attention to market failure (Wadesango & Mabunda, 2017). That being said, the study findings emphasised that Namibian cooperatives face the challenge of limited water resources due to inadequate rainfall, which is frequently required for livestock and irrigation. They are additionally prevented from reaching a more lucrative market outside the Veterinary Cordon Fence by economic and political restrictions to safeguard the elite market.

As autonomous entities, agricultural cooperatives rely on long-lasting connections with every member of their network of stakeholders to establish and preserve their foundation (Pedrosa-Ortega et al., 2019). Their stakeholders are primarily involved in developing innovations that satisfy consumer expectations, which aligns with creating social, environmental, and financial value. Equally, these connections are valuable resources that cooperative managers and executives need to manage to uphold organisational wealth that makes it possible to enhance social, economic, and ecological performance (Pedrosa-Ortega et al., 2019). As agricultural cooperatives rely on stakeholder relationships, they must consider and involve shareholders, employees, clients, suppliers, the government, public authorities, the local community, civil society, financial partners, donor agencies, and other pertinent participants to remain sustainable. Additionally, a more all-encompassing corporate strategy is built on the sustainability of stakeholder relationships, which serves as a key guiding principle for managerial decision-making. Additionally, three crucial social science concepts, power, legitimacy, and urgency, should be developed through stakeholder identification and salience (Pedrosa-Ortega et al., 2019).

This is consistent with the study's findings, which suggested that Namibian agricultural cooperative stakeholders play a critical role in influencing the cooperative sector and highlighting the significance of tackling socioeconomic challenges. They serve as the cornerstones of agricultural cooperative

sustainability, giving cooperative affairs the direction to continue an association's progress. However, since crucial initiatives cannot be carried out without the consent of stakeholders, the absence of cooperative initiatives is made more understandable by the lack of stakeholder engagement within cooperatives. Consequently, discontented parties hasten the collapse of the cooperative market by impeding the establishment of the cooperative's administrative, legal, and physical framework. This makes it difficult for cooperatives to regulate prices, lower transaction costs, and uphold agreements and anti-competitive legislation. Accordingly, resolving conflicts of interest, embracing inclusivity, strengthening capacity-building programmes, and cultivating clear communication channels can improve stakeholder engagement and minimise the effects. Therefore, effective cooperative governance is supported by providing stakeholders with insightful information about the cooperative's principles, mandates, goals, and advantages, thereby fostering mutual respect and acknowledgement.

The paradigm shift from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) intends to enhance developing nations' accountability, boost global collaboration for efficient development cooperation, encourage greater participation from a broader range of public, private, and civil society entities, and ensuring the sustainability of social, economic, and environmental development (Moon & Lee, 2020). Subsequently, social enterprise cooperatives and public-private partnerships have long been recognised as useful tools for advancing the SDGs by guaranteeing local economies' growth, efficacy, and sustainability. According to Nhemachena et al. (2018), to accelerate the 2030 Agenda for SDGs and end global poverty and hunger, the agricultural sector must meet the requirements of Sustainable Development Goals one and two. However, preserving natural resources and combating climate change under SDG 11 will rapidly boost agricultural output and improve food production, thereby ensuring consistency in the sector. This will frequently embrace progress in reducing and eradicating hunger and malnutrition by 2030, adversely enhancing the prospects of achieving other SDGs (Nhemachena et al., 2018). Similarly, achieving other SDGs lays the groundwork for ending severe poverty and hunger. Therefore, expanding agricultural production is imperative, especially in rainfed arable lands, given the obstacles posed by the growing global population, climate change, scarcity of irrigation water, and degradation of agricultural land. The SDGs were adopted by the 193 UN members on September 25, 2015, as a global blueprint to change the world into a resilient and sustainable environment (Nhemachena et al., 2018). Having recognised the national policies and priorities established to gauge progress towards the SDGs, different national realities, capacities, and levels of development, the SDGs offer a global vision for eradicating poverty and hunger while restoring and sustaining natural resources (Nhemachena et al., 2018).

The research findings indicate that agricultural cooperatives in Namibia can achieve greater success through the utilisation of diverse agricultural techniques, including but not limited to crop rotation plans, planting perennials and cover crops, eliminating tillage, implementing integrated pest management, combining livestock and crops, implementing agroforestry methods, and supervising entire systems and landscapes. Nonetheless, cooperative members should receive a good education, financial assistance, and skills development to engage in cooperative activities. As such, the sector's sustainability practices prioritise water scarcity, increase value-added processing, implement effective water management, and prioritise climate resilience and revenue stream diversity. This should also include promoting collaborations and alliances, establishing a framework to facilitate market entry, and influencing the triumphant launch of projects or investment prospects, market entry, and investment inducements to augment sustainability.

#### **4.5. Summary**

This study examined the significant factors affecting the sustainability of agricultural cooperatives in Namibia, using the Onghalulu Farmers' Cooperative in Okongo, Ohangwena Region, as a case study. The population of the Onghalulu Farmers' Cooperative comprises 194 members assigned to different responsibilities of the cooperative, from which the study sample size of 15 participants was attained as determined by Dworkin (2012). From the 15 participants, the study discovered a variety of factors affecting the sustainability of the agricultural cooperatives in Namibia and the Onghalulu Farmers' Cooperative, in particular, with the external and internal factors at the centre of study constructs. Participants' expressions of the various potential of agricultural cooperatives simplified their significance by breaking down the multiple magnitudes associated with the study constructs. The main activities being carried out at Onghalulu Farmers' Cooperative connected to the difficulties facing Namibian agricultural cooperatives were outlined, and the study demonstrated the importance and influence of Namibian farm cooperatives and Onghalulu Farmers' Cooperative stakeholders. The study streamlined the barriers impeding the effectiveness of Onghalulu Farmers' Cooperative stakeholders' engagement and proposed interventions for implementation to improve the situation. The importance of good cooperative governance in boosting the sustainability of agricultural cooperatives was deliberated upon and aligned to the effectiveness of farming cooperatives' sustainability of Onghalulu, with the strategies anticipated to enhance agricultural cooperatives' effectiveness in Namibia. As this study is solution-driven, it presents significant approaches for implementation to enhance the sustainability of farming cooperatives in Namibia and further pinpoints the managerial skills essential to improve the sustainability of the agricultural cooperatives in Namibia and that of the Onghalulu Farmers' Cooperative.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction

This chapter provides a summary of findings, conclusions and recommendations. The study aimed to investigate factors affecting the sustainability of agricultural cooperatives in Namibia, with a particular emphasis on Onghalulu Farmers' Cooperative. The chapter provides a summary of secondary and primary data that were analysed using NVivo and CAQDAS and briefly deliberates on the key findings, pinpoints areas of future research, offers some recommendations, and draws some conclusions based on the study's findings.

#### 5.2. Main findings

The study investigated the factors affecting the sustainability of agricultural cooperatives in Namibia, with Onghalulu Farmers Cooperatives being the case study. It found that internal and external factors affect the sustainability of farming cooperatives in Namibia. It was concluded that well-coordinated agricultural cooperatives have an excellent opportunity for more sustainable growth.

A total of fifteen (15) participants participated in the study, including five (5) females and ten (10) males, in the age range between 25 and 65 years old and more. Only 13.33% of the participants were youths, while 86.67% were adults. Participants' positions ranged from the Cooperative Chairperson, Cooperative Advisory Boards, Cooperative Supervisory Committee, and Cooperative members of Onghalulu Farmers Cooperatives, representing 66.67% of participants. Furthermore, the remaining 33.33% of participants were employees from the DCDR within the Ministry of Agriculture, Water and Land Reform, including the Registrar for Cooperatives in Namibia and Cooperative Business Analysts. Overall, the participants have between six (6) months to eight (8) or more years of experience in cooperative activities, and their education levels range from adults, education, primary education, secondary education, tertiary education and vocational education, which is a display of a good level of education that also implies participants' high level of understanding.

In determining the main agricultural activities carried out by Onghalulu Farmers Cooperatives, the study discovered that raising cattle, sheep, goats, and pigs accounts for two-thirds of agricultural activities. The cooperative further engages in poultry farming, raising chickens for meat and eggs, and broilers. In addition, it participates in horticulture and agronomy activities, cultivating various crops such as melons, watermelons, beans, groundnuts, tomatoes, potatoes, carrots, onions, and cabbage. Cereal crops like sunflowers, wheat, maize, and millet (mahangu) are also produced. The cooperative

contributes to the production of charcoal, thereby preventing the spread of bushes and reclaiming rangeland, and bush harvesting is closely controlled to maintain the charcoal value chain. Along with livestock, horticulture, agronomy, and charcoal products, Onghalulu Farmers' Cooperative markets all its members' agricultural activities.

The research findings indicated that agricultural cooperatives in developing nations such as Namibia, encounter several obstacles that eventually affect their sustainable growth. These challenges include insufficient funding for new and existing cooperatives, irregular weather patterns and insufficient rainfall, declining soil fertility, social unrest, and poor mentorship. Their underdevelopment and bankruptcy are primarily caused by a lack of innovation and vision, exacerbated by the low youth participation rate in the agricultural sector and the poor cooperative governance and leadership. A constant source of underdevelopment and unproductive results means that cooperatives are immediately challenged by the unsustainable interventions of political and traditional authorities in their management decisions and responsibilities. These interventions eventually impede the cooperatives' ability to operate because of the ongoing conflicts between the contending authorities. They afterwards suffer from dependency syndromes that make it impossible for them to function without the support of donors and the government. Additionally, they are often impacted by elevated levels of corruption and poor management, thereby obstructing their ability to survive and expand. Due to their frequent establishment in rural areas, they often lack collateral security and that eventually limits their ability to obtain bank loans and other financial assistance from financial institutions, which is usually required to advance their operations and pledge other investments.

Furthermore, the study found that cooperatives do not have land ownership, as the land allocated to them belongs to the government and they lease it from the government for 99 years. The government's willing-buyer, willing-seller policy has failed to provide land to cooperatives in the country, hence, many cooperatives do not have access to land ownership. That being said, the cooperative farmers within the Northern Communal Areas (NCA) hinder their sustainability by not implementing contemporary farming methods, utilising renewable energy sources, and preserving the health of their livestock. As a result, their livestock cannot participate in the most profitable markets because the Veterinary Cordon Fence (VCF), which separates the northern market from the central market, keeps them out of the lucrative market. Moreover, agricultural cooperatives fail mainly due to traditional farming methods, resistance to change, and uncommitted members. Due to a lack of political will from the government and insufficient support from stakeholders, cooperatives continue to face challenges.

The research results indicated that Onghalulu Farmers' Cooperative encountered economic hardships, financial difficulties, restricted capital assets, scarce water resources, and restricted information availability. Cooperative members are demoralised, which makes it difficult for them to contribute significantly to the vital projects and programmes of the cooperative. As the Office of the Registrar for Cooperatives in Namibia (DCDR) functions are centralised and only available in Windhoek, Onghalulu Farmers' Cooperative has limited access to DCDR, and this makes it difficult for them to obtain crucial information and direction to run the cooperative. Onghalulu also has difficulties accessing the auction kraals where to market and sell their livestock because of its inaccessible location. Economic hardships have led to members' disengagement and improper coordination of cooperative functions, and the cooperative is further hindered by its lack of access to agricultural marketing institutions. Because the cooperative's properties, livestock and horticultural products are uninsured, it is more likely that valuables will be lost to theft or natural disasters. Subsequently, member conflict, which has a detrimental effect on the cooperative's ability to grow, makes decision-making and resource allocation difficult as some members are less dedicated to their responsibilities. Furthermore, the internal infighting within the cooperative members has led to low stakeholder engagement, further exacerbating the already toxic environment. This hinders members' ability to manage an efficient cooperative due to a lack of funds for human resource development that is required to capacitate members with the needed competencies. In addition, traditional organisations' running methods influence a cooperative's sustainable growth and decline.

The study findings indicated that cooperative stakeholders are crucial in forming Namibia's cooperative sector and tackling socioeconomic problems collectively. They subsequently facilitate sustainable practices, economic opportunities, production maintenance, training and capacity building, marketing assistance, financial support, and all necessary support for agricultural cooperatives. The government, political institutions, financial institutions, regulatory agencies, international organisations, and local communities are essential cooperative stakeholders in the Namibian agricultural cooperatives' ecosystem, contributing significantly to their well-being. As a crucial stakeholder, the government guides cooperatives towards long-term development objectives through National Development Plans, the Harambee Prosperity Plan, and Vision 2030 strategies. In addition, the Ministry of Agriculture, Water, and Land Reform oversees information sharing, maintains supply consistency, manages resources, and encourages the local market to maximise profits. Above and beyond, Onghalulu Farmers' Cooperative recognised the involvement of stakeholders in its operations as significant to guaranteeing communal water access and improving the cooperative's overall performance. Their involvement, therefore, influences their long-term success, thereby ensuring security, mobilising investment potential, optimising leverage and safeguarding the interests

of all. One notable stakeholder within the sector is the DCDR, which essentially collaborates with the Regional Councils to disseminate information within the community about agricultural cooperatives' developmental agenda. Therefore, for Onghalulu Farmers' Cooperative to succeed, stakeholders primarily bring issues to members' attention, advance the cooperative priorities, and engage in economic activities. Their participation raises the standard of living in the community, promotes environmentally friendly farming systems, and supplies vital resources for the cooperative's long-term sustainable growth.

It was revealed that the obstacles hindering the efficiency of Onghalulu Farmers Cooperative's stakeholder engagement include poor communication, low commitment to cooperative duties, conflicts of interest and greediness among some stakeholders. Miscommunication, a lack of resources, and trust issues hamper stakeholders from significantly impacting the collective development of the cooperative's objectives. The Agricultural Bank of Namibia, as an imperative stakeholder, cannot support Onghalulu Farmers' Cooperative financially since the other cooperatives defaulted on their loan repayment obligations. Consequently, all 219 registered cooperatives in Namibia have limited access to the centralised DCDR Office, Namibia's primary cooperative developer and coordinator, thus making it difficult for them to interact with one another during their Annual General Meetings.

However, the study findings found that several interventions, such as improvement of frequent communication, setting clear channels of communication, resolution of conflicts between stakeholders, improvement of the decision-making process, and educating stakeholders about the values and benefits of the cooperatives, should be implemented to advance stakeholder engagement at Onghalulu Farmers' Cooperative. Furthermore, encouraging an inclusive engagement between stakeholders and decentralising the DCDR Office will sharpen the roadmap to promote the cooperative's sustainable growth and foster overall governance and management.

It was found that collective action improves market accessibility and knowledge enhancement, contrary to extensive stakeholder engagement. As a result, agricultural cooperatives will preserve the environment, watersheds will be held, and soil health will be improved. On the other hand, being a social enterprise that offers its members goods and services to enhance their income and financial circumstances, Onghalulu Farmers' Cooperative mobilises resources, generates employment, attracts potential investments, and encourages participation in the economy and social development. Besides, Onghalulu reduced poverty and hunger within the community while promoting economic expansion, thereby guaranteeing sustainability, enhancing food security, and ultimately opening doors for the development of ecologically friendly farming, machinery customisation, and prompt training opportunities. Moreover, the cooperative embraced its purchasing power due to its communal

negotiating supremacy, and thus strengthening its position when interacting with other businesses to lower material costs.

The research findings indicated that Namibian agricultural cooperatives can improve efficiency by increasing sales, developing appropriate pricing plans for their goods using cutting-edge technologies, and broadening their market reach. Compatible cooperatives can accomplish economies of scale using the following strategies: combining livestock and crops, utilising integrated pest management, upgrading agricultural techniques, implementing crop rotation plans, implementing agroforestry methods, and offering members with education to advance their competencies. Furthermore, to improve dependable financing options for small-scale farmers and cooperatives, the Agricultural Bank of Namibia should collaborate with other stakeholders to review and modify the loan guarantee programme for agricultural cooperatives. Moreover, sustainable agricultural cooperative growth can be ensured by embracing capacity building, enhancing governance, implementing cutting-edge technologies, practising risk management, and promoting sustainability. In contrast, educating the youth about cooperatives and developing an inclusive agricultural market will change the narrative. Nonetheless, adopting intelligent farming practices, modernising infrastructure, and utilising cutting-edge technology can boost agricultural cooperative productivity. Moving forward, Namibian agricultural cooperatives should concentrate on enhancing their sustainability and supporting the entire agricultural sector. This can be achieved by reaffirming agro-processing, developing capacity, boosting investments in renewable energy, putting cutting-edge technology into practice, encouraging sustainable agricultural practices, optimising yield, minimising the consumption of fossil fuels, and reducing production costs and environmental effects.

The research outcomes indicated that the following strategies can be used to improve the sustainability of agricultural cooperatives in Namibia: adopting sustainable practices, prioritising climate resilience, diversifying revenue streams, putting ethical practices into action, continuously monitoring and evaluating projects, and concentrating on water scarcity. Market entry incentives, support structures, and joint venture promotion can significantly improve the cooperative's sustainability practices. Moreover, government interventions aimed at reducing the cost of agricultural inputs, including introducing subsidies, enhanced information sharing, and resolving conflicts between the public and wildlife, are all immediate requirements for interference. Moreover, maintaining compliance, developing effective leaders, and strengthening the organisational and commercial capacities of the industry are all contingent on fostering good cooperative governance.

The study findings simplified technical, executive, and integrated entrepreneurial skills to be profound aptitudes that are required by Onghalulu Farmers' Cooperative management to enhance



sustainability. They must advance their understanding of operational, financial, and strategic performance to guarantee Onghalulu's advancement and sustainable growth. Notably, strong leadership qualities, industry knowledge, financial and business acumen, strong behavioural traits, and the capacity for strategic planning are all necessary for a cooperative to succeed. Consequently, it is imperative that cooperative managers and executives set an excellent example for the team, value innovation, and build a team capable of driving change. Joint and business management proficiencies, which include financial management, teamwork, communication, problem-solving, and additional demonstration of vision, tenacity, and integrity, are also necessary for successful cooperative management. Henceforth, to increase the cooperative's sustainability, the leadership of Onghalulu Farmers' Cooperative should be proficient in marketing, risk management, negotiation, communication, and change adaptation.

### **5.3. Areas of future research**

Since no study exists in a vacuum, all research aims to suggest further research. Accordingly, this study suggests the following areas for future research:

- i. Future research can be conducted for measuring the factors affecting the sustainability of registered cooperatives in Namibia, including manufacturing cooperatives, arts and crafts cooperatives, financial cooperatives and mining cooperatives, to broaden the understanding of issues affecting the Namibian cooperatives ecosystem.
- ii. A study on the analysis of the influence of research and development investments on the sustainability of agricultural cooperatives should be conducted.
- iii. Further studies evaluating the impact of members' educational achievement on the efficiency of agricultural cooperatives should be done.
- iv. Future research should be conducted to assess the influence of cooperative members' competencies on the effectiveness of farming cooperatives in Namibia.
- v. An assessment of the effectiveness of compliance management and cooperative governance on the operational efficiency of agricultural cooperatives in Namibia should be executed.
- vi. An investigation into how political and traditional leadership interference affects agricultural cooperative performance should be assessed.
- vii. An assessment of the impact of inclusive farming on the Namibian agricultural cooperatives' ecosystem should be examined.

#### **5.4. Conclusions**

This study aimed to investigate factors affecting the sustainability of agricultural cooperatives in Namibia, using Onghalulu Farmers' Cooperative as a case study. Key findings from the survey shed light on the factors affecting the sustainability of farming cooperatives, assessed how cooperative stakeholders influence the sustainability of agricultural cooperatives, simplified the effectiveness of cooperatives on the sustainability of farming cooperatives, and proposed appropriate strategies for enhancing agricultural cooperatives in Namibia. Conclusions emanating from the study have significant implications for improving Namibia's agricultural cooperatives' growth and sustainability. To strengthen the sustainability of the farming cooperative, stakeholders should put the recommendations into practice. Furthermore, aspiring researchers interested in farming cooperatives are provided with areas to explore further to expand the literature on agricultural cooperatives. The study is crucial for policymakers, advisory board members, cooperative board members, cooperative registrars, and other stakeholders, as it provides them with access to valuable knowledge required to enhance agricultural cooperatives' sustainable community development agenda.

#### **5.5. Recommendations**

The findings derived from primary data led to the following recommendations:

- i. Agricultural cooperatives should invest more in Research and Development (R&D) to promote innovation, boost productivity, grab market opportunities, improve the agricultural sector's overall sustainability, and consistently adopt best practices that are appropriate for Namibia's agricultural environment.
- ii. The Registrar of Cooperatives in Namibia should collaborate with the Agricultural Cooperatives Advisory Boards to discuss the implementation of savings and credit cooperative schemes, thereby allowing cooperatives to combine their members' funds and lend money to members at reasonable interest rates.
- iii. To ensure adequate consultation between all the cooperative's stakeholders, they should implement a national communication mechanism about the development matters for cooperatives using the Media Houses to disseminate critical information to people in rural areas through local radios and the coordination of Regional, Local, and Traditional Authorities.
- iv. All agricultural cooperatives should formulate their well-defined five-year strategic plans with achievable goals on their developmental agendas, and it should be mandatory that the Advisory Board reviews their performance quarterly, while the Registrar should evaluate their performance annually to ensure that they achieve their objectives.

- v. The government should establish the first-ever Cooperative Bank of Namibia to provide appropriate channels for managing loans for cooperatives at reasonable interest rates and instantly guaranteeing affordable financing options for developing projects on mutually acceptable terms.
- vi. The government should amend its policy to encourage foreign direct investment partners in agriculture to collaborate with local agricultural investors who will help advance smart agriculture development in Namibia. This will allow cooperative farmers to become more capable of utilising cutting-edge farming technologies and implementing smart agricultural practices.
- vii. The Registrar and the Cooperative Advisory Boards should collaborate with local universities, including NUST, UNAM, IUM, and many more, to develop a customised curriculum for Cooperative Management courses to advance knowledge and teach Namibians about the business cooperative management process.
- viii. Women's involvement in agricultural cooperatives should be encouraged by giving them a voice in management and board decisions and pressuring the government to introduce development programmes to help women grow their agricultural cooperatives.
- ix. The government should support the establishment of cooperatives that prioritise youth development in all areas of the Namibian economy by facilitating grants and credit facilities to increase the involvement of young people in agricultural cooperatives through youth-focused cooperative-based economic development programmes that will generate sustainable income and jobs to address the nation's high unemployment rate.
- x. It is recommended that the Ministry of Education, Arts and Culture works with the agricultural stakeholders to modify the education curriculum to incorporate cooperative activities as compulsory subjects to be taught in schools and colleges by involving learners in hands-on work in school gardens or farms, thereby advancing agricultural cooperative development in young people.
- xi. The Ministry of Agriculture, Water, and Land Reform should decentralise the DCDR Offices to all 14 Regions to improve the effective, efficient, and appropriate management of agricultural cooperatives in Namibia. This would enhance the accessibility of the DCDR Office to all registered cooperatives in Namibia.
- xii. Agricultural cooperatives should insure their properties with a reliable insurance company to protect them against the losses caused by theft and natural disasters and improve risk management strategies to minimise the loss of livestock, crops, machinery, equipment, and infrastructure.

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## APPENDIX 1: RESEARCH QUESTIONNAIRE



**FACULTY OF COMMERCE, HUMAN SCIENCE, AND EDUCATION**

**DEPARTMENT: GOVERNANCE AND MANAGEMENT SCIENCE**

Dear prospective participant

You have been selected to participate in **Mr Wilikeni Nampala Kadhikwa's** study about the **Factors Affecting the Sustainability of Agricultural Cooperative in Namibia: A Case Study of Onghalulu Farmers Cooperatives**. The study is a requirement for me to complete the **Master of Management (NQF: 9)** programme at the **Namibia University of Science and Technology (NUST)**. I respectfully and humbly seek your permission to participate in this study, which consists of twenty (20) brief questions with a total expected response time of fewer than 15 minutes. Considerably, this research depends on your insightful opinions to ensure that the study's conclusions are appropriate and consistent with its constructs. Notwithstanding, you are assured that all information gathered will be kept private, but it is entirely up to you whether or not to reveal your identity.

By responding to the study, you give your permission to participate and acknowledge that the information you voluntarily share may be used for research purposes. You may inquire further about this study from the Researcher, Mr Wilikeni N. Kadhikwa, at +264816141508, [wilikenikadhikwa@gmail.com](mailto:wilikenikadhikwa@gmail.com) or my Supervisor, Dr Nikodemus Angula, at [nangula@nust.na](mailto:nangula@nust.na).

**I confirm that I understand the consent form and that my participation in this research is voluntary.**

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

### **SECTION A: BIOGRAPHICAL INFORMATION**

Participants' **Biographical Data** is required for the researcher to obtain accurate statistical data.

Kindly answer by selecting the appropriate box with information that best describes you by Ticking (✓) or Crossing (×) in one box.

1.1. What is your **Gender**?

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

1.2. What is your **Age Range**?

18-25	<input type="checkbox"/>
25-35	<input type="checkbox"/>
35-45	<input type="checkbox"/>
45-55	<input type="checkbox"/>
55-65	<input type="checkbox"/>
65 and more	<input type="checkbox"/>

1.3. What is your **Rank/Position** in the Cooperative?

Cooperative Chairperson	<input type="checkbox"/>
Cooperative Advisory Board	<input type="checkbox"/>
Cooperative Supervisory Committee	<input type="checkbox"/>
Cooperative Member	<input type="checkbox"/>
Others, Describe: .....	<input type="checkbox"/>

1.4. How long have you been engaged in the **Cooperative Duties**?

Less than six (6) months	<input type="checkbox"/>
6-12 Months	<input type="checkbox"/>
1-4 Years	<input type="checkbox"/>
4-8 Years	<input type="checkbox"/>
More than 8 Years	<input type="checkbox"/>

1.5. What is your **Education Level**?

None	<input type="checkbox"/>
Adult education	<input type="checkbox"/>
Primary education	<input type="checkbox"/>
Secondary education	<input type="checkbox"/>
Tertiary education	<input type="checkbox"/>
Vocational education	<input type="checkbox"/>
Others, Describe: .....	<input type="checkbox"/>

**SECTION B: OPEN-ENDED QUESTIONNAIRE DIRECTED TO ONGHALULU FARMERS COOPERATIVE MEMBERS AND THE COOPERATIVES BUSINESS ANALYSTS FROM DCDR**

2.1. What are the main agricultural activities undertaken at Onghalulu Farmers' Cooperative?

.....  
.....

2.2. What are common challenges facing agricultural cooperatives in developing nations like Namibia?

.....  
.....

2.2.1. Why do you think such challenges continue?

.....  
.....

2.2.2. How do you think such challenges can be resolved?

.....  
.....

2.3. What are the possible factors affecting the sustainability of Onghalulu Farmers' Cooperative?

.....  
.....

2.3.1. What internal factors in existence that affect its sustainability?

.....  
.....

2.3.2. What external factors in existence that affect its sustainability?

.....  
.....

2.4. What influence do agricultural cooperative stakeholders have on the sustainability of farmers' cooperatives in Namibia?

.....  
.....

2.5. How vital are stakeholders in the sustainability of Onghalulu Farmers' Cooperative?

.....  
.....

2.6. What obstacles hinder the efficiency of Onghalulu Farmers' Cooperative stakeholders' engagement?

.....  
.....

2.7. What interventions should be implemented to improve stakeholder engagement for Ongalulu Farmers' Cooperative?

.....  
.....

2.8. How effectively does good cooperative governance enhance farmers' cooperatives' sustainability in Namibia?

.....  
.....

2.9. How effective is the farming cooperative on the sustainability of Ongalulu Farmers' Cooperative?

.....  
.....

2.10. What strategies should be embraced to increase the effectiveness of agricultural cooperatives in Namibia?

.....  
.....

2.11. What approaches should be implemented to advance the sustainability of agricultural cooperatives in Namibia?

.....  
.....

2.12. What managerial skills are relevant to enhance the sustainability of Ongalulu Farmers' Cooperative?

.....  
.....

**APPENDIX: 2 SEMI-STRUCTURED INTERVIEWS**

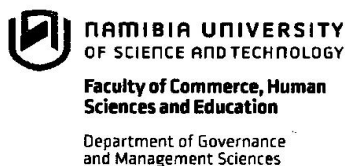
**SEMI-STRUCTURED INTERVIEW SURVEYS DIRECTED TO THE REGISTRAR, CAB, AND CSC**

- 1. Gender representation at Onghalulu FC: How many **male and female members**?  
.....
- 2. What is the relationship between traditional and political leadership and their influence on AC?  
.....

**Climate change (Changing in weather patterns)**

- 3. How does poor rainfall influence the sustainability of OFC?  
.....
- 4. What strategies are employed by Onghalulu to minimise the impacts of poor rainfall?  
.....
- 5. Are AC structures (**guided by their values and principles**) adequate in resolving their internal issues?  
.....
- 6. What **should Namibia (supports)** do to enhance its AC initiatives?  
.....
- 7. What skills are essential to improve AC sustainability, specifically in Namibia?  
.....
- 8. How should AC maintain a healthy relationship with its stakeholders (Onghalulu)?  
.....
- 9. Is infrastructure development relevant to the sustainability of AC?  
.....
- 10. What tools are vital in running an effective AC in Namibia?  
.....
- 11. Is Environmental Sustainability Governance (ESG) components extensive when committing investments in AC?  
.....
- 12. In conclusion, what governance issues influence AC sustainability?  
.....

## APPENDIX 3: ETHICAL CLEARANCE LETTER



13 Jackson Kaujeua Street T: +264 61 207 2398  
Private Bag 13388 F: +264 61 207 9398  
Windhoek E: mgf@nust.na  
NAMIBIA W: www.nust.na

### TO WHOM IT MAY CONCERN

Dear Sir/Madam

### RE: LETTER OF RECOMMENDATION FOR ACADEMIC RESEARCH

Namibia University of Science and Technology avail its compliments to your esteemed organization and would like to avail the following to your kind attention that:

**Mr Wilikeni Kadhikwa** student number: **212021923** is a Master of Management student studying at Namibia University of Science and Technology. The students are required to undertake a research project as partial fulfilment for the requirements of the master' degree programme. He intends to carry out research on:

**“An investigation into the factors affecting the sustainability of agricultural cooperatives in Namibia: A case study of Onghalulu Farmers Cooperatives.”**

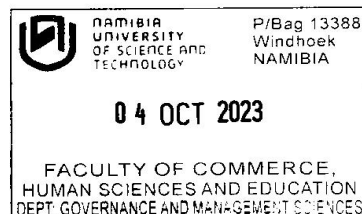
On behalf of the Department of Governance and Management Sciences, I humbly request your good offices to assist the bearer in enhancing his academic endeavors. I wish to assure you that the information/data provided from your offices will only be for academic purposes and in strict confidence.

I thank you in advance for your usual cooperation. Please be assured of my highest consideration.

Scholarly yours,



**Dr Davy Du Plessis**  
**Research Coordinator**  
**Department of Governance and Management Sciences**  
**T: 061 207 2575**  
**E: [dduplessis@nust.na](mailto:dduplessis@nust.na)**



## APPENDIX 4: PERMISSION LETTER TO COLLECT DATA



REPUBLIC OF NAMIBIA

### MINISTRY OF AGRICULTURE, WATER AND LAND REFORM

Tel: + 264 61 208 7561  
Mobile: + 264 81 2495036  
Fax: +264 61 208 7565  
E-mail: loide.jason@mawlr.gov.na  
**Enquiries: Loide Jason**

Department of Planning, Marketing and Administration  
Directorate of Planning and Business Development  
**Division of Co-operative Development and Regulation**  
Private Bag 13184, Windhoek  
Government Office Park, Luther Str., Office No. 351

10 October 2023

Mr. Wilikeni N Kadhikwa (212021923)  
Master of Management: NUST  
P O Box 22375  
**WINDHOEK**

Dear Mr. Kadhikwa,

#### **RE: REQUEST FOR AUTHORIZATION TO CARRY OUT ACADEMIC RESEARCH SURVEY**

I acknowledge receipt of your letter dated 05 October 2023, requesting permission to conduct academic research on the factors affecting the sustainability of agricultural cooperatives in Namibia: a case study of Onghalulu Farmers' Co-operative, respectively, within the DCDR and at Onghalulu Farmers' Co-operative.

The DCDR's routine activities include overseeing and directing all cooperative activities in Namibia and ensuring they adhere to all established policies and regulations. As a result, Onghalulu Farmers' Co-operative was legitimately registered under the DCDR, and the DCDR is primarily responsible for overseeing its overall activities to ensure compliance.

I am therefore hereby informing you that you have been granted permission to conduct your academic research within the DCDR and Onghalulu Farmers' Co-operative for the specified duration. In addition, you are required to uphold professionalism, respect proprietary information and avoid interfering with the operation of the DCDR and Onghalulu Farmers' Co-operative during your survey.

I hope your research will significantly advance the body of knowledge, and I instantly wish you all the best with your study.

Yours sincerely,

Loide Jason  
Registrar of Co-operatives  
Division of Co-operative Development and Regulation (DCDR)

REPUBLIC OF NAMIBIA  
MINISTRY OF AGRICULTURE,  
WATER AND LAND REFORM

2023 -10- 10

REGISTRAR OF CO-OPERATIVES  
DIVISION OF CO-OPERATIVE  
DEVELOPMENT  
AND REGULATION

## APPENDIX 5: THESIS EDITING CERTIFICATE

**ACET Consultancy**  
***Anenyasha Communication, Editing and Training***  
Box 50453 Bachbrecht, Windhoek, Namibia  
*Cell: +264814218613*  
Email: mlambons@yahoo.co.uk

30 January 2024

To whom it may concern

### **LANGUAGE EDITING – WILIKENI NAMPALA KADHIKWA**

This letter serves to confirm that a **MASTER OF MANAGEMENT** research titled *AN INVESTIGATION INTO FACTORS AFFECTING THE SUSTAINABILITY OF AGRICULTURAL COOPERATIVES IN NAMIBIA: A CASE STUDY OF ONGHALULU FARMERS' COOPERATIVE, NAMIBIA*, was submitted to me for language editing.

The research was professionally edited and track changes and suggestions were made in the document. The research content or the author's intentions were not altered during the editing process and the author has the authority to accept or reject my suggestions.

Yours faithfully



**PROF. (DR) NELSON MLAMBO**  
**PhD in English**  
**M.A. in Intercultural Communication**  
**M.A. in English**  
**B. A. Special Honours in English – First class**  
**B. A. English & Linguistics**