EXAMINING FACTORS AFFECTING THE ENTREPRENEURIAL ACTION AMONG SMALL SCALE FARMERS IN THE ETUNDA GREEN SCHEME PROJECT NAMIBIA

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ABSTRACT

The main purpose of this study was to investigate factors affecting the entrepreneurial action of the small-scale farmer's at the Namibian green scheme irrigation project. The study precisely aimed to assess both the limiting and success factors affecting the small-scale farmer's as well as to evaluate the current entrepreneurial process model in application. The study used a quantitative research approach to produce descriptive statistics of the agricultural entrepreneurs concerning their experiences when starting up or operating their ventures. Quantitative data was collected using questionnaires by conducting a survey with 42 small-scale farmers at the Etunda Green scheme irrigation project. The study used Microsoft Excel analysis tool pack to analyse the data. The key findings revealed that the majority of small-scale farmers operating at the project are obstructed by some elements of policy environment, finance, business support services, market environment, infrastructure as well as ecological factors. Furthermore, the attainment factors found in the study comprised of the farmer's level of education, labour regulations, telecommunications and political stability in the region. The study findings offers policymakers and practitioners a blueprint for developing entrepreneurship in an agricultural context, recommending that sectoral linkages should be strengthened and government should target elements that would improve the overall performance of the Namibian agricultural sector. This study was based mainly on quantitative data collected only from 42 small-scale farmers and all the items used in the data collection were self-reporting measures, an alternative approach could incorporate the perspective of the project management. Further research need to explore technical specifics regarding the perception around the established limiting or success factors affecting the entrepreneurship action of the small-scale farmers as well as the impact of agricultural entrepreneurial performance on farmers' livelihoods at the Namibian Green scheme.

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LIST OF ACRONYMS AND ABBREVIATIONS

AALS Affirmative Action Loan Scheme

AMTA Agro Marketing and Trade Agency

ANDE Aspen Network of Development Entrepreneurs

GSIP Green Scheme Irrigation Project

HACCIADEP Harambee Comprehensively Coordinate and Integrated Agricultural Development Program

HPP Harambee Prosperity Plan

ILO International Labour Organisation

MAWF Ministry of Agriculture, water and forestry

MLP multilayer perceptron

MSIF Medium Sized Irrigation farmers

MSP Market Share Promotion

NAB Namibian Agronomic Board

NAP Namibia agricultural Policy

NDP National Development Plan

NSA Namibia Statistics Agency

OECD Organisation for European Economic Co-operation

PPP Public-Private Partnerships

RBF Radial basis function

SSIF Small Scale Irrigation farmers

VAT Value added tax

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DEDICATION

I dedicate this thesis to my family for their initial upkeep and the encouragement they rendered to me as I undertook the journey of pursuing this Degree. Sincere appreciation to my grandparents [the late kuku Japhet Shuupulo Ashipala and kuku Aina Shigwedha] for priming me and taking care of me throughout my childhood.

DECLARATIONS

I, MICHAEL NEEMA hereby declares that this study is my own work and is a true reflection of my research, and that this work, or any part thereof has not been submitted for a degree at any other institution.

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CHAPTER 1: INTRODUCTION

1.1 Background of the study

The twenty-first century belongs to entrepreneurs across the world (Kumar & Ali, 2010). Economies, including the developing ones like Namibia, have come to accept the importance of job creation as the basis for healthy economy and appreciate the importance of entrepreneurship in creating jobs and fuelling economic growth. As cited in Kumar and Ali (2010) entrepreneurship, is concerned with the discovery of profitable opportunities and the decision to exploit them as the essence of entrepreneurial action (Ravasi & Turati, 2005); (Shane & Venkataranman, 2007). According to Ekesiobi and Dimnwobi (2020) various countries in the world have achieved highest economic performances by fostering and promoting entrepreneurial activities.

Researchers Kumar and Ali (2010), Nieman and Nieuwenhuizen (2014) all argue that successful entrepreneurship is a combined result of appropriate personal traits and an enabling environment. This seems to mean that promotion and fostering of entrepreneurship requires creation of both suitable business environment conditions as well as suitable people who possess traits needed to exploit opportunities in their surroundings.

Isala, Mburu, and Likuwa (2016) wrote that in the developing countries, agriculture appears to be the backbone of human lives and economic growth. It is important in terms of job creation, addressing poverty as well as uplifting people's living standards. Namibia is gifted with natural resources such as land

and water which can be used to advance economic transformation through agricultural entrepreneurship initiatives (Mubita, 2019). In Namibia, both the Fourth National Development Plan (NDP4) and Fifth National Development Plan (NDP5), in line with Vision 2030, flags agriculture, logistics, tourism, and manufacturing as the four economic priority areas of focus (National Planning Commission, 2017) (National Planning Commission, 2012).

NDP5 for instance, highlights, improving productivity of small-holder farmers as an effective way to food security and reducing poverty. To this end, the Namibian Government has embarked on state-led socio-economic development through the Green Scheme projects (GSP), an initiative that is aimed at ensuring agricultural productivity and food security in line with Namibia's Vision 2030 (MAWF, 2008). Cited by Mughongora (2018), Fiebiger *et al.*, (2010) stress that, through the Green Scheme Projects, which were approved in 2003 and revised in 2009, the Namibian Government aims to develop the potential of irrigation farming.

The strategy of the Green Scheme is to attract and enable large-scale commercial farming enterprises to establish commercially viable entities in remote and under-developed rural areas, by acting as service providers. These service providers ought therefore to ensure the provision of effective production and facilitate the transfer of required skills to small-scale farmers integrated into the Green Scheme projects. Nevertheless, According to AgriBusDev (2017) Namibian national food demand has been satisfied mostly by imports rather than local production.

For example, in the 2015/16 production year, the total national production equalled 18 000 metric tons, which equates to less than 13% of national food demand. The significance is that, Namibia largely still remains a majority food import country, despite the introduction of Green Scheme projects. This meant that due to some reasons, productivity of the Green Scheme projects has not reached the desired levels. This study therefore, investigated and evaluated the Etunda Green Scheme projects in the Omusati region with respect to factors affecting the entrepreneurial action of the small-scale farmers. The factors are hypothesized to have an impact on the overall development and performance of the Green Scheme projects as these projects are designed to be farmer or people-centric.

1.2 Statement of the problem

As many countries throughout the world achieved their desired economic performance by fostering and promoting entrepreneurial activities, the Namibian government through its national development plan initiatives, tries to promote entrepreneurship in all its sectors. Amongst these, is the agricultural sector with its Green Scheme Project initiative. The national development, especially the Fifth National Development Plan (NDP5) identifies the agricultural sector through its projects as the potential sector to boost economic growth, specifically in addressing challenges of food security, unemployment and overall poverty reduction.

Researchers Kumar and Ali (2010); Nieman and Nieuwenhuizen (2014) argue that successful entrepreneurship action is a combined result of the appropriate individual traits and the supportive enabling environment. Despite the fact that the agricultural sector was pointed out as a high priority or potential sector in the economy through initiatives such as the green scheme project, what is more troublesome is the fact that the sector's contribution to the country's Gross Development Product (GDP), has continued to decline from 16% to 10% between the years 1990 to 2010 before falling further to 7% in 2019 (First Capital Namibia, 2020); (Namibian Statistics Agency, 2020). Additionally, although the agricultural sector is the largest employer in the economy, its share of employment has also declined from 27% in 2004 to 22% in 2018 (NSA, 2020).

In their study, researchers Isala, Mburu and Likuwa (2016) conclude that green scheme projects are not adding significant improvements to surrounding communities' livelihoods, whereas, First Capital Namibia (2020) reports that the import of crops and vegetables remains remarkably high as Namibia produces 40% of its food consumption and the remaining 60% is imported from other countries.

These all encourage enquiries such as, what impact has the introduction and expansion of Green Scheme projects brought in the sector? Could it be that the entrepreneurial action or process development model is not sustainable enough? Can it be that the integrated small-scale farmers at these projects are hardly capacitated on the needed supports, agricultural technologies or trends to improve their productivity?

These questions prompted this study and it is against this background that this study sought to investigate and evaluate the factors affecting the entrepreneurial action among the small-scale farmers at Etunda green scheme project.

1.3 Objectives of the study

The main objective of the study was to investigate the limiting and success factors affecting the entrepreneurial action of the farmers at Etunda Green Scheme project in Namibia, using the perspectives of the business environment (legal, financial and market structure).

The specific objectives of this study were:

- To assess the limiting factors affecting the farmer's entrepreneurial action at Etunda green scheme irrigation project in Namibia.
- To investigate the success factors of entrepreneurial action among the farmers at the Etunda green scheme irrigation project in Namibia.
- Evaluate the current entrepreneurial action in application at Etunda green scheme irrigation project in Namibia.
- To suggest a model of entrepreneurship action for the green scheme projects in Namibia.

1.4 Significance of the study

The significance of this study would be that it answered interrogations as to why the sector is important, the implications of doing the research and how it links with other studies and knowledge.

Additionally, it deliberated on what new perspectives it will bring. In this study, key issues pertaining to how to improve socio-economic contributions of the Green Scheme projects were unpacked. The researcher chose five objectives that have a direct influence on the socio-economic contribution of Green Scheme projects to the populations and these factors were:

- mobilise private and public capital for investment in agriculture,
- increase agricultural production and sector contribution to Gross Domestic Product (GDP),
- promote food security at national and household level,
- promote research and adaptation of technology to increase productivity as well as
- Promote value addition, jobs, skills and transfer of technologies.

As part of continuous improvement, important socio-economic initiatives need to be monitored and evaluated and one such initiative is the Green Scheme projects which were designed to improve the livelihoods of rural communities. Poverty alleviation is one of the Republic of Namibia's top priority areas. It is indeed quite clear that, Government has recognised that the most effective way to reduce poverty and improve food security is to raise the productivity of its agricultural resources on which poor people depend for their livelihood (MAWF, 2008) and this, through irrigation development. The effectiveness of this arrangement needs to be evaluated as a basis for going forward. It is indeed one thing for government to introduce pro-poor development, but it is another thing to make sure the target groups are aware of such developmental initiatives to

ensure they benefit. These results will be used to identify points of intervention to improve the adopted Public-Private Partnership model employed in the Green Scheme projects and ensure improved socio-economic contribution to the target population.

Additionally, this study adds to the existing body of knowledge particularly around agricultural entrepreneurship, for example, it gives a new comprehensive perspective on both limiting and success factors affecting the complete entrepreneurship action or process. Ultimately, this benefits policy decision makers to implement better policies that would enhance agricultural production and promote international trade through value addition and be able to compete globally. Last but not least, results will also help as a useful guideline for upcoming entrepreneurs who plan to venture into Namibian agricultural projects in the future.

1.5 Limitation of the study

Limitations refer to the potential challenges in a study, which in most cases are beyond the control of the researcher (Leedy & Ormrod, 2012). Participants might have been reluctant to provide information as they may perceive it confidential, therefore the researcher clearly communicated the intention of the study. This study faced time and logistical cost limitations especially due to the COVID-19 regulations imposed by the Government concerning movements. To mitigate this challenge, the researcher took residence in the surrounding locations during the time of the study.

1.6 Delimitation of the study

Delimitations define the parameters of the study (Leedy & Ormrod, 2012). This study examined farming entrepreneurship in the Etunda Green Scheme project as it is currently the largest project among other green scheme projects, assuming that the business model adopted was similar to those of other green scheme projects in the country. Since it was not feasible for the researcher to cover all the Green Scheme projects, this study was limited to the Etunda Green Scheme in Omusati region, Namibia, thereby limiting the generalisability of the outcomes. The targeted participants were farmers and the management of the project. Furthermore, the study was limited to a public-sector organisation in the agricultural sector. Nonetheless there was relevance to any entrepreneurial project in any industry.

1.7 Thesis outline

The thesis was divide into five chapters as follows:

Chapter one indicated the introduction, which focused on the background of the study, the problem statement, and the objectives of the study as well as the significance of the study. It also gave a brief overview of the scope and limitations of the study as well as the delimitations.

Chapter two deliberated the literature reviewed according to the defined research objectives of the study. It presented an overview of the Namibian agricultural sector policies, particularly the green scheme project and its adopted business model.

The chapter's theoretical and empirical literature reflected on the general role of entrepreneurship to an economy, the entrepreneurship action and factors affecting it. Last but not least, the chapter presented the elements of assessing the entrepreneurship environment.

Chapter three detailed the research methods used in answering the research objectives, which explained the research design, the population and sample size of the study. Furthermore, it explained the sampling procedure utilised in the study, the research instruments, method of data collection and the data analysis thereof.

Chapter four is the results and discussions. This was done in the form of both graphical and frequency tables. The validity and reliability of the research instruments in answering the research objectives was also discussed in this chapter.

Finally, chapter five covered the conclusions deduced from the findings and provided recommendations for action and further research.

1.8 Summary of the chapter

This chapter discussed the background of the study, the problem statement, the study objectives, significance of the study, limitations and delimitation of the study as well as the outline of the overall study. The next chapter presents the literature review for the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

A literature review is an examination of scholarly information and research-based information on a specific topic (Babbie, 2016). Its goal is

to create a complete, accurate representation of the knowledge and research-based theory available on a topic. Babbie (n.d.) also describes a literature review as a clear and logical presentation of the relevant research work done thus far in an area of study. The purpose of a literature review is to identify and highlight the important variables and to document the important findings from earlier research that will serve as the theoretical framework for a study.

Upon presenting the overview of the Namibian agricultural sector, in the context of agricultural entreprenersurship, this section introduces the body of literature that has explored the entrepreneurship development action of projects, in developing and developed economies on both micro and macroeconomic levels. This chapter outlines the theoretical and empirical literature in relation to the entrepreneurship action limiting and success factors. Various studies have examined the perspective of leading entrepreneurs and others have covered the business enviroment perspective. A selective list of empirical studies done at a global perspective and developing economies in particular are discussed in this chapter. A literature review should reflect a strong layout and be relevant to what others have done in alignment to the research questions or objectives (Biggam, 2011).

This chapter is organised as follows: section 2.2 presents the overview of the agricultural sector in Namibia, 2.3 reviews the theoretical literature on entrepreneurship, leading entrepreneurs' demographics and entrepreneurship environment factors affecting the entrepreneurship action. A review of recent empirical literature on agricultural entrepreneurship action is presented in section 2.4 and section 2.5 concludes the chapter with a summary.

2.2 Overview of the agricultural sector in Namibia

Mubita (2019) wrote that the agricultural sector in Namibia comprises of both crop farming and livestock farming. Crop farming includes pearl millet (Mahangu), maize, sorghum, wheat and grapes among others. On the other hand, livestock farming includes cattle, goats, sheep and pig production. According to Shapi (2017) the agricultural sector remains one of the key sectors in the Namibian economy as it has been the major provider of food, employment, income and foreign exchange in the economy.

The livestock subsector is a significant contributor to the sector as about 80 percent of livestock production is exported as primary beef cuts, lamb carcasses and live exports (Smith, Zaaruka, & Tjerico, 2017). Similarly, about 55 percent of crop production was exported between the years 2011 to 2017, these were such as table grapes, onions, potatoes and tomatoes (AMTA, 2016). The agricultural sector also supports other sectors such as transport and manufacturing among others, in providing the inputs for further processing of other products, thus, making it crucial to other sectors of the Namibian economy (Mubita, 2019).

2.2.1 Namibia agricultural policies

In 1995, the Namibian government formulated the National Agriculture Policy (NAP) to guide agricultural development in the agricultural sector (Shapi, 2017). The policy aimed at increasing agricultural production, agro-processing and marketing. The specific objectives of the NAP are among others to accelerate the agricultural sector's contribution to national gross domestic product (GDP), create a conducive environment for increased and sustained agricultural production, productivity as well as to promote development of the national agricultural sector across the value chain (Ministry of Agriculture,water and forestry, 2015).

The Green Scheme policy (2008) of which this study focuses on, is an entrepreneurship initiative by government under the Ministry of Agriculture, Water and Forestry (MAWF) facilitated by the Agricultural Business Development Agency (AgriBusDev) to encourage the development of irrigation-based agronomic production in Namibia (Agribusdev, 2015). The aim of the policy is to increase the contribution of the agricultural sector to the country's gross domestic product and to achieve social development of communities located within suitable irrigation areas as well as promote human resources and skills development (Agribusdev, 2015). Studies by Shapi (2017), Mubita (2019), First Capital Namibia (2020) all concur that Namibia's agricultural sector is currently underdeveloped as the sector's production, contribution to GDP declines and the agricultural imports keep increasing.

In addition, the Agriculture Marketing and Trade Policy Strategy (2011) was formulated to guide the agricultural sector towards utilising opportunities in both the domestic and international markets (Mubita, 2019). This policy serves as the roadmap for the marketing of Namibia's agricultural products in the domestic and international markets. In this respect, the Agriculture Marketing and Trade Agency (AMTA) was established as a special agency of the MAWF to coordinate and manage the marketing and trading of agricultural produce in Namibia (Shapi, 2017).

According to Shapi (2017) the agency's mandate is to manage fresh produce business hubs and national strategic food reserve infrastructure towards attainment of food safety and security. As reported in Mubita (2019) this policy aims to contribute to the successful performance of the agricultural sector as well as compliment other policies and strategies across the agricultural value chain.

The MAWF (2017) wrote that in line with the NAP, the National Drought Policy and Strategy was formulated to manage drought faced by the agricultural sector. The policy specifically aims to shift responsibilities for managing risk from government to the farmers with financial assistance and food security interventions (Ministry of Agriculture, Water and Forestry, 2017). Mubita (2019) also wrote that through the Agricultural Bank of Namibia Act (Act no. 5 of 2003), the Agricultural Bank of Namibia (Agribank) was mandated to advance money to persons or financial intermediaries for the promotion of agriculture and related activities.

Under this act, Agribank introduced the Affirmative Action Loan Scheme (AALS) which enables emerging farmers from previously disadvantaged communities to acquire farms in commercial areas. With regards to both local agricultural production and consumption, the Namibian Agronomic Board (NAB) introduced the National Horticulture Development through the Namibian Horticulture Market Share Promotion (MSP) scheme. The initiative was funded by the MAWF under the Agronomic Industry Act no 20 of 1992 to promote the consumption of local produce, import substitution, agro-processing and export marketing of local fresh produce (Mubita, 2019). Importers are expected to ensure that a minimum percentage of their horticultural produce purchases consist of Namibian products, failure to meet the required percentage means they are curtailed in their imports on a pro rata basis.

Mubita (2019) also argued that the desired goal in the Harambee Prosperity Plan (HPP) with respect to hunger, is to have zero deaths attributed to a lack of food. Therefore, under the Harambee prosperity plan of 2015, the Harambee Comprehensively Coordinated and Integrated Agricultural Development Program (HACCIADEP) was initiated (Mubita, 2019). The program aims at facilitating market access to small and medium scale agricultural producers and agro processors as means to stimulate sustainable agricultural production (Mubita, 2019).

2.2.2 Etunda Green Scheme Irrigation Project and its farming model

According to Agribusdev (2015) the Etunda project among others, is the largest farm in terms of size of land and volume of production. The project is situated 45km west of Outapi in northern Namibia. The project is divided into two (2) segments of 450 hectares each for both small-scale and commercial farming (Agribusdev, 2015). The project concentrates on harvesting maize and wheat annually, and the farm is managed through contract agreement. The Green scheme policy adopted the farming model designed to create an enabling environment for increased food production through irrigation on both commercial and communal land (Agribusdev, 2015).

According to the MAWF (2008) the policy correspondingly seeks to support individuals with access to irrigation water to increase output through special incentives and the creation of synergies between large and small-scale farmers, creation of opportunities for emerging farmers to participate, and injection of capital into the rural economy through the public private partnership. This model is highlighted in the Tandjieskoppe Green Scheme project evaluation report by Mwangi, Anglow and Soliman (2004) giving a glimpse of the Green Scheme model as commercial farming enterprises are tied to a settlement of small-scale farming units in a joint enterprise. Mwangi, Anglow and Soliman (2004) reasons that the idea is for the small-scale irrigation farmers (SSIFs) to learn by watching the good agricultural practices from the commercial farmer, thereby building their capacity in terms of production and marketing management.

In addition to capacity building, the commercial farmer serves as a service provider to the SSIFs, by providing them with the necessary farm equipment, transport and marketing services at cost (Mwangi, Anglow, & Soliman, 2004). The intention of the Green Scheme Programs is to create an enabling, commercially viable environment through effective public-private partnerships (PPP) (Shapi, 2017).

2.2.3 Defining Small scale (smallholder) farmers

There are more than 500 million small-scale farmers on the planet (Dyck & Silvester, 2019). Small scale farmers also known as smallholders are characterised by family-focused motives such as favoring the stability of the farm household system, using mainly family labour for production and using part of the produce for family consumption. They are found usually managing areas varying from less than a hectare to 10 hectares (Food and Agriculture organisation of the United nations (FAO), (2012). As cited in Hassan and Jajja (2021) it is widely recognised that farmers all over the world, and in developing countries, in particular, do not get a fair return on their efforts and investments (Loconto & Simbua, 2012). One of the main characteristics of production, systems of smallholder farmers are: simple, outdated technologies, low returns, high seasonal labour fluctuations and women playing a vital role in production (FAO, 2012). It is these characteristics that must change if the collective vision of reducing hunger and ensuring food security is to be realised.

According to Mughongora (2018) if agriculture is at the heart of addressing poverty in Africa, then small-scale farmers are the vehicle to achieving that. Africa in general and Namibia in particular have recognised that smallholder farmers are the key drivers of economies even though their potential is often not recognised (Mughongora, 2018). There is therefore a need to significantly increase the productivity of smallholder farmers to ensure long-term food security. In this study, small-scale farmers strictly refer to small-scale irrigation farmers integrated into the Green Scheme projects.

As per the Green Scheme policy, a small-scale farmer refers to the irrigation farmer utilising a farming unit within the state agro project. This farmer is allocated not more than 10 hectares of land for cultivation and enters into an agreement with a commercial farmer for service (MAWF, 2008). In the Green Scheme projects, small-scale farmers are differentiated from medium scale farmers in that, even though medium scale farmers also utilise farming units within the state agro projects, they however provide their own surety and funding of production activities. In a nutshell, small farmers potentially remain the most marginalised players in the value chain. Hence, the key question addressed in this study is: What are the factors currently affecting the small-scale farmer's entrepreneurial action?

2.3 Theoretical literature

2.3.1 Entrepreneurship and entrepreneurship action

According to Baron and Henry (2011); Kumar and Ali (2010) entrepreneurship is a field that seeks to understand how opportunities to create something new (e.g., products or services) arise, and are created by individuals who then use various means (e.g., launch new businesses) to exploit or develop them. This argument therefore communicate that new and emerging businesses create large proportion of innnovative products and services that often transform the way people work and live.

Drucker (1985) argued that entrepreneurs are individuals who are capable of identifying, assessing, carrying out and benefiting from those situations. Other researchers, Nieman and Nieuwenhuizen (2014), Adobor (2020), Kumar and Ali (2010) agree that entrepreneurship is important for every country, because not only does it create and drive new businesses, but it also, creates employment for the people, boosts chances of survival and growth of the country's economy. This appear strongly to be a preferred activity that all economies should strive to employ.

According to Ekesiobi and Dimnwobi (2020), Kumar and Ali (2010), success of entrepreneurship is a combined result of the appropriate personal traits and an enabling environment. Although they didn't precisely indicate in details the appropriate personal or enviromental qualities, of which this gap is covered by this study, still this appears to mean that promotion and fostering of

entrepreneurship does not only require creation of suitable business environment conditions but also requires people who possess traits needed to exploit opportunities available in their environment. As cited in Arabi and Abdalla (2020), Firman (2014) points out that creating a local context that is conductive to entrepreneurship and economic development requires a myriad of public and private decisions to formulate a character of place. Additionally, in a citation by Arabi and Abdalla (2020) the concept of an entrepreneurial ecosystem dictates that entrepreneurship takes place in a community of interdependent actors (Stan 2015). This argument indicates that it is through different stakeholders with common interest whereby entrepreneurship is practically encouraged, which is the intention of this study to investigate and contribute to the body of knowledge the articulation of such a place and stakeholders.

The essential idea of an entrepreneurship ecosystem lies in the creation of a conductive environment supporting innovation, the creation of new, successful firms and to match sustainable employment growth goals within a specific geographic region (Simatupang, Schwab, & Lantu, 2015). Additionally, Isenberg (2010) points out that opportunities are not pursued in isolation of their context, this is supported by Mazzarol (2014) assertion, which states that the concept of an entrepreneurial ecosystem refering to the interaction that takes place between various institutional and individual stakeholders fostering entrepreneurship, innovation and SME growth. In their study, Arabi and Abdalla (2020) identified seven factors as components of the entrepreneurship ecosystem which includes:

human capital, business support services, finance, government policy, markets, culture, research and development and innovation.

2.3.2 Baron and Henry's (2011) Entrepreneurship Action theory

According Baron and Henry (2011), entrepreneurs create and operate viable new companies through vigorous application of their ideas, skills, knowledge and talents. The process includes four stages:

Motivation: This stage covers factors related to what motivates individuals to become an entrepreneur. It includes the factors that influence a person's effort toward attaining entrepreneurial goals and initiating a new business (Baron and Henry, 2011).

Opportunity recognition: The second stage of Baron and Henry's model examines factors related to the likelihood individuals will recognise opportunities and the types of opportunities recognised.

Acquiring resources: The third stage in the model focusses on the entrepreneur's acquisition of essential resources. These are factors related to individuals' behaviours, skills, and actions as they impact the acquisition of firm resources, example finance, human resource, machinery etc. The model also argues that numerous factors like entrepreneurs' use of social networks and the nature of managerial and human resource management practices impact entrepreneurs' acquisition of resources (Baron & Henry, 2011).

Entrepreneurial success or performance: The final stage of Baron and Henry's (2011) model examines factors that lead to organisational outcomes like firm performance and survival, and founder outcomes like career satisfaction and health. In other words, these are the factors related to achieving organisational-level outcomes.

Figure 2.1 illustrates the process of entrepreneurship action adopted from Baron and Henry (2011) model. In developing the model, Baron and Henry identified several theoretical perspectives and phenomena related to each stage of their process model. These are listed in Table 2.1 below.

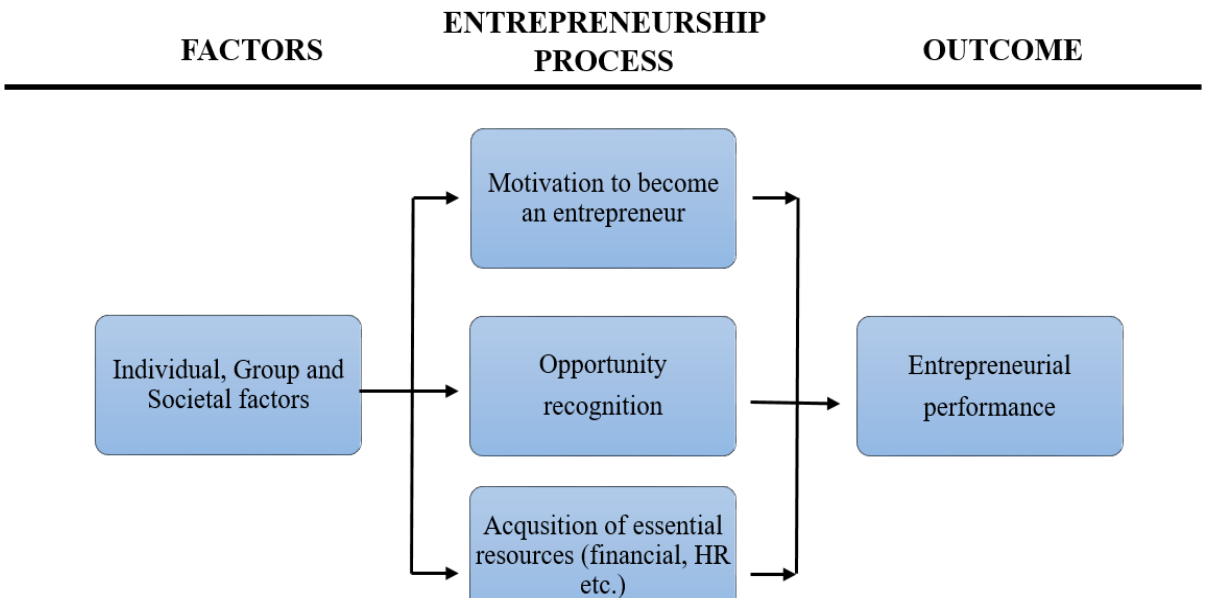

Figure 2.1 Basic Process Model of Entrepreneurship

Source: Author's own construct based on the Baron and Henry's (2011) entrepreneurship action model

Table 2.1: Theoretical perspectives and phenomena related to the stages of Entrepreneurship

STAGES OF ENTREPRENEURSHIP MODEL	THEORETICAL PERSPECTIVES AND PHENOMENA
Entrepreneurial opportunity recognition	Opportunity • Potential economic value • Newness • Perceived desirability Amount of information Access to information Alertness • Cognitive capacities (e.g., creativity, intelligence) Prior knowledge/information Prior work/life experience Networks that lead to information helpful for identifying opportunities (e.g., spouses, friends, co-workers, etc.) Knowledge about customers Knowledge about how to serve markets Knowledge about technology Search activities/active search Proactive work behaviour Social network (breadth) Networking activities as sources of information Processes through which opportunities are identified • Pattern recognition • Signal detection theory Perception Prototype model of pattern recognition (e.g., heuristics of typical members of the category) Regulatory focus theory
Acquiring essential entrepreneurial resources	Number of founders Ability to provide incentives to attract founders/employees Human resource processes Political and social skills Social networks helpful for attracting/acquiring: • Employees and other human resources • Reputation • Continued relationships (e.g., suppliers, financiers, etc.) • Support • Encouragement • Expertise • Tangible resources • Financial resources Social capital Strong ties (e.g., family and close friends) • Trust Weak ties (e.g., co-workers, casual acquaintances, etc.)

	• Bridging social capital • Access to other network partners Social competence Parents and/or close friends with entrepreneurial experience
Entrepreneurial success/ performance	Satisfaction with one's career Personal happiness Effective psychological adjustment Firm survival Growth in sales Growth in income Growth in number of employees Market value Entrepreneurial outcomes other than financial/economic variables • Attitudes • Personal and social adjustment • Health Bandura's Social Cognitive Theory (e.g., individual-level variables related to firm-level variables) Relationship between optimism and financial performance

Source: Baron and Henry's (2011) Entrepreneurship Action Model

2.3.3 Individual factors affecting the Entrepreneurship Action

2.3.2.1 The Expectancy theory

One of the most prominent theories of work motivation is the expectancy theory, which has been well adopted within the industrial organisation (I/O) psychology literature to explain what motivates individuals to engage in certain actions (Vroom, 1964). Broadly, the expectancy theory proposes that individuals engage in actions, or behaviours, to the extent that they believe (expectancy) those actions will lead to outcomes that will be rewarded (instrumentality) and they must value those outcomes/rewards (valence). It is a general belief that expectancy theory is particularly relevant in explaining how and why individuals (men or women) engage in the process of entrepreneurship. "Expectancy theory

sees the anticipation of a reward as selectively functioning on actions expected to lead to it" (Campbell *et al.,* 1970, p. 343).

The researcher believes that during different stages of the entrepreneurial process, the expectancy theory arguments may be particularly powerful in explaining why an individual may (or may not) engage in specific actions.

In particular, that their beliefs regarding whether their actions will lead to certain entrepreneurial outcomes at each stage may unfold in interesting ways. Further, the researcher critique that women entrepreneurs' preferences for certain entrepreneurial outcomes, or rewards, may vary from men's suggesting interesting relationships related to their behaviours and the outcomes they seek. Considerable research on entrepreneurship has focused on the reasons that individuals are motivated to become entrepreneurs (Rauch & frese, 2000) and some authors noted that an expectancy theory framework is relevant to this process (Gartner, Bird, & Star, 1992). Gartner, Bird and Star (1992) maintained that the valence of outcomes associated with becoming an entrepreneur is related to individuals' motivational levels. For example, Rauch and Frese (2000) found that people are motivated to become entrepreneurs because they have a desire for economic wealth and high needs for achievement or autonomy.

Research has also shown that an individual's self-efficacy (effort to performance expectancy) is positively related to the motivation to pursue entrepreneurship (Canedo, Stone, Black, & Lukaszewski, 2013). Other studies revealed that educational level, previous experience, and socio economic status (SES) were

related to a person's motivation (Rauch & frese, 2000); (Sullivan & Meek, 2012). There are different types of entrepreneurs and entrepreneurial ventures (Nieman & Nieuwenhuizen, 2014). For example, their typology specified that there are "crafts entrepreneurs" who are from blue-collar backgrounds, have low educational levels, and little managerial experience, but become entrepreneurs because they have the skills needed to create a particular product.

Similarly, there are "opportunistic entrepreneurs" who come from middle class backgrounds, have managerial experience, broad levels of education, and are likely to develop innovative businesses (Nieman & Nieuwenhuizen, 2014). Finally, there are "inventor entrepreneurs" who have crafts' orientations, but place high priorities on developing new products and patents (Canedo, Stone, Black, & Lukaszewski, 2013). It follows from these typologies that individuals' background, education, and skill levels may motivate them to pursue different types of new ventures and not necessarily their motivations alone.

Although many factors may affect the agricultural entrepreneur's motivation, the researcher believes that some unique issues could influence their motivation to become entrepreneurs. Therefore, a "one size fits all" model of entrepreneurship may not completely explain agricultural entrepreneur's motivational levels, and hence the researcher modified the existing model to include the following:

Motivations: Investigating the motivations of Hispanics, Cited in Canedo, Stone, Black and Lukaszewski (2013); Shinnar and Young (2008) argues that Hispanics are motivated by both "push" and "pull" factors. Pull factors

emphasise the positive aspects of self-employment, which are often associated with economic independence and job satisfaction. Some research found that self-employed workers were more satisfied than wage and salary workers (Brandley & Roberts, 2004). Push factors focus on entry into self-employment as a last resort. For example, researchers argued that some people often start a new business because they are excluded from the job market by unfair discrimination (Canedo, Stone, Black, & Lukaszewski, 2013).

Similarly, Peterson (1995) maintained that Cuban-Americans often become entrepreneurs because they perceive they have no alternative career options.

Education and skills level: Two other factors that may influence the individual's motivation to pursue entrepreneurship are the educational background and skill level. Education represents the main factor that provides individuals with the degrees and skills required of them in order to practice jobs, besides specific entrepreneurship training (Arabi & Abdalla, 2020). Furthermore, entrepreneurship education is intended to change beneficiaries' orientation and attitude, equipping them with the skills and knowledge necessary to start and manage their own businesses (Ekankumo and Kemebaradikumo, 2011). In the same context, Mohamad *et al.* (2019) state that entrepreneurship education plays an essential role in cultivating entrepreneurial thinking, entrepreneurial attitudes and rising entrepreneurial skills to mould a person to become an entrepreneur (Arabi & Abdalla, 2020). It is under those arguments that the researcher hereby concludes that education both formal and informal is important for an entrepreneurial assignment.

Baron and Henry (2011) defined opportunity as a "perceived means of generating economic value (i.e., profit) that has not previously been exploited by others" (p. 251). They maintained that there are three characteristics associated with opportunity recognition: profitability, newness and perceived desirability or moral acceptability of the opportunity. Entrepreneurial opportunities refers to a situation in which a new good, service, material or method is introduced into a society to generate more value than its initial offering costs (Drucker, 1985).

Recognising a new opportunity, generally occurs during the prelaunch phase of a new venture, and there are several factors that affect this process. For instance, research showed that access to information, alertness to opportunities, and social networks all affect opportunity recognition (Shane & Venkataranman, 2007). Research indicated that individuals who have considerable access to information about markets or customers are more likely to generate new opportunities than those with little information (Shane & Venkataranman, 2007). Similarly, research revealed that people who are highly creative or have high cognitive abilities are more alert to new opportunities than those who are low in these characteristics (Baron and Henry, 2011).

Furthermore, studies found that those with large social networks gain access to information that cannot be gained in any other way, and such access is positively related to opportunity recognition (Ozgen & Baron, 2007; Shane & Venkataraman, 2000). With regard to prior work or life experiences, DeTienne and Chandler (2007) explored differences between women and men's human capital and how they related to the opportunities identified. They found that the

number of jobs held and the retail work experience of women were positively related to the number of opportunities women identified (for men, their number of start-ups was positively related to the number identified).

Furthermore, women and men use different processes to identify opportunities. Compared to men who either use financial assets to acquire existing firms or identify and serve new markets with unmet needs, women rely on information gained from previously working within an industry to identify existing customer needs that are not being adequately met. Overall, these findings point to the importance of women's prior work experiences relative to opportunity recognition. Using an existing model of entrepreneurship by Baron and Henry (2011) in understanding and explaining the factors related to the behaviours of Hispanic entrepreneurs, in their study Canedo, Stone, Black and Lukaszewski (2013) reviewed several literatures on Hispanic entrepreneurs relevant to each stage in the model, and presents testable hypotheses to guide future research on the issue. Among their reviewed literatures, Canedo, Stone, Black and Lukaszewski (2013) study revealed that Hispanics' educational attainment, experience, and skills affect their motivation (Robles & Cordero-Guzman, 2007). In particular, Hispanics with lower educational levels are less likely to be motivated to become entrepreneurs, and are often less successful than those with higher educational levels (Canedo, Stone, Black, & Lukaszewski, 2013). Likewise, research found that Hispanics' skill levels influenced their motivation to start new ventures (Dana & Morris, 2007).

In addition, managerial ability was positively related to self-employment among Mexican-Americans (Lofstrom & Wang, 2007). Regarding Resource acquisition stage Canedo, Stone, Black and Lukaszewski (2013) state that the reviewed literature showed that minority entrepreneurs typically have less access to financial capital for new ventures than Anglos (Bates & Brandford, 2007), and that Hispanics were more likely to be denied a start-up loan than Anglos (Coleman, 2004).

Given this disparity, researchers maintained that the lack of start-up capital contributed to the higher failure rates of Hispanic businesses, and served as an enduring barrier to the size and scope of their businesses (Canedo, Stone, Black, & Lukaszewski, 2013).

2.3.3 Environmental factors affecting the entrepreneurship Action

Nieman and Nieuwenhuizen (2014) argue that the process of successful entrepreneurship depends not only on what lies within the individual members of the society, but also on the degree of spirit of enterprise which exists or can be initiated in a given environment. In the same spirit, the concept of an entrepreneurial ecosystem dictates that entrepreneurship takes place in a community of interdependent actors (Stam, 2015).

The entrepreneurial ecosystem approach has been in place only during the past 10 years, brought to light in 2010 by Professor Daniel Isenberg of Babson College through an article in the Harvard Business Review (Isenberg, 2010). The essential idea of an entrepreneurship ecosystem lies in the creation of a

conductive environment supporting innovation, the creation of new, successful firms and to match sustainable employment growth goals within a specific geographic region (Roundy, 2017).

Isenberg (2010) points out that opportunities are not pursued in isolation of their context, this is supported by Roundy (2017) assertion that the concept of an entrepreneurial ecosystem refers to the interaction that takes place between various institutional and individual stakeholders fostering entrepreneurship, innovation and SME growth. The entrepreneurial ecosystem is a concept that is fundamentally spatial and centrally local (Isenberg, 2010). Therefore, it is due to that background that the researcher of this study adopted the Aspen Network of Development Entrepreneurs (ANDE) framework indicators as a guiding source, which is tailored and modified to fit the Namibian agricultural sector as the local context.

According to the ANDE (2013) the framework identifies three broad elements that are important in assessing the entrepreneurial ecosystem:

- Determinants,
- Entrepreneurial performance, and
- Impact.

This study also agree that the three elements make sense as a starting point for ecosystem assessment. While there are a limited number of indicators for measuring impact and entrepreneurial performance, the number of potential

determinants is fairly extensive. ANDE (2013) argues that some of the impacts and aspects of entrepreneurial performance may also feed back into the determinants, for example economic growth may boost access to finance for small firms.

2.3.3.1 The elements of assessing entrepreneurial ecosystems:

Entrepreneurship determinants refers to the various factors that affect entrepreneurship.

Despite the varied sources for these evaluative approaches, they are relatively consistent in terms of broad themes and actors that would be considered determinants of entrepreneurship, such as specific policies, amount of venture capital financing deployed, and the availability of business development services (Arabi & Abdalla, 2020).

Entrepreneurial performance refers to the specific activities that entrepreneurs perform that will ultimately deliver the impacts (Arabi & Abdalla, 2020). ANDE (2013) indicators such as the total number of formal businesses in an economy, the number of high-growth firms (gazelles), employment figures, and enterprise survival and death rates are all considered measures of entrepreneurial performance. This is among the element this research focuses on, thus aiming to contribute a precise knowledge in regards to the Namibian agricultural green scheme projects.

Impact as cited in Arabi and Abdalla (2020) refers to the value created by entrepreneurs, and entrepreneurship, which may be measured in terms of

macroeconomic variables, such as GDP growth, employment, Gini coefficients (to measure income distributions), or the size of the formal sector vs. the informal sector (ANDE, 2013).

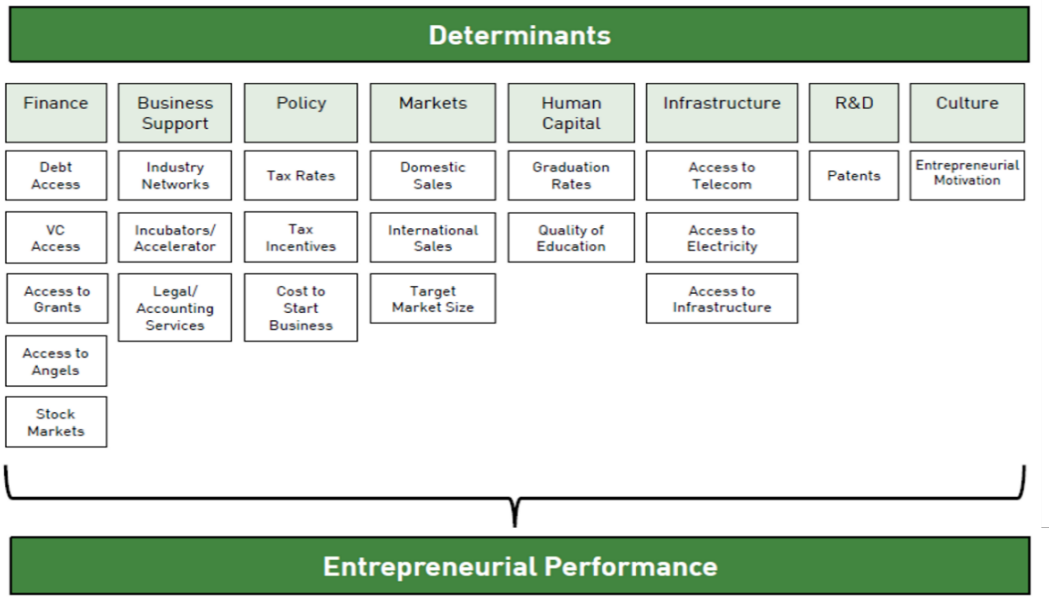

Figure 2.2: The OECD framework for entrepreneurship Indicators
Source: Adapted from OECD Eurostat

2.3.3.2 The domain of analysing entrepreneurial ecosystem

Approaches to defining and measuring entrepreneurial or entrepreneurship ecosystems vary widely. As for this study, the researcher explicitly adopted the following set of domains that are key to most of entrepreneurship ecosystems, including that of agriculture. These are listed in Table 2.2 below.

Financial capital: One of the necessary factors for entrepreneurship is the availability of and access to financial capital (Demirdag & Eraydin, 2021). Several authors suggest that access to financial capital increase the likelihood of starting a new business (Klapper *et al.*, 2010; De Clercq *et al.*, 2013) and enable entrepreneurs to develop strategies for discovering and entering new markets

(Pena, 2002). Financial capital hereby includes access to debt, access to venture capital, access to grants, access to angels, banks, microfinance institutions, public capital markets, development finance institutions as well as government finance. Arabi and Abdalla (2020) Argues that more developed financial systems allow easier access to finance. Several studies have found that financial development exerts a significantly positive impact on economic growth (Kasseeah, 2016). Moreover, Abubakar (2015) maintained that about 45% of firms in Sub-Saharan Africa recognise lack of finance as a key obstacle to their business, relative to 13% in OECD countries. This is also among the expected argument contribution this study intends to establish and in so doing contribute to the overall body of knowledge.

Business Support services: There appears to be multiple types of support that must be emphasized for the promotion of entrepreneurship. Mazzarol (2014) states that "Entrepreneurial actions" do need to be facilitated where possible, via soft and hard infrastructure such as mentoring and support services, education courses, incubators, co-working spaces, networking forums and accelerator programs (Arabi & Abdalla, 2020). As noted by Brown, Mawsonb, Lee and Petersona (2019), accelerators seek to provide support to scale up a fledgling business, rather than to launch ventures. Other examples of businesses services may include industry networks, legal or accounting services and credit rating agencies. According to this study, this opinions may not necessarily mean that all the mentioned support services are a prerequisite or somewhat limit the

entrepreneurial action, however this study empirically established their impacts accordingly.

Policy: The organisation for European Economic Co-operation (OECD) report that policy as an entrepreneurship development factor could be categorized into macro and micro policy groups. According to Urban and Dlamini (2020) micro policies are often performed by lower levels in government, whereas macro polices, made at the top decision-making levels, improve the business environment. In general, macro policies are more effective than micro-ones in developing entrepreneurship (ANDE, 2013). Some examples of the macro policies include inflation control, low interest rate, economic security and efficient taxing system, competitive and anti-monopoly policies in accessing the financial resources, trade rules, and the implementation method of policies and regulations by the government.

Micro policies include financial assistance to train the managers and employees of small and medium sized enterprises (SMEs), enhancement of research and development (R&D) in SMEs, improving entrepreneurship capacities, creating entrepreneurial culture, and improving entrepreneurs' access to financial resources (OECD, 2007a). Cited in Arabi and Abdalla (2020), Public policy comprises patterns of action developed and implemented by public officials to achieve particular goals (Edoho, 2016). To this effect, Levie *et al.,* (2014) reported that the more policymakers understand what entrepreneurs consider important, the greater the potential for policies to be better aligned with the actions of companies.

It is for this background that the researcher notes that improving business environment is the result of the right policy making and effective implementation, consequently target to investigate and establish relevant policies and practices in the Namibian agricultural sector.

Markets: Market hereby includes domestic corporations, international corporations, consumers, distribution networks, retail networks and other marketing networks. Cited in Arabi and Abdalla (2020), Abubakar (2015) highlighted a positive relationship between entrepreneurial development, economic growth, prosperity, wealth creation and the role of markets in driving the process. Additionally, access to markets, both domestic and foreign plays a significant role in driving entrepreneurial activities (Kshetri, 2014).

Human Capital: Cited in Demirdag and Eraydin (2021), Human capital is described as a stimulator of entrepreneurial activities and innovation processes (Maskell & Malmberg, 1999). Human capital, defined as the acquired knowledge and skills that can help an entrepreneur to develop his/her new knowledge and technology accumulation (Vixathep, 2017) and as highlighted by Dvoulety and Mares (2016) to create more employment than entrepreneurs with a relatively low level of education. This concept is associated with high schools, universities, technical training institutes and community colleges. There are several empirical studies pointing to a positive and significant association between human capital and the level of entrepreneurial activity (Dvoulety & Mares, 2016) (Urban & Dlamini, 2020).

Researchers have argued consistently that individuals equipped with high-quality human capital are able to perceive the business opportunities in a market and can take advantage of these opportunities successfully and so are more likely to launch a new business (Vixathep, 2017).

Infrastructure: ANDE (2013) these includes electricity providers, transport providers, communications (mobile, internet) and other utility providers (gas, water). Kumar and Borbora (2019) suggest that urbanization, which means a much more diversified and dynamic demand structure, contains important opportunities for entrepreneurship activities. Kibler (2013) indicates that metropolitan and urban environments stimulate firm formation by supplying more convenient incubation conditions than rural and less dense areas, as they have more advanced business infrastructures, a pooled labour market, market proximity and universities and other research centres (Verheul, Wennekers, Audretsch, & Thurik, 2002).

Research and Development: It includes public research centres and laboratories as well as private research centres and laboratories (ANDE, 2013). Historically, technological innovation and entrepreneurship have been viewed as essential sources of business success and of national economic development, based on the creation of high-value added jobs and leadership in global markets (Ding & Abetti, 2003). Environmental problems will not be solved solely by innovations, which create new products and services but also through the creation of new ways for society to answer the question of "How should we live?" (York and Venkataraman, 2010).

Additionally, Elia *et al.* (2020) show that digital technologies have nowadays a significant impact on how new business ventures are imagined and created.

Culture: ANDE (2013) emphasized several regional attributes namely level of income, unemployment, existing economic structure and agglomeration of certain activities. These are defined as important factors in explaining the differences in the levels of regional entrepreneurship (Demirdag & Eraydin, 2021). Among others, the direct and indirect influence of a regional culture includes the media, government, schools, professional associations as well as social organisations that support a culture of entrepreneurship (ANDE, 2013). Culture can either foster collaboration and innovation or prevent effective knowledge sharing, its possible negative role can be detrimental because connecting potential entrepreneurs to networks offering resources and mentoring has always been an essential part of the culture for innovation and entrepreneurship (Kanter, 2012). Additionally, Aaltonen (2016) states that several examples show how national culture shapes potential entrepreneur's tendency to create businesses and to innovate. As noted by Mazzarol (2014) that there needs to be a culture that is tolerant of risk and failure and willing to champion entrepreneurial success with role models of individuals and firms who can serve to inspire and motivate others. Moreover, Fritsch and Wyrwich (2018) state that persistence of entrepreneurship over time specifies the role of a region-specific "culture" agreed as an informal institution that changes only gradually and over rather long periods of time.

Therefore, local cultural heritage embedded in the community regarding entrepreneurship is indeed an important and valuable source of encouragement for a new venture creation process (Mazzarol, 2014).

Table 2.2: The entrepreneurial ecosystem domain of analysis

DIRECT		PARTIALLY DIRECT					INDIRECT
FINANCE	SUPPORT	POLICY	MARKETS	HUMAN CAPITAL	INFRASTRUCTURE	RESEARCH & DEVELOPMENT	CULTURE
Banks	Incubators	National government	domestic corporations	Universiy	Electricity providers	Public Research centers and laboratories	Media
Vanture Capital	Accelerators	State government	International corporation	Technical training institute	Transport providers	Private Research centers and laboratories	government
Angel Investors	Industry associations networks	Local government	Consumesrs	High schools	Communications (Mobile, internet)		Schools
Foundations	Legal services		Distribution networks	Community colleges	Other utilities (gas, water etc.)		Proffessional Associations
Microfinance Institutions	Accounting services		Retail networks				Social Organisations
Public Capital markets	Technical experts or mentors		Marketing networks				
Development finance institutions	Credit rating Agencies						
Government							

Source: Adapted from ANDE diagnostic Toolkit

2.4 Empirical literature on agricultural entrepreneurship

Adopting a mixed research design to demonstrate the significance and challenges of agricultural development in Namibian green scheme projects, Shapi (2017) administered a structured questionnaire to 135 farmers and interviewed 8 project managers at the eight selected green schemes.

The author used SPSS to generate descriptive statistics during the analysis of the quantitative data, the study found that production and access to efficient market challenges emerged as the main stumbling block to the optimal production and sales of small farmers' produce. Shapi (2017) concluded by arguing that Production and marketing challenges featured most as compared to access to agricultural credit challenges faced by smallholder farmers in the Namibian green scheme projects.

In terms of production challenges, Shapi (2017) argued that they mainly had to do with input cost such as water and electricity bills and fertilizers as well as pest and inadequate land. With regard to marketing, the transportation of farmers' produces to market places, low prices offered to the produce and over supply of produces were the major marketing challenges reported by farmers. It was pleasing to note that local market for farmers' produce existed in the area. In terms of access to agricultural credit, over 70% of farmers indicated not to have problem with accessing agricultural credit. The author maintained that; it was a good indication that Agribank is living to its expectation by facilitating farmers to access agricultural credit at a low interest rate. However, the bank is urged to

make use of its comparative advantage of being the only agricultural bank to provide efficient, affordable and effective services to the farmers as farmers complained the cumbersome process of the bank before a loan is approved.

There appear to be a link between what Shapi (2017) found and the theoretical literatures (Abubakar, 2015) (Arabi & Abdalla, 2020) reviewed in this study, especially those that emphasized on the vital importance of market environment towards the success of entrepreneurial ventures in any economy. Investigating the impact of the Namibian Agricultural Green Scheme on the livelihood of communities, Isala, Mburu and Likuwa (2016) sought to ask if there was any economic benefits and changes in the diversification of food stuff to people living around the Green Schemes as well as challenges experienced by people around the Green Schemes. They conducted a survey on 30 households in the two villages, Sikondo village and Siyandeya village in the Kavango region. Purposive and random sampling techniques were used to select Green Schemes and households respectively, Personal interviews were undertaken using structured and unstructured questionnaires. Descriptive statistics, frequencies and cross tabulations were used to outline respondents according to the impacts of the Green Scheme.

According to Isala, Mburu, Likuwa (2016) their study revealed that there was no significant association between economic activities of the two village settings. Most variables were the same before and after the scheme for both village settings. Changes in food diversification for people were assessed and results indicated that food items for consumption reduced for Sikondo village and

increased in Siyandeya village. The study further highlights community's assertion that Green Schemes are not adding significant improvements or changes to community livelihoods as no significant developments in the surrounding villages have been attributed to the Green Schemes. It is for these reasons that it appears that there is a need for further investigation around the aspects that brought about that conclusion, and that is what this study intends to explore.

Isala, Mburu, Likuwa (2016) further highlighted that while there are benefits from the Green Schemes; these are minimal and are not worth the continuing challenges of water shortages and sanitation, their losses and expectations for improved livelihood. Significantly Isala, Mburu, Likuwa (2016) study highlights the need to inculcate a change in attitude so as to encourage collaborative efforts between communities and the Green Schemes management which will impact on the livelihood of people positively.

Unlike the study by Isala, Mburu, Likuwa (2016), this study does not try to establish the socio-economic contribution of Green Schemes, but rather tries to answer why the Green Scheme Programme in general particularly the selected Green Scheme project have not achieved their intended objectives of poverty reduction and food security. In this regard, the researcher attempts to establish if the under-performance of Green Scheme projects is associated to the factors of the individual farmers or the environmental factors around the project. It is against this background, that the study of this nature was necessitated as it also compliments the findings by Shapi (2017) and Isala, Mburu, Likuwa (2016).

2.4.1 Agripreneurship in some developing countries

According to Otache (2017) Agripreneurship is the ability and willingness of a person to recognise viable agricultural business opportunity, gather resources, establish and manage a resulting agricultural business successfully. Aiming to discuss and analyse the entrepreneurial process in Indian seed business and factors affecting entrepreneurship in the sector, Kumar and Ali (2010) adopted in-depth personal interviews with 40 entrepreneurs involved in 31 seed ventures belonging to five districts covering three states of India – Uttar Pradesh, Haryana, and Uttarakhand. These firms were selected following the convenience sampling method, whereby all major components of entrepreneurial process, personal traits and background of the entrepreneur, legal and financial environment as well as the market structure were studied in detail.

The author used descriptive and relational data-analytic methods such as frequency distribution, cross tabulation and correlation analysis to analyse the data. The paper found that the firms established during the then last five to ten years, have shown continuous growth indicating attractiveness of the industry. Ability to build entrepreneurial team with complementary skills and knowledge and experience of the lead entrepreneurs were found to be the critical success factors in the industry. The author concluded and recommended that most interviewed entrepreneurs involved in the seed business had direct or indirect experience of the seed industry before they decided to establish their own venture, which indicates that prior experience and knowledge of the industry plays a significant role for entrepreneurs in choosing an industry in which they

start their own businesses. This conclusion is among the findings that agrees with the assumption of this overall study.

According to Kumar and Ali (2010) their study results had a very strong implication for the policy makers. Both, state and central governments in India, through various policy interventions, have been trying to impart entrepreneurship training to the people. Apprenticeship of suitable duration needs to be made an integral component of these training modules. They recommended that during the period of apprenticeship, trainee entrepreneurs will appreciate and understand the ground level realities of functioning of the businesses and they will also be in position to develop networks which will be of great help in any business creation or development endeavours.

Examining Nigerian Agripreneurship Development using a Desk Research approach, Otache (2017) explored Agripreneurship development as a strategy for economic growth and development. Though some related literature was reviewed, Otache (2017)'s paper relies heavily on the author's viewpoint regarding how Nigeria can grow and develop its economy through Agripreneurship development. Otache (2017) found that economic challenges that Nigeria faced were blamed on overdependence on the oil sector, bad governance, corruption, leadership failure, policy inconsistency, overdependence on imported goods and ostensible neglect of the agricultural sector. The author claimed that policymakers, economic analysts and the government have advocated strongly for diversification of the economy.

Besides, there is a consensus among scholars, economic analysts and policymakers that "agriculture is the answer" (Otache, 2017). This is among the studies that motivated the investigation into the green scheme project, as it has economic potential ready to be expressed if organised well. Cabrera and Mauricio (2017) investigated factors affecting the success of women's entrepreneurship, a review of literature. The literature, 108 articles on factors affecting female entrepreneurship produced since January 2010 until October 2015 was analysed to define entrepreneurial success, identify factors affecting success at each stage of the entrepreneurial process and propose and organise those factors at individual and environment levels. Cabrera and Mauricio (2017)'s study found that several factors affecting female entrepreneurial success at each stage of the entrepreneurship process were found and organised at the internal (individual) micro, meso and macro environment level. The most considered factors found at the internal level were human capital, education and experience, with effects on the opportunity identification stage of the entrepreneurial process.

At the micro environmental level, the researchers found that the access to resources factor had an effect on the opportunity recognition, acquiring resources and entrepreneurial performance stages, both with influence on quantitative and qualitative indicators of success. The authors Cabrera and Mauricio (2017) thereby concluded that success of an entrepreneurial venture can be interpreted as being a dependent variable without any operational definition that can be expressed in accordance with several indicators widely used in existing literature and that can be organised according to two dimensions:

(1) The quantitative variable, or the one related to business performance and (2) The qualitative variable, associated with the entrepreneur and his or her perception of business success. The series of factors with the greatest impact highlight the need for sweeping changes in national education systems to enable women to access education for their empowerment. Changes in national education systems could also help alter the socio-cultural perceptions, rules and regulations and values that underpin stereotypes and make it difficult for women to access the resources they need to sustain and grow their businesses (Cabrera & Mauricio, 2017).

Using descriptive and explanatory designs to conduct quantitative analysis, Arabi and Abdalla (2020) examined the role of ecosystem for entrepreneurship development in Sudan, whereby the population in the study comprised of Sudanese manufacturing firms. A total of 106 firms, all located in Khartoum State completed the survey. Both primary and secondary data were collected. Arabi and Abdalla (2020)'s study is explanatory in nature and designed to be cross-sectional, using a quantitative approach. Questionnaires were used to collect data from a stratified sample, ten industrial subsectors drawn from the total population of the study. Data was analysed with help of exploratory factor analysis and multiple regression model.

Arabi and Abdalla (2020) found that among the major findings is that the relationship between the entrepreneurial ecosystem and entrepreneurship development was found to be significant in six factors, namely: finance, government policy, human capital, infrastructure, research and development and

innovation and regulatory framework, whereas it was insignificant in three factors, namely; culture, market and support services. These former factors explain 65.8% of the variation in entrepreneurship development. The results reveal that six of the study's hypotheses variables are supported, that is, there is a significant relationship between entrepreneurial ecosystem and entrepreneurship development.

Human capital has the most significant effect on entrepreneurship development (ß 5 0.409, $p < 0.10$) followed by finance (ß 5 0.336, $p < 0.10$) government policy (ß 5 0.298, $p < 0.10$) regulatory framework (ß 5 0.178, $p < 0.05$) infrastructure (ß 5 0.167, $p < 0.05$) and research and development and innovation (ß 5 0.151, $p < 0.05$). Results additionally demonstrate that three of the study's hypotheses variables, namely: culture, market and support services are not supported. However, given the fact that infrastructure is part of hypothesis-backed support services, it is possible to say that support services are partially supported. The established significant influence of human capital on entrepreneurship development in Sudanese manufacturing firms was found to be the most positive one.

In the Kingdom of Saudi Arabia, Rafiki (2020) examined the determinant of the growth of small and medium sized enterprises (SMEs) through adopting a quantitative method, whereby the descriptive and multivariate regression analysis were used to analyse the data. The author adopted a stratified sampling technique with a sample size of 119 managers from SMEs.

There were variables delineated from theories (human capital, social capital, strategy and organisation) which are associated with the firm's growth that include; the size of the firm, firm age, manager's education, training, experience, financing and network relationship. Rafiki (2020) study found that the size of the firm, the experience of the manager, training, financing and the network relationship have a significant relationship with the venture's growth.

The study revealed that the independent variables of owner–managers' experience, training, networks, financing and size of the firm (number of employees) are significantly related to the firm's growth. Meanwhile, owner–managers' education and age of the firm have an insignificant relationship with the firm's growth. The result of each variable that have consistency with previous studies, means that the determinant factors of growth in other countries are adoptable and adaptable by the SMEs in Saudi Arabia. Each country has its own influence on the firm's characteristics, firm's owner–managers, its strategy and market characteristics, thus the findings could differ. These are considered as the reasons for the insignificant relationship of variables such as education and the age of the firm. Meanwhile, Rafiki (2020) the highest contribution to the firm growth is training variable and this is followed by networks of SMEs.

In Ghana sub-Saharan Africa, Adobor (2020) used qualitative data from interviews, extending the literature on agricultural entrepreneurship and entrepreneurial failure by exploring failure in a cohort of firms. The author identified reasons for the failure of a group of entrepreneurs associated with a novel agribusiness activity in an otherwise economically attractive market in an

emerging economy. The data for the study came from 69 respondents who started and exited aquaculture. Adobor (2020) results of the study show that there can be negative effects of social structure on entrepreneurial behaviour and outcomes. The strong social ties that emerged among the farmer-entrepreneurs led to excessive peer-to-peer copying and knowledge sharing, leading to premature closure of the search for no redundant ideas. One consequence of that found was the narrowing of the pool of available knowledge, which if broadened, may have improved the chances of success of these businesses. Also, Adobor (2020) results demonstrate that a lack of institutional support in the form of training in the appropriate management of a new technology adversely affected the farmer-entrepreneurs and their businesses. Although Adobor (2020) did not necessarily investigate all factors that possibly could affect the farmer's entrepreneurial action, the author deliberated on aspects that are of relevance when it comes to the performance of the green scheme projects.

The study recommended that it is important for governments that introduce a new economic activity to provide the scaffolding, including an understanding of the value chain, to enhance the chances of the economic success of ventures. Entrepreneurs for their part need to broaden their search for new ideas outside their peer groups to increase their chances of accessing non-redundant knowledge. The above references bear witness to the importance of the flow of information. In Pakistan, Muhammad, McElwee and Dana (2016) focused on entrepreneurs' experiences inhibiting them from launching a business at the micro level.

The purpose of their study was to identify issues that limit rural entrepreneurship in Pakistan and also, to identify the cultural, social, economic and religious traditions and settings that discourage entrepreneurship thus hindering economic development. The study adopted an ethnographic approach to obtain a picture of current problems and perspectives of rural inhabitants, whereby members of 84 families were interviewed.

Muhammad, McElwee and Dana (2016) found that religious, socioeconomic and structural forces play a significant role in suppressing social and cultural capital in rural areas of Pakistan, explaining the low level of entrepreneurship in these areas. These indicated that Social and cultural capital requires a certain socioeconomic context for entrepreneurship to thrive. The findings of Muhammad, McElwee and Dana (2016) are similar to those of Light and Dana (2013) to the extent that entrepreneurial cultural and social capital is a requirement in entrepreneurship. However reporting findings from 84 interviews with families in rural areas of Sindh, clear evidence demonstrates that social and cultural capital, despite being very important comes secondary in need for promoting entrepreneurship after the initial and more essential need of a conducive environment for entrepreneurship.

Muhammad, McElwee and Dana (2016) also agree with an earlier insight by Light and Bhachu (1993) who propose that cultural and structural factors are crucial factors in helping individuals develop their entrepreneurial potential. Social and cultural capital relevant to entrepreneurship cannot sustain or prosper in an environment that is not supportive of entrepreneurship.

Furthermore, in a rural setting of Pakistan, people are still living in large families where they are dependent on each other and usually the main head of the family is the primary source of income (Muhammad, McElwee, & Dana, 2017). They recommended that proper government intervention is necessary for structured and sustainable development of these areas through entrepreneurship and business development services.

In Kenya, Kiprop, Okinda, Akter and Geng (2020) investigated the factors that influence market channel choices among improved indigenous chicken farmers in Baringo County and to rank the determinants according to their level of importance in influencing farmer's choice of marketing channels. The study employed a multistage sampling technique and collected data from 209 households between April and July 2019, out of which, 198 useful responses were obtained. Multinomial logit regression and neural network models were used to analyse the factors influencing market channel choice based on socioeconomic, demographic and farm characteristics.

Kiprop, Okinda, Akter and Geng (2020) established that group membership, education, market distance, transport costs, farm size, cost of information and bargain costs were statistically significant in the choice of market channels. With the direct consumer as the base market choice. The cost of transport had the highest normalized importance in the prediction of a farmer's selection of market channels for both radial basis function (RBF) and multilayer perceptron (MLP) neural networks. However, flock attributes and age of household head had the least normalized importance in MLP and RBF, respectively.

Using data from a recent survey of 447 rice farmers in rural Ghana, an endogenous switching regression model was employed to account for selection bias arising from both observable and unobservable farmer attributes. Authors Abdul-Rahaman and Abdulai (2020) examined the factors that influence farmer group membership and collective marketing decisions and their impacts on smallholder farm performance in rural Ghana.

Abdul-Rahaman and Abdulai (2020)'s study reveals that group members and collective marketing participants are beneficial for the marketing and selling of their produce. These authors found positive and significant impacts of farmer group membership and collective marketing towards their farm net revenues. Not only did this study concur with other reviewed literature (Shapi, 2017) regarding access to market and its vast economic benefit to the farmers but also strongly support the value of farmers working together and engaging their resources for their benefits as a group. Additionally, this study will not only empirically test the farmers marketing perspective but similarly link the marketing elements to either availability of market information as well as the support services or facilities in that regard.

2.5 Summary of the chapter

The main objective of the study was to investigate the limiting and success factors affecting the entrepreneurial action of the farmers at Etunda Green Scheme project in Namibia. The literature reviewed that there are a few studies that have been conducted on the Namibian Green Scheme projects in the past.

Previous studies evaluated the Green Scheme projects in totality and attempted to validate their contribution or non-contribution thereof to the socio-economic wellbeing of individuals. There was little evidence of any researcher that has investigated the Green Scheme project in the specific areas of demographics of the farmers, the business environment and the overall green schemes entrepreneurial action in application. This study sought to fill this identified gap.

From the reviewed empirical literature, it was evident that the subjects of leading individual entrepreneurs and macro business environmental factors, plays a very important role in the success of entrepreneurship in general. Furthermore, it is also evident within regional and national developmental documents, that poverty eradication is a priority and, increasing agricultural productivity, especially for small-holder farmers is listed as one of the most effective vehicles as well as priority areas to achieving that. Also, investing in enhancing the technical skills development of these type of farmers is a prerequisite to that. The next chapter deals with the research methods used to gather and analyse data pertaining to these issues.

CHAPTER 3: RESEARCH METHODS

3.1 Introduction

This chapter gave an insight into the main research objective, the appropriate research approach, the methods and instruments of data collection and analysis adopted to address the objectives. It presented what was done to address the research objectives and how the research was carried out. It justified the design and explained why the selected methods were appropriate for the research objectives, including the feasibility of the whole study process (Saunders, Lewis, & Thornhill, 2007). The chapter also explained how the data were analysed and gives full details on how the researcher was able to come up with the solution to the problem statement the study sought to address. Lastly, the measures used to address the expected academic standards concerning ethical considerations were also highlighted in this chapter.

3.2 Research Design

According to Creswell (2014) research designs are types of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research. On the other hand, Mouton (1996) described research design as a set of guidelines and instructions to be followed in addressing a research problem. Others have called them strategies of inquiry (Saunders, Lewis, & Thornhill, 2007).

The designs available to researchers have grown over the years as computer technology has advanced data analysis complex models and as individuals have articulated new procedures for conducting social science research.

According to Saunders, Lewis and Thornhill (2007) research onion context, this study appropriately adopted a Survey research strategy. The Survey strategy design was feasible for this study as it was one of the finest and economical research strategy designs available. Survey research design is most appropriate in collecting rich and reliable data (Saunders, Lewis, & Thornhill, 2007). Surveys tend to be used in quantitative research projects, and involve sampling a representative proportion of the population (Bryman, 2012). The Survey strategy is mostly used to observe contributing variables among different data and it permits the collection of vast data that will be used to answer the research questions.

The study used a quantitative research approach to produce descriptive statistics of the leading farming entrepreneurs and their experiences when starting up and operating their ventures at the Etunda farm. Quantitative data was collected using questionnaires. Quantitative research involves the analysis of numerical and quantifiable data (Creswell, 2014). According to Leedy and Ormrod (2012) quantitative research is also used for testing the relationships between given variables (which is not the case for this study) and the main tool used in quantitative research is a questionnaire.

3.3 Population

Leedy and Ormrod (2012) defined a population as the total number of elements that are of interest to a researcher. Leedy and Ormrod (2012) further argued that all members of the population of interest should be in a position to provide answers to the questions raised should they be selected to form part of the sample. The exact current number of farmers registered and operating in Etunda could not be precisely established at the time of conducting this study. However, previous reports and studies (AgriBusDev, 2017) (Shapi, 2017) estimated the total number of farmers operating in the Etunda project to be close to 82 farmers (eighty-two) whereby 65 are Small Scale Irrigation farmers (SSIF) and 17 are Medium Sized Irrigation farmers (MSIF). Without concrete data on the contrary, this study therefore concurs with the estimates of the above scholar together with the estimates given by the project managers regarding the number of farmers operating at Etunda green scheme. The assumption held was that there were approximately 75 farmers operating in Etunda, and therefore, the population under study was the 65 SSIF. Furthermore, it was not possible to establish the type of crop produced per farmer in operation as this data was not specifically the focus of the study.

3.4 Sample

Sampling is a technique that is used for selecting a sample (Leedy & Ormrod, 2012). Since it can be time consuming and expensive to use every member of the population, samples ware used in order to derive population characteristics.

According to Saunders (2003) samples are used because it is impractical to get the entire population to participate.

3.4.1 Sampling Size

For the purpose of this study, a sample of 56 farmers was drawn from the population of 65 small-scale irrigation farmers registered and operating in Etunda green scheme project. The sample of 56 was arrived at by using Slovin's Formula of Sampling. The formulas Mathematical illustration used was as follows:

$$n = N / (1 + Ne^2)$$

Where : n = Number of samples,

N = Total population and

e = Error tolerance (level).

A sample size has been calculated at a confidence level of 95 percent, giving a margin of error of 0.05. It is for this computation that the Slovin's formula was believed by the researcher to be effective and with a desired degree of accuracy.

3.4.2 Sampling Method

There are probability and non-probability sampling methods. This study used probability sampling method as in the form of simple random sampling. This is when every member of the population has the same chance of being selected to participate in the study. The sample consisted of small scale farmers who were selected using random sampling technique.

It was random because each farmer within the Etunda green scheme project had an equal chance of being selected to partake in the study. Another factor which influenced the choice of sampling technique was the willingness to participate in the research. Each small scale farmer was allocated a number that was different from the other, and all numbers were placed in a hat, and taken out one by one. The selected respondents were requested to complete a questionnaire with the assistance of the researcher or questionnaire administrator.

3.5 Research Instruments and Data collection procedures

The primary tool for data collection used for this study was a questionnaire. A questionnaire is a set of questions prepared by a researcher on a given subject of interest to collect responses from the selected sample (Leedy & Ormrod, 2012). Using the survey questionnaire provided the researcher with more control over the research process as it allowed for a large collection of data from a sizeable population in an economical way and it is an efficient data collection tool when the researcher knows what is required and knows how to measure the variables concerned (Saunder, 2003). The choice of using questionnaires in this study was informed by the number of respondents and the type of the study undertaken. This study made use of a sample of 56 respondents, therefore, making the questionnaire a viable method to collect data.

3.6 Validity and reliability of the instruments

According to Leedy & Ormrod (2012) reliability in research refers to the extent that research instruments will produce similar scores whenever given to the same population. On the other hand, validity refers to how research instruments measure what was intended for measurement. In addition, Middleton (2019) emphasized that reliability is about consistency of a measure while validity is about accuracy.

Therefore, it was important for the researcher to consider validity and reliability by establishing an appropriate research design, and choosing appropriate sampling method and research instrument (Middleton, 2019). Accordingly, the research instrument was aligned to the objectives of the study and were given to experts in the field to validate them. In the same vein, a pilot study was conducted to test the reliability of research instruments. Moreover, the pilot test of questionnaires was based on the questions that the researcher used in the main study. The philosophy that supported the preliminary test of collecting data was to determine the practicability of the method intended to be used by the researcher in the main study (Taherdoos, 2020). The preliminary collection of data determined the reliability of the research tools since it permitted modification and correction of difficulties or concerns that were encountered while the data collection was in progress (Li, 2016). Therefore, in order to ensure that the data that assembled would be truthful, the study employed a close-ended questionnaire method of collecting data which gave assurance of reliability, credibility and honesty.

3.6.1 Administration of the questionnaire

Concerning the actual administration of the questionnaire, firstly, the questionnaire was formulated under the review of the supervisor prior to distribution. The content of the questionnaire was carefully explained and reviewed with the respondents and all queries were dealt with before handing it out for the actual survey. During the survey, the researcher observed the Covid-19 protocol by wearing a safety musk, carried a sanitizer as well as application of social distance measure. The research began with a verbal introduction or background information of the visit to the respondent's location or field, presenting the research cover letter to evidently support the aim of the visit and strongly explained to all the respondents that the study aimed to investigate factors affecting their entrepreneurship action at the Etunda green scheme project.

The questionnaires were self-administered by the researcher. This was done in order to clarify where respondents felt it was necessary. It was also done to ensure that the selected respondents personally completed the questionnaires. The researcher highlighted to each respondent any ethical issues, such as their rights, privacy and confidentiality of information during the data collection process. After questionnaires were administered, they were collected for analysis. Out of the 56 questionnaires that were administered, only 42 were successfully retrieved. The questionnaires contained structured questions using a Likert scaling format. The questionnaire was structured in this manner in order to make it easy for the respondents to complete within the shortest time possible. As

suggested by Baker (2003) effective communication depends on the design and phrasing of the questions. After designing the questionnaire, a pilot test was conducted to check whether the questionnaire was ready for application (Saunders, Lewis, & Thornhill, 2007).

3.7 Data analysis

According to Blumberg, Cooper and Schindler (2011) data analysis requires a technique to reduce accumulated data to a manageable level, developing summaries, looking for patterns and applying statistical techniques. The data collected was cleaned, coded and edited for errors, mistakes, uniformity and completeness. Microsoft Office Excel software version 2019 was used to generate descriptive statistics during the analysis of the quantitative data. Quantitative data collected was presented in tables and graphs using Microsoft Office Word and Excel 2019 computer applications. Descriptive statistics were used to interpret the data and compare the responses of respondents regarding individual and commercial factors affecting their entrepreneurial process at the project. Concerning hypothesis development and testing, this study used the Aspen Network of Development Entrepreneurs (ANDE) framework indicators as a guiding source, which is tailored and modified to fit the Namibian context. In the end, all the information collected was summarized and synthesized to obtain the overall results of the study.

3.8 Research ethics

According to Creswell (2012) ethical reporting and writing research needs to be honestly reported, shared with participants, not previously published, not plagiarized, not influenced by personal interests and duly credited to authors that made the contribution. All information gathered during the fieldwork was treated with utmost respect and confidentiality. The data collected has been used for the purposes of this research only.

Honesty was displayed at all times with the respondents, with respect to the purpose of the research and all information has been cited truthfully. Informed consent was obtained, where the respondents were given full information of what the study entails and their right to withdraw whenever they felt like. Participation was voluntary and no respondent was coerced or forced into participating in the survey. Hard copies of the data such as questionnaires are being kept in a lockable cabinet that can only be accessed by the researcher for a period of five years and will be destroyed by shredding. The key to the cabinet is being kept by the researcher alone.

3.9. Summary of the chapter

This chapter presented the methodology that was used for collecting the data. The chapter explained the research design that was adopted, the instrument used for data collection and analysis, measures to ensure validity and reliability of the data collection instrument and ethical considerations observed when collecting the data. The next chapter presents the results of the study and their discussion.

CHAPTER 4: RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presented research results obtained from the sample of 42 small-scale irrigation farmers operating in Etunda GSIP. The chapter was organised into four sections: Response rate, demographical data (Individual factors) of respondents and commercial factors affecting farmers' entrepreneurial process. The chapter ended with the analysis and discussion of the research results.

4.2 Response rate

Table 4.1: Response rate

	Distributed	Retrieved	Not Retrieved
Questionnaires	56	42	14
Percentages	**100%**	**75%**	**25%**

Source: Survey results (2021)

A considerably high percentage of questionnaires that were distributed to various farmers around and within Etunda GSIP were successfully retrieved and analysed. From a total sample of 56 questionnaires distributed, 42 questionnaires were retrieved and analysed representing a 75% response rate. Only 25% of the questionnaires that were distributed were not retrieved.

4.3 Demographical data of respondents

4.3.1 Gender of the respondents

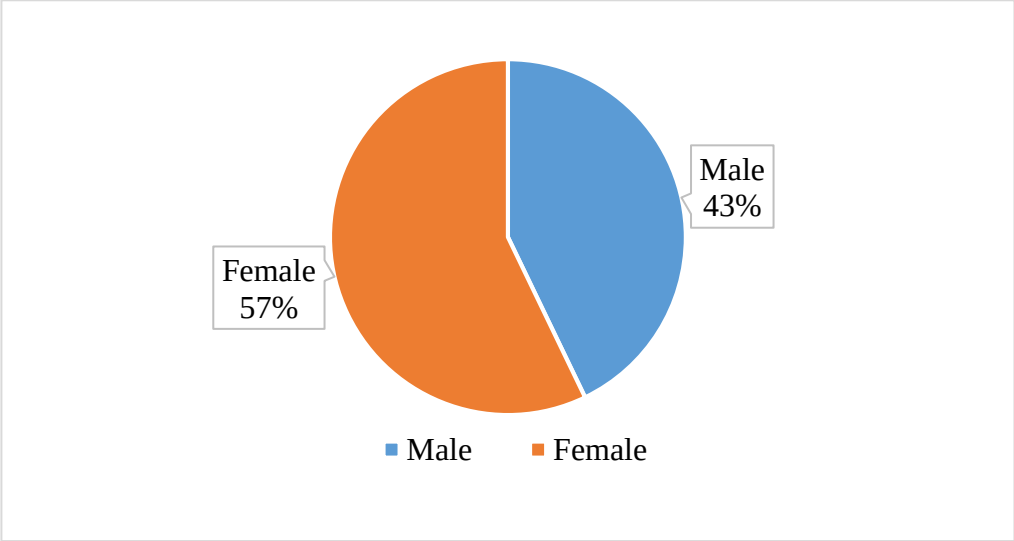

Figure 4.1: Gender of the respondents

Source: Survey results (2021)

The majority of respondents who participated in this study were female. From a sample of 42 research participants, 57% were female and the remaining 43% were male. However, due to the sample size, it could not be concluded based on the above statistics that there were more female farmers owning and operating fields in Etunda GSIP than male farmers.

4.3.2 Legal ownership classification status

According to figure 4.2 below, the majority (74%) of the respondents indicated that legal ownership classification status is not applicable, while the remaining percentage (26%) of the respondents left the question unanswered or blank. The statistics show that none of the respondents registered their projects as either sole proprietorship, partnership or corporation.

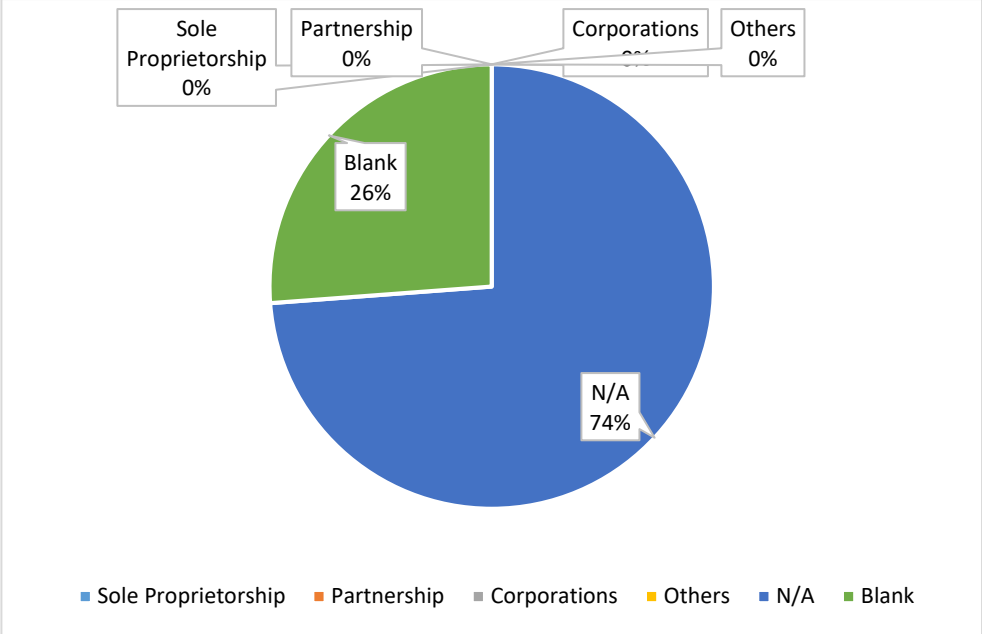

Figure 4.2: Legal ownership status

Source: Survey results (2021)

4.3.3 Level of educational of the respondents

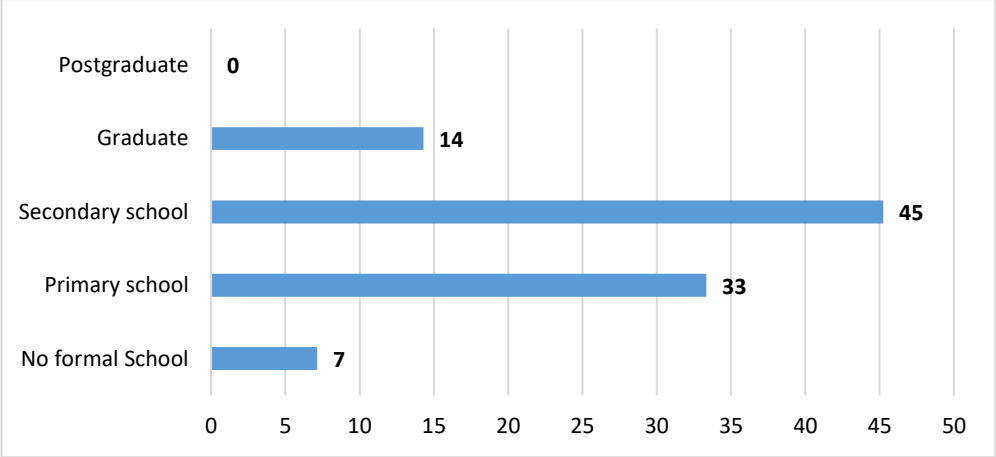

Figure 4.3: Educational background of research participants

Source: Survey results (2021)

It was evident from figure 4.3 that from the sample of 42 research respondents, the majority, 45% of farmers attended formal schooling until Secondary school. 34% of respondents only attended Primary school, 14% attended undergraduate courses and the remaining 7% had not attended formal schooling at all. The

figures also indicates that none of the farmers had studied up to postgraduate level. The statistics above show that most small-scale farmers operating in Etunda attended only Secondary and Primary school education. The researcher was not able to conclude as to why that was the case at the project, however the same results gave the researcher the confidence that the farmers were able to understand the questions asked of them and thereby made their response meaningful and valuable.

4.3.4 Agricultural Training skills of the research participants

Figure 4.4 presents the percentage of farmers that received agricultural training and those that did not. Comparing general formal education and agricultural training skills received by farmers, 71% of the farmers confirmed to have received agricultural training and the remaining 29% indicated that they did not.

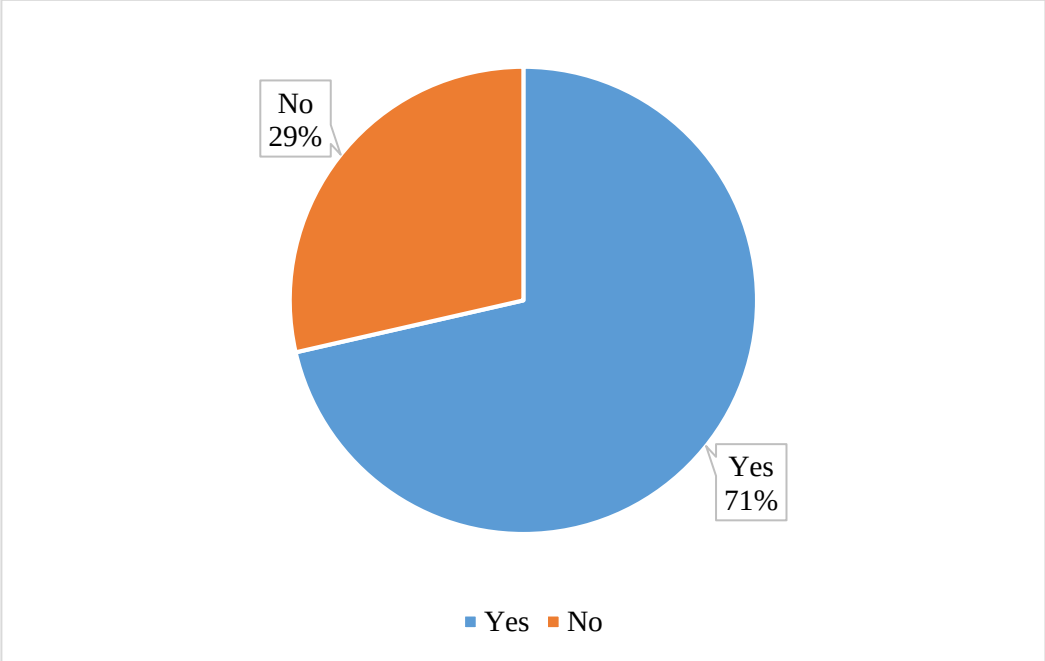

Figure 4.4: Agricultural training skills

Source: Survey results (2021)

4.4 Commercial factors affecting small-scale farmers' entrepreneurial process

This section presents the statistics information about the respondent's perception of the entrepreneurial ecosystem on the key elements of policy environment, finance, business support services, market environment, infrastructure, human capital and any other general elements that are able to direct or indirectly affect the respondent's projects operations.

4.4.1 To what degree are the following elements of the policy environment an obstacle to the current operations of your project?

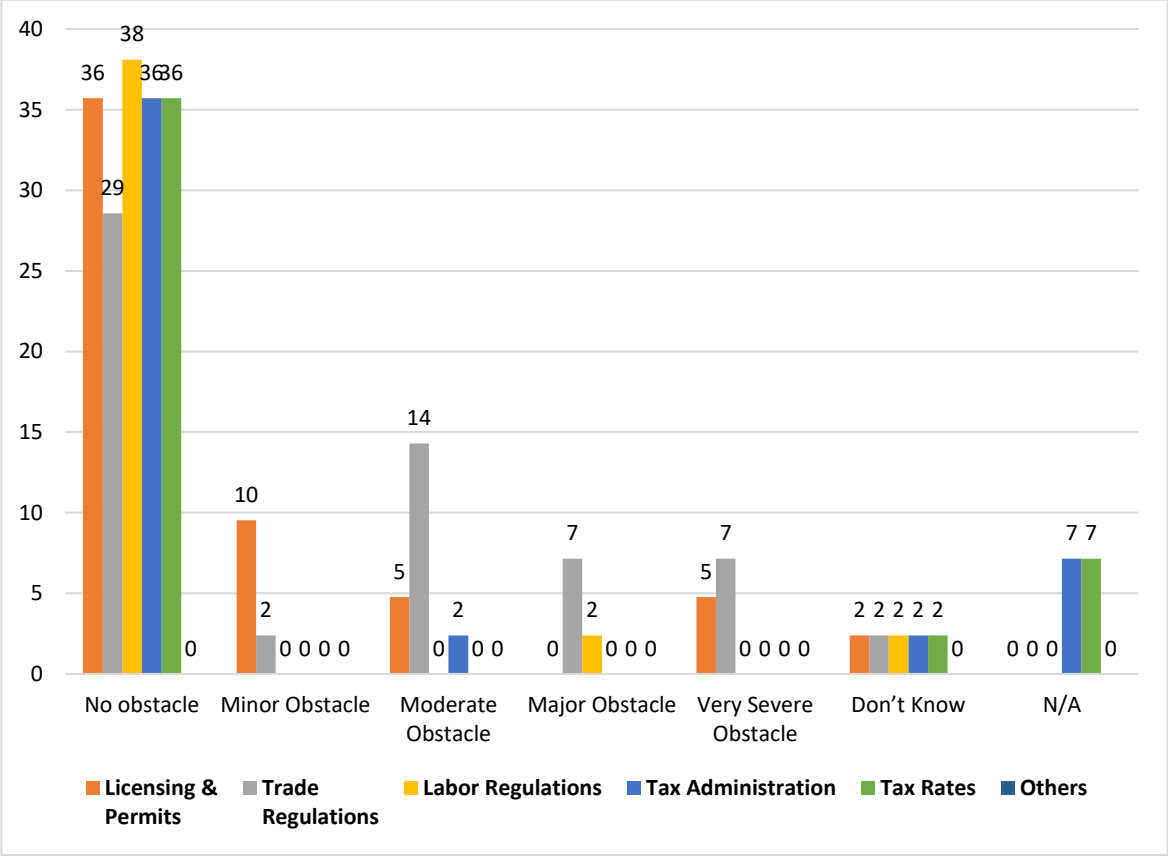

Figure 4.5: Elements of Policy environment

Source: Survey results (2021)

The perception of the respondents concerning the elements of the policy environment as in an obstacle to their current operation of their fields are as indicated in the figure above. Majority 36% of respondents indicated that they do not experience any obstacle around the Business licensing and permits, while 10%, 5% and 5% of respondents indicated that they experience minor obstacle, moderate obstacle and very severe obstacle respectively. Concerning Trade regulations element, majority 29% of the respondents indicated that they do not experience any obstacle at all.

However, 2%, 14%, 7% and 7% of the respondents indicated that they experience minor, moderate, major and very severe obstacle around the same element respectively. As for labour regulations, Majority (38%) of respondents also indicated that they do not have any difficulty with this element. Only 2% indicated that this same element presents a major obstacle to their current operations of their projects. Regarding Tax administration and Tax rates, Majority 36% of the respondents each indicated no obstacle and only 2% indicated moderate obstacle around the element of Tax administration. Last but not least, for all the policy environment elements (Business licensing and permits, Trade regulations, labour regulations, Tax administration and Tax rates) 2% of the respondents each indicated that they do not know if all those elements present any obstacle to their operations, while 7% of respondents for both Tax administration and Tax rates indicated that they were not applicable.

4.4.2 To what degree are the following elements of finance an obstacle to the current operations of your project?

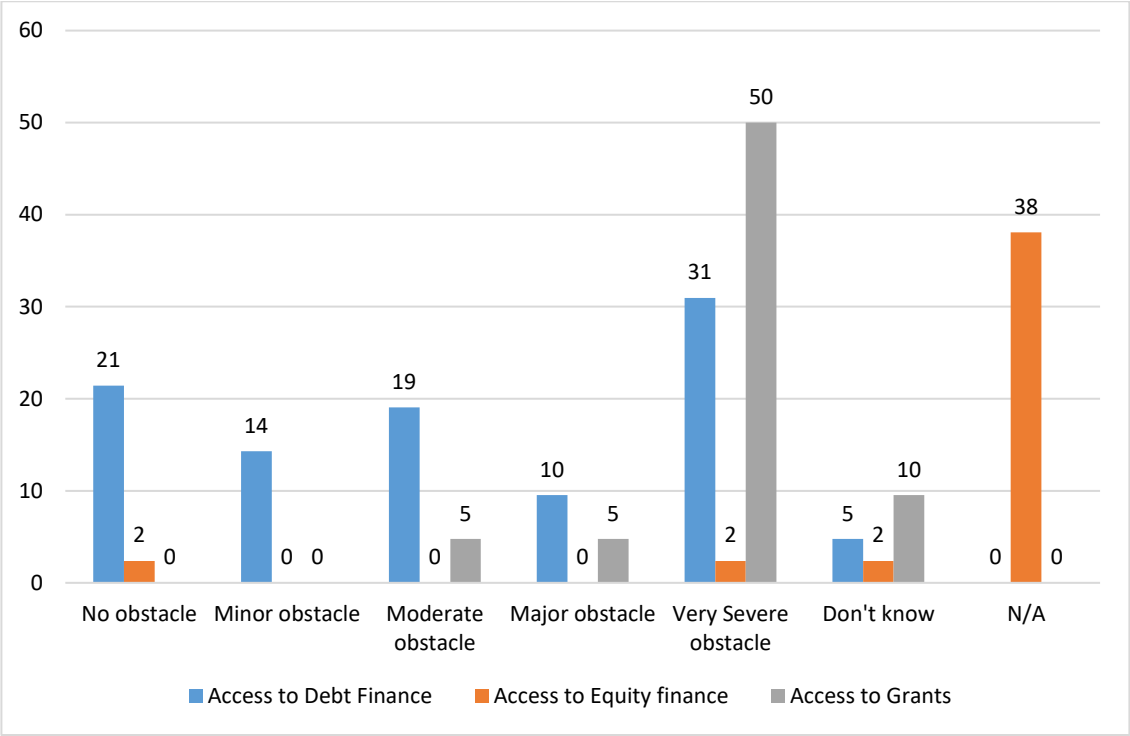

Figure 4.6: Elements of finance

Source: Survey results (2021)

According to figure 4.6 entrepreneurship elements of finance, Majority of respondents (31%) indicated that access to debt financing presented a very severe obstacle to their current project operations. 21%, 19%, 14% and 10% of respondents indicated that access to debt financing is No obstacle, moderate obstacle, minor obstacle and major obstacle respectively. As for access to equity financing element, 30% of respondents indicated that it is not applicable to their project's operations. Last but not least, concerning access to grants as an element of finance, majority (50%) of respondents indicated that this element presents a very severe obstacle to their current project operation.

4.4.3 To what degree are the following elements of business support services an obstacle to the current operations of your project?

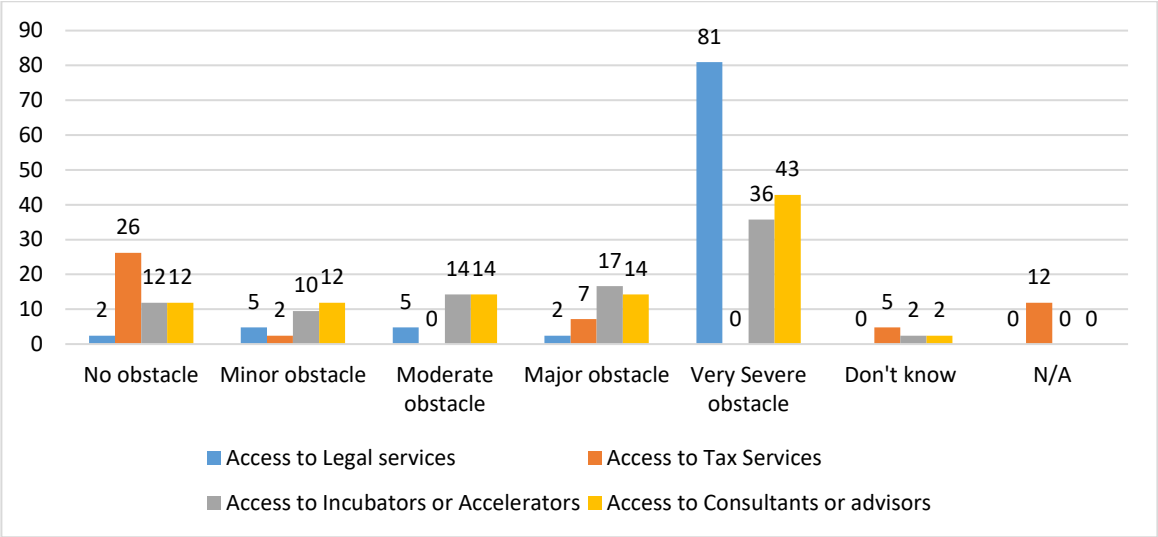

Figure 4.7: Elements of Business support services

Source: Survey results (2021)

The majority (36%) of respondents indicated that access to legal services presents a very severe obstacle towards their operation, while 5%, 5% and 2% indicated minor, moderate and major obstacle. Under this element, only 2% of respondents indicated no obstacle at all. Concerning access to tax services, majority (26%) of respondents indicated no obstacle, while 12%, 7% and 5% indicated not applicable, major obstacle and don't know respectively. Regarding access to incubators/accelerators, the majority (36%) of the respondents indicated very severe obstacle and only 12% of them indicated no obstacle in this regard. 17%, 14% and 10% of respondents indicated that this element is major, moderate and minor obstacle respectively. Figure 4.7: elements of business support services or to be precise access to consultants/advisors: 43% indicated that this presents a

very severe obstacle, while 14%, 14%, 12% and 12% of the respondents indicated major, moderate, minor and no obstacle correspondingly.

4.4.4 To what degree are the following elements of the market environment an obstacle to the current operations of your project?

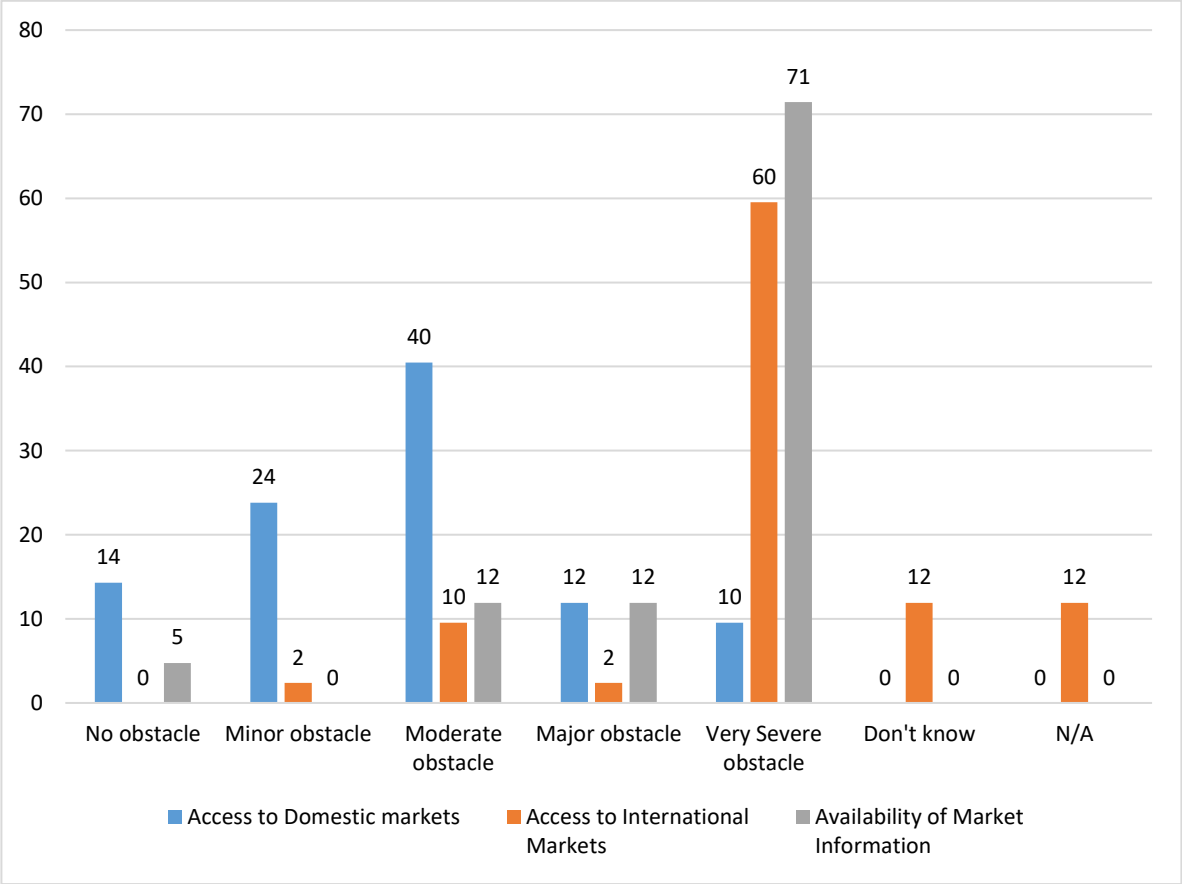

Figure 4.8: Elements of the market environment

Source: Survey results (2021)

According to figure 4.8, the majority (40%) of the respondents indicated that they find accessing domestic markets a moderate obstacle, while 24%, 14%, 12% and 10% indicated minor obstacle, no obstacle, major obstacle and very severe obstacle respectively.

As for accessing international markets, 60% of the respondents indicated very severe obstacle, while 12% of them indicated that they don't know and another 12% responded that it is not applicable. Figure 4.6 also presents the element of availability of market information respondent's statistics, whereby 71% and majority of the respondents indicated very severe obstacle and only 2% indicated no obstacle at all. Still on the same element, 12% of the respondents indicated availability of market information as a major obstacle and another 12% of respondents indicated moderate obstacle.

4.4.5 To what degree are the following elements of infrastructure an obstacle to the current operations of your project?

According to Figure 4.9 below, the majority (62%) of the respondents indicated that telecom or internet does not present any obstacle to them as they run and carry out operations at their projects. Only 5%, 2% and another 2% of the respondents indicated minor, moderate and very severe obstacle correspondingly. As for electricity element of infrastructure, 43% (majority) indicated that electricity presents a moderate obstacle to them, while only 4% indicated that it does not. Another element of infrastructure was water, where by majority (38%) of the respondents indicated moderate obstacle and another 33% of respondents indicated it as a major obstacle. Another element of infrastructure was transport. According to the figure 4.8, approximately 76% of the respondents indicated that transport element presents a very severe obstacle to them as they run their operations at the Etunda farm. Only 2% of the respondents indicated that they do not experience any obstacle in that regards.

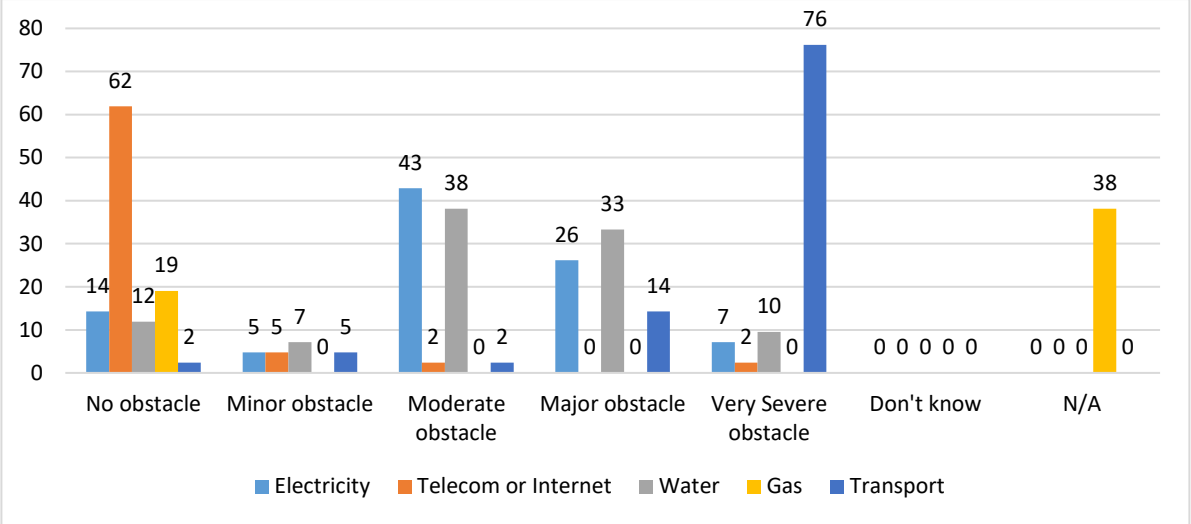

Figure 4.9: Elements of infrastructure

Source: Survey results (2021)

4.4.6 To what degree are the following elements of human capital an obstacle to current operations of your project?

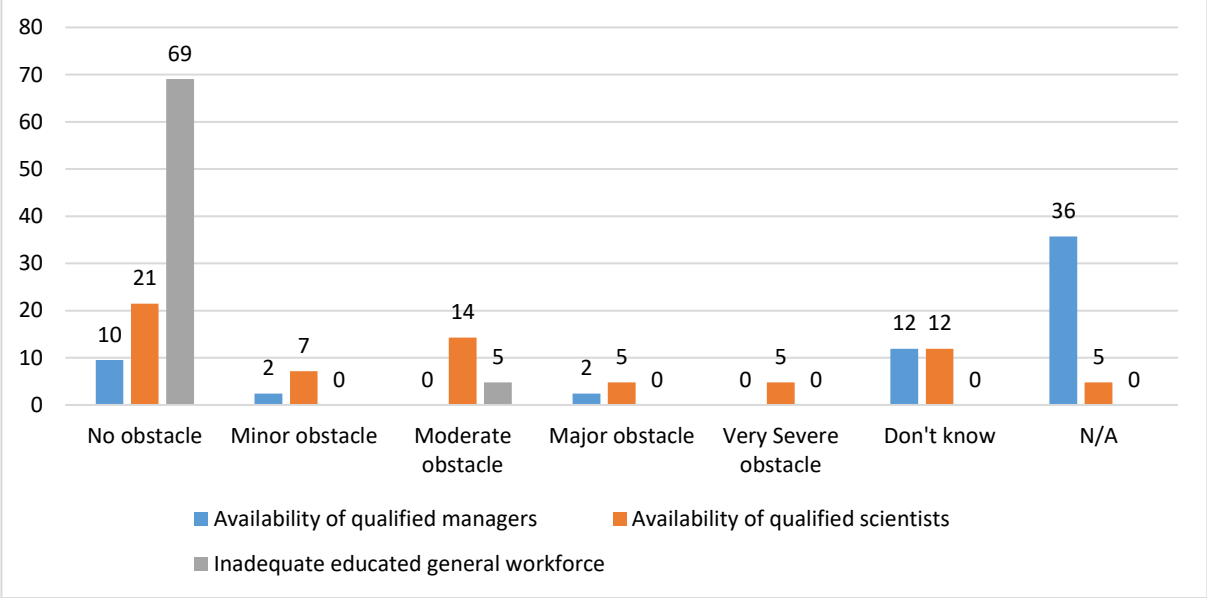

Figure 4.10: Elements of human capital

Source: Survey results (2021)

Figure 4.10 on elements of human capital above demonstrates that the majority 69% of respondents indicated that they do not experience any obstacle when looking for educated general workforce and approximately only 5% of them indicated moderate obstacle when doing so. On the other hand, majority of respondents (36%) responded that availability of qualified manager is not applicable to their project operation, so is 5% of the respondents in regards to availability of qualified scientist.

4.4.7 To what degree are the following elements of the general business environment an obstacle to current operations of your project?

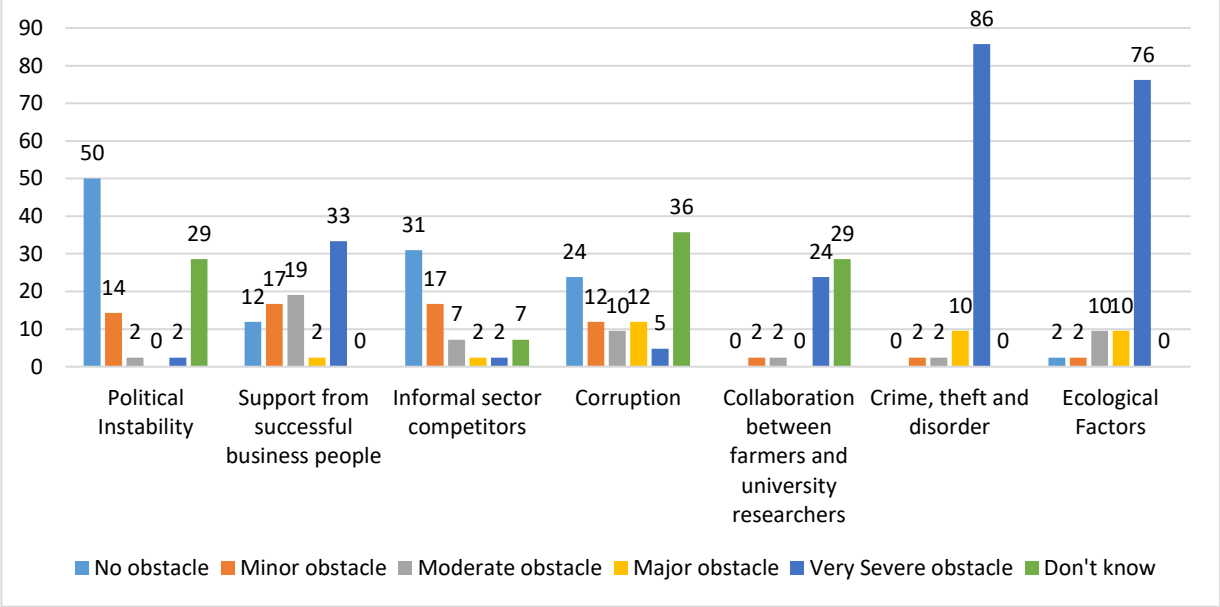

Figure 4.11: Elements of general business environment

Source: Survey results (2021)

According to figure 4.11 above, it is clear that crime, theft and the disorder element negatively affected the majority (86%) of the respondents as they indicated that as a very severe obstacle to their operations in Etunda.

Additional to those, 10% of the respondents also indicated it as a major obstacle and 2% of them indicated crime, theft and disorder as both moderate and minor obstacle to their project operations. The figure also present ecological factors as one of the elements of the general business environment, whereby majority (76%) indicated very severe obstacle, and 10% of the respondents each indicated moderate and major obstacle. Only 2% of the respondents demonstrated that their project does not experience any hindrance with any ecological factors.

As for Political instability and corruption, majority of respondents (50%) indicated that they do not experience any obstacle in regards to political instability, while 29% and 14% of the respondents indicated that don't know and experience minor obstacle respectively. As for corruption, the figure clearly indicates that majority (36%) of the respondents they don't know. 24% of the respondent indicated corruption is no obstacle and only 5% of them indicated that corruption presents a very severe obstacle to their projects' operations. The support from successful business people was also among the general business environment elements, whereby majority (33%) of the respondents indicated this element as very severe obstacle and only 12% of them indicated that it is no obstacle to them. 19%,17% and 2% of the respondents indicated moderate obstacle, minor obstacle and major obstacle respectively.

Regarding the element of collaboration between farmers and university researchers, majority (29%) of the respondents indicated that they do not know and 24% of them indicated that this element presents a very severe obstacle to their operation in the project.

The last element but not the least in this category was practices from informal sector competitors, whereby 31% of the respondents indicated that they do not experience any obstacle in that regard. However, 17%, 7% and 2% of respondents indicated minor obstacle, moderate obstacle, major obstacle and very severe obstacle respectively.

4.5. Discussion of research results

Discussion of findings was done under three subheadings namely: (1) the limiting factors affecting farmers' entrepreneurial action, (2) success factors affecting farmers' entrepreneurial action and (3) the entrepreneurial action in application at Etunda GSIP.

4.5.1 Limiting factors affecting farmers' entrepreneurial action at Etunda farm

4.5.1.1 Elements of Policy environment

According to Bignotti, Antonites and Kavari (2021)'s regulatory framework, non-financial support and social capital are an important component in enhancing entrepreneurial performance in agriculture. This signifies that these factors are necessary for creating an enabling environment for entrepreneurial performance. As from the elements of the policy environment, the findings from this study revealed that an average farmer operating at Etunda GSIP is not operating as a registered legal entity. This meant that their projects are only registered in their names and that is the model adopted at Etunda GSIP, which is the arrangement from the government's green scheme policy.

This clearly indicated that these farmers do not trade as legal business entities and it is therefore the argument of this study that this raises trade limitations for the small-scale irrigation farmer at the green scheme. An example of this is that if the government is unable to purchase crops from these farmers, it consequently also means that these farmers are not legally able to trade with or make a trade agreement with any other potential buyer. This also appears to have presented a major limitation and loss for the Etunda GSIP farmers' produce at times, as scholars Davari, Zehtabi, Negati and Zehtabi (2012) argues that a registered entity is more acceptable for business agreements and that only registered entities are able to engage in activities or deals such as opening of commercial bank accounts, entering into trade contracts or even becoming liable under their own names and not necessarily that of the individual farmer.

Other researchers argued that registered entities are regulated and managed by the government authorities so that in a case of any dispute between members or anyone else, they can easily approach any such authority and resolve their dispute effectively (Bignotti, Antonites, & Kavari, 2021). Additionally, contractual trade arrangements are of importance because they form a sub-chain of the market (market segment) that could influence the efficiency of the market and the profits made (Kyomugisha, 2015). It was correspondingly under this finding that the researcher concludes that these small-scale farmers as non-registered businesses may not be paying tax or perhaps not necessarily paying it efficiently. According to OECD (2005) tax policies related to agriculture can take different forms depending on the country, they can generally be classified according to the

following typology: taxes on income, profits and capital gains; social security contributions (which are a mixture of tax, duty and insurance); taxes on payroll and workforce which concern farm operators as employers; taxes on property (including taxes on property transfer) and taxes on goods and services (including sales tax and VAT).

The results from the study also show that customs and trade regulations present a challenge for the small-scale irrigation farmers operating at the green scheme. It is the argument of the researcher that this could have come about as the result of the policy design that green scheme small-scale farmers are obligated only to directly sell their production to the government as their sole buyer. This meant that the adopted model did not necessarily allow them to sell to any other buyer in the market.

4.5.1.2 Elements of finance

Concerning the element of finance, this study's results show that among the majority of the farmers experience very severe obstacles when it comes to accessing debt financing of their productions. However, some of the respondents commented that it is not necessarily that they do not have access but rather the method of debt they are given. On this, some farmers indicated that the funding given is not necessarily in the form of the money but rather in the form of a voucher which is limited in terms of the resource or the supplier of the necessary resources they may need.

It seems to the researcher that the voucher was used to enforce the correct use of the funds by the farmers. Although the voucher method appeared to be suitable with the registration model adopted at the project, the researcher is of the view that it might have created complications around the farmer's contribution to tax especially that not all respondents claim to have efficiently made use of it. Some of the respondents also commented that they understood the intention of the voucher, however the fact that the trading partners where the voucher could be used did not always have the needed or necessary resources (such as fertilizer or pesticides) that farmers needed to run their projects, it somehow set them up for failure as they lost harvests, thereby affecting their income which meant that they were not able to make the loan repayments.

The study findings also showed that the majority of the respondents indicated that access to equity financing was not applicable. This also meant that the farmers at Etunda GSIP do not have the option of selling ownership in their project and raise extra funds to expand or improve their project's operation, as the model of the farm operation does not accommodate such.

As cited by Urban and Dlamini (2020) Public policy supported by effective institutions is one of the key strategies for promoting entrepreneurial activities (Walter & Block, 2016) which in turn can act as a tool for addressing severe macro-economic problems that plague many developing countries, particularly in Africa where high levels of unemployment and poverty are prevalent (Brixiov, Ncube, & Bicab, 2014).

They also wrote that extensive research indicates that a major prerequisite for a thriving enterprise sector in any country is the existence of an enabling environment, whereby such an enabling environment is comprised of institutions and polices which render political and economic stability and also providing market access needed to start and grow an enterprise (Naude & Havenga, 2005).

A growing number of research projects support these arguments, where for instance the analysis of the World Bank's global enterprise survey data collected from 100 countries revealed that an improved regulatory environment significantly accelerates the number of registered businesses (ILO, 2014; Klapper *et al.*, 2009; WEF, 2017). However, while acknowledging that governmental intervention can be used as a tool to foster entrepreneurship, the problem must also be recognised that there is no one-size-fits-all policy solution to drive entrepreneurship, since transferring policies across nations that seem to contribute to economic development in one nation may not have any impact on another nation (Urban, 2019). Undeniably, it is the cultural and institutional distinctiveness of each country that contributes to different policy impacts on entrepreneurial activity (Stenholm, Acs, & Wuebker, 2013).

4.5.1.3 Elements of Business support services

The study found that Majority of the respondent small-scale farmers indicated that they were severely obstructed by access to legal service, access to incubators/accelerators as well as access to consultants or advisor as they run and experience the operations of their projects at the Etunda GSIP.

This means that whenever these green scheme small-scale farmers experience setbacks for example if a form of theft or any other wrongdoings around their field, they do not necessarily have somebody that they could report to specifically in attendance to represent them from the legal perspective. As for the other two elements, access to incubators/accelerators and access to consultants/advisor, the study's results shows that small-scale irrigation farmers operating at Etunda GSIP are on their own, which meant that they do not necessarily have a reliable direct representative official team of business support services professional that benefit them with the technicalities they experience when running their projects at Etunda GSIP.

Related to an ecosystem's infrastructure are the ancillary professionals and support organisations that provide the services entrepreneurs need to found and grow their ventures. For example, new ventures in virtually every industry require legal, accounting, banking, insurance and information technology services (Isenberg, 2010). Ideally an entrepreneurship ecosystem should contain professionals of these varieties that are adept at working with entrepreneurs and are willing to tailor their services and even their compensation structure, to suit early-stage ventures (e.g., working on a contingency basis or in exchange for equity; Isenberg, 2010). It is most effective if these services are integrated, accessible and priced appropriately (Arabi & Abdalla, 2020).

4.5.1.4 Elements of the Market environment

Findings from this study revealed that the majority of small-scale farmers are currently experiencing severe, major and moderate obstacles concerning the element of market environment such as access to domestic markets, access to international markets as well as availability of market information. According to Urban and Dlamini (2020) access to an open market is a key driver of entrepreneurship growth as it can increase competition, lower prices and maintain pressure on suppliers and producers and keep them innovative and efficient (Herrington, Kew, & Mwanga, 2017). The literature shows that one of the critical impediments to the growth of an enterprise is access to markets (Urban & Hwindingwi, 2017).

The government has a role to play in ensuring that entrepreneurs or small business owners are able to access markets through addressing market imperfections and providing a "level playing field" for them to compete in the marketplace (Urban, 2015). As cited in Shapi (2017), Mashindano *et al.*, (2011) argued that market access and attractive prices for producers translate into growth, leading to poverty reduction. One of the green scheme's objectives is to diversify agricultural production and products for the domestic and export markets (Ministry of Agriculture, Water and Forestry, 2008).

According to the green scheme policy and the adopted business model, farmers should sell their produce via the service provider, which is the government. This was the reason the government established the Agro-Marketing and Trading

Agency (AMTA) with an objective of coordinating and marketing the agricultural produce from the green schemes in the whole country. This meant that farmers were only expected to produce and not to worry where to sell their produce. In his findings, Shapi (2017) wrote that it was a little bit surprising to see that AMTA, as a designated market for farmers, did not feature prominently but instead it fell under other markets (22%) although it (AMTA) was supposed to be the major market destination of farmers to sell their produce. It is also for this reason that the negative findings of this study around small-scale farmers' element of the markets may not necessarily come as a surprise. Cited in Kyomugisha (2017), Devaux *et al.* (2008) pointed out factors such as changes in policies, markets and technology availability, production or marketing experience and collective action are necessary for the market to be efficient.

4.5.1.5 Elements of Infrastructure

Regarding the elements of infrastructure, this study's findings revealed that electricity, water and transport are among the obstacles or challenges the majority of respondent farmers are currently worried with. It is however not really clear to the researcher as to the rationale of the study result in this regard, especially that the adopted green scheme business model indicates that government is the service provider and responsible for efficiency around these infrastructural mechanisms.

Roundy (2017)'s studies of entrepreneurial ecosystems in large urban areas revealed that successful ecosystems are built on a foundation of several layers of infrastructure (Isenberg, 2010). This infrastructure is absent, or limited, in small town entrepreneurial ecosystems. For instance, for entrepreneurs to engage in the activities required to create and scale new ventures, including reaching customers, they are dependent on the physical components of a city such as its transportation infrastructure, stock of affordable housing and available office space (Roundy, 2017).

A thriving entrepreneurial ecosystem is also dependent on sufficient technological infrastructure, such as telecommunications technologies and high-speed internet access (Roundy, 2017). In general, technology is a conduit for the flow of information. A city or town's "cultural" infrastructure can also influence its entrepreneurial ecosystem. For instance, according to Roundy (2017) green spaces, theatres, museums and coffee shops can influence the quality of life a city can offer, which can attract and help to retain entrepreneurs and other members of the ecosystem.

Under the same element of infrastructure, this study also found that availability of fertilizer is among the small-scale farmer's limiting factors of their entrepreneurial process at the Etunda GSIP. Kyomugisha (2015) wrote that soft infrastructure such as access to credit facilities, market information and access to extension services are reported by Minten (1999) to have a positive effect on access to output markets, information flows as well as increased producer prices thus enhancing actors' market efficiency.

4.5.1.6 Elements of the general business environment

As for the general business environment, the study found that the level of support, collaboration between the Etunda small-scale farmers, local business people and university researchers, crime and some ecological factors are among the limiting factors affecting their agricultural produce project operations. Roundy (2017) wrote that entrepreneurial ecosystems comprise a dense network of formal and informal relationships among the components of an ecosystem. There is a constellation of connections among both individuals (e.g., entrepreneurs, investors, researchers) and organisations (universities, support agencies, government, large corporations) (Neck, Mayer, Cohen, & Corbett, 2004).

Indeed, the vibrancy of the ecosystem is a reflection of how deep and well-connected communities of entrepreneurs are with investors, advisors and supporters that "cut across sectors" (Case & Harris, 2012). Well-developed networks among the members of an entrepreneurial ecosystem are beneficial because they aid in the free flow of information, knowledge and skills both among ecosystem participants and from outside the system (Roundy, 2017). The genesis of such networks are events, including meet-ups, pitch competitions, "start-up weekends" and conferences, that connect individuals interested in taking part in the entrepreneurship community (Case & Harris, 2012). In his writing, Roundy (2017) also indicated that beyond creating relationships among ecosystem participants, events are also valuable because they help to generate "local buzz" – i.e., a sense of enthusiasm and anticipation about what is happening in the ecosystem that draws attention to it.

The study also found that theft is among the severe obstacle small-scale entrepreneurial farmers operating at the Etunda GSIP currently face. It is not clear as to who is committing this wrongdoing however, putting in consideration the overall setup of the farmer, especially that there is no fence or security officers on every other farmer's field or any other security mechanism around. It is the view of the researcher that theft is no surprise and thereby most likely to be a business of the day as there is no direct mechanism designed to prevent it from happening. NPC (2017) wrote that despite Namibia's aspiration to increase value addition through the growth at home strategy, create jobs and reducing import dependence, Namibia's agricultural sector is still constrained by a variety of challenges.

Literature on challenges affecting the Namibian agricultural sector has identified some of the challenges alluded to above as climate change, high cost of production and lack of skills among others (Shapi, 2017). Soil infertility has also been among the issues in Namibian agriculture as it leads to a decline in crop yield, which increases poverty and malnutrition since the majority of the people in Namibia, survive on agriculture. Continuous cultivation which is mostly practiced in Namibia, is observed as the main source of soil infertility leading to nutrient mining of the soil (NPC, 2019). According to NPC (2019) cost of production inputs such as fertilizers, water and electricity used for production purposes also obstructs the sector at large and Etunda GSIP in particular is no exemption. Table 4.2 below presents a summary of the limiting factors affecting small-scale farmers' entrepreneurial action at Etunda GSIP.

Table 4.2: Limiting factors affecting small-scale farmer's entrepreneurial action at Etunda GSIP

Limiting factors at Etunda GSIP
1. Legal ownership status
2. Elements of the policy environment: o Customs and trade regulations
3. Elements of Finance: o Access to Debt Finance o Access to Equity finance o Access to Grants
4. Element of Business Support services: o Access to Legal services o Access to Incubators/Accelerators o Access to Consultants/advisors
5. Element of Market environment: o Access to Domestic markets o Access to International Markets o Availability of Market Information
6. Elements of infrastructures o Electricity o Water o Transport
7. Elements of the general business environment: o Level of support from successful business people in the region o Research/development collaboration between businesses and university researchers o Crime, theft and disorder o Ecological factors (Pest, temperature)

Source: Survey results (2021)

4.5.2 Success factors affecting farmers' entrepreneurial action at Etunda GSIP

4.5.2.1 Level of education

According to Shapi (2017) the contemporary farming is not an art but a science. He argued that it is for that reason that a combination of both formal and practical education is essential for the modern farmers to farm successfully. This is imperative especially in African farming communities, as Africa has compounded farming limitations, be it soil fertility, climate change, access to credit, access to technology, pest challenges and thin agricultural market (Shapi, 2017).

It was evident from this study that the majority of leading small-scale farmers completed some formal schooling, which thereby enables them to quickly grasp and internalize any additional training she or he may receive. It was against this confirmation that this study noted that the level of education of the small-scale farmers at Etunda GSIP was among the positive and success factors affecting these farmers' entrepreneurial process.

Scholars argued that education and training of farmers is a key factor in promoting entrepreneurship in the agricultural sector (Kyomugisha, Mungisha, & Christopher, 2017); (Shapi, 2017); (Roundy, 2017); (Pliakoura, Beligiannis & Kontogeorgos, 2020). According to the findings of this study, farmers at Etunda GSIP went until Secondary school, primary school and most of them had received agricultural training thereafter.

This is therefore among the success factor and indicator of farming enterprise as the majority of these farmers had acquired both basic formal education and agricultural training which are both key to modern successful farming. The formal education arguably makes entrepreneurs able to quickly grasp and internalize any additional training they may receive (Shapi, 2017). Hence, with these statistics on the farmer's level of education, this study concluded that it was one of the key reasons why the small-scale farmers at Etunda are able to continuously operate to date.

4.5.2.2 Elements of Policy environment

The study also found out that many elements of the policy environment are not an obstacle to many farmers at the green scheme project, as majority of farmer's indicated that they have no difficulties with either labour regulations, tax administration as well as the tax rates. Scholars Urban and Dlamini (2020) argues that the more policymakers understand what entrepreneurs consider important, the greater the potential for policies to be better aligned with the actions of the entrepreneurs.

It was against the above finding that this study noted that those elements of the policy environment are among the success factors paving the farmer's entrepreneurship process at Etunda GSIP. Cited in Urban and Dlamini (2020) De Soto (2000) finds that the "costs of staying formal such as taxes, renewal of licenses and other bureaucratic requirements such as import licenses and workers" welfare weigh heavily on entrepreneurs.

4.5.2.3 Elements of Infrastructure

The statistics of respondents on elements of infrastructure indicated that small-scale farmers at Etunda GSIP are not experiencing any obstacles around telecommunications or internet channels. This meant that when it came to sharing of information or communication through telecommunications from the Etunda GSIP, cell phone network coverage was among factors that made their operations continue to exist. A thriving entrepreneurship environment is dependent on sufficient technological infrastructure such as telecommunications technologies and high-speed internet access (Roundy, 2017).

4.5.2.4 Elements of human capital

This study also found that whenever the majority of farmers needed to employ temporal or even permanent general workers, there was no obstacle in doing so as they were always available. This could mean that there are a lot of people in the region who preferred to work in the agriculturally based projects or it could mean that there is high unemployment in the region and either way this arrangement presented an advantage to the small-scale farmers operating at the Etunda GSIP. Urban and Dlamini (2020) argued that businesses operate according to the forecasts and scenarios that comprise surprises as well as certainties. However, as much as businesses factor in, uncertainty, the one thing that they want to avoid at all costs is the instability in the macro environment that results from political gridlock, extremism and political dysfunction.

4.5.2.5 Elements of the general business environment

According to the statistics of respondents around the element of general business environment, particularly the element of political instability and informal sector competition, this study found that the majority of small-scale farmers operating at Etunda GSIP are not in any way negatively affected by either political instability or informal sector competition. This meant that there is order and stability around the region and this presents an atmosphere for the farmers to operate their farms with certainty and no fear.

Roundy (2017) wrote that beyond the grassroots leadership provided by entrepreneurs and support organisations, entrepreneurial environments can also benefit from the support of local government through policies that emphasise economic development and support entrepreneurship (Case & Harris, 2012). Government leaders can act as strong advocates of entrepreneurship, create effective institutions that promote the creation of new ventures (e.g., opportunities for public/private partnerships) and enact "venture-friendly" legislation (e.g., tax benefits, the enforcement of property rights and contracts; Isenberg, 2010; 2011).

Table 4.3 shows the overall summary of the success factors affecting the small-scale farmers at the Etunda GSIP:

Table 4.3: Success factors affecting farmer**'s entrepreneurial action at Etunda GSIP**

Success factors at Etunda GSIP
a. Level of education
b. Elements of the policy environment: o Labour regulations o Tax administration o Tax rates
c. Elements of infrastructures o Telecom/internet
d. Element of human capital o Adequate availability of trained general workforce
e. Elements of the general business environment: o Political stability o Informal sector competition

Source: Survey results (2021)

4.5.3 Entrepreneurial action in application at Etunda GSIP

Although the majority of the small-scale farmers that participated in this study indicated that the Etunda GSIP generally presents income generation and food security opportunities for themselves and their families, the findings of this study revealed that the entrepreneurial action model adopted at the Etunda GSIP currently presents more limiting factors than success factors. It seems that from the elements of the policy environment, farmers are privileged, however when it comes to elements of finance, business support services, market environment, infrastructure.

Some of the elements on the general business environment are among the major challenges or difficulties that currently hinders the efficient progress, productivity and growth of the green scheme project. Literature indicated that the concept of an entrepreneurial ecosystem dictates that entrepreneurship takes place in a community of interdependent actors (Stam, 2015). Isenberg (2010) points out that opportunities are not pursued in isolation of their context, this is supported by Mazzarol (2014)'s assertion which states that the concept of an entrepreneurial ecosystem refers to the interaction that takes place between various institutional and individual stakeholders fostering entrepreneurship, innovation and growth.

Small-scale farmers at Etunda GSIP were not satisfied with the government support currently rendered to them. In their response and comments, they made, they acknowledge that the idea of the green scheme is among the best idea the Namibian government and ministry of agriculture ever came up with, with some of the farmers stating that they been in the project for years and to their surprise things keep getting worse and worse every year. It is from this study's observations that, it is only fair to say that the business model adopted in the green scheme project, particularly the Etunda GSIP in the Omusati region, is currently not yielding best results as many of its technicalities are hindering its progress.

According to the Namibian Statistics Agency (2020) the import of crops, vegetables and fruit remains remarkably high and regarding food security, Namibia produces only 40% of its food consumption and the remaining 60% is

imported from other countries, with the bulk coming from South Africa. Other researchers also noted that the Namibian agricultural sector's contribution to GDP declined significantly between the years 1990 to 2010, from 16% in 1990 to 10% in 2010 before falling further to 7% in 2019 (First Capital Namibia, 2020) (NSA, 2020). It seems logical and fair to designate that the current entrepreneurship action model applied by the green scheme irrigation project policy by the government as the service provider is currently not at its best performance level but the opposite.

4.6 Summary of the chapter

This chapter scrutinised and discussed findings of the study, in particular, the chapter assessed the limiting factors and success factors affecting small-scale farmers' entrepreneurial process at the Etunda GSIP. The chapter closed with the overall evaluation of the current entrepreneurial action in application at Etunda GSIP. The study confirms the belief or theories that the concept of an entrepreneurial environment dictates that entrepreneurship takes place in a community of interdependent actors (Arabi & Abdalla, 2020); (Roundy, 2017), (Cabrera & Mauricio, 2017); (Kumar & Ali, 2010) and that entrepreneurial opportunities are not pursued in isolation of their context (Bignotti, Antonites, & Kavari, 2021); (Shapi, 2017). The following chapter provides conclusions and recommendations of the study, which can be used as assistance to small-scale farmers in the whole of Namibia's green scheme projects. Areas for future studies are also identified.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The previous chapter presented the analysis of results. In this concluding chapter, conclusions based on the findings of this study were outlined, recommendations to policy decision makers, limitations of this study as well as areas for future studies are also identified.

5.2 Conclusions

This study pursued to assess and test a model for the development of agricultural entrepreneurship in a Namibian context. The theoretical part of the study reviewed the literature on the basic process model of entrepreneurship, with an emphasis on individual and environmental factors affecting the entrepreneurial process. It also presented the elements of assessing entrepreneurial ecosystems which resulted in the adoption of the OECD framework for entrepreneurship indicators. The empirical part of the study involved the transformation of the conceptual model and the OECD framework for entrepreneurship Indicators into a statistical model and the empirical testing thereof. The final empirically tested conceptual framework for entrepreneurship indicators is depicted in Figure 5.1 below.

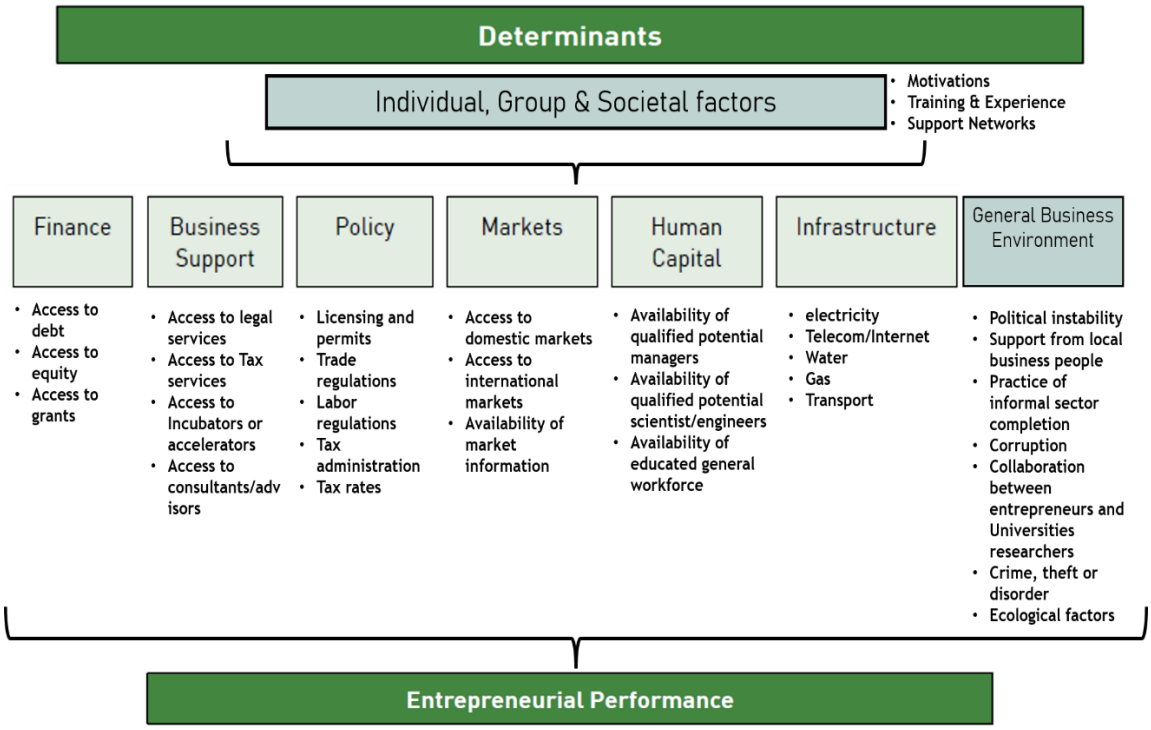

Figure 5.1: Final framework for entrepreneurship action indicators

Source: Survey results (2021)

In the Namibian agricultural sector, the hope lies in improving the agricultural productivity by all means if population led growing demand for food is to be met. The green scheme project can be regarded not only as one of the best agricultural-entrepreneurship ideas by the government but could also be viewed as one of the effective ways of reducing the poverty rate, which currently stands at 43.3% in the country (Namibia Statistic Agency, 2021). This study, based on responses through the administered 42 structured questionnaires to the green scheme small-scale farmers herein referred to as the leading entrepreneurs, has tried to interpret the complex process of starting, operating and developing an agricultural venture or project.

The results help in understanding the entrepreneurial process and can draw certain understandings which may help policy makers in promoting and fostering entrepreneurship in the Namibian agricultural sector. The study also offers some valuable learning for prospective agricultural entrepreneurs. This study concluded that some of the individual, groups, societal or environmental factors currently affecting the entrepreneurship process, entrepreneurship performance and entrepreneurship development at the green scheme project were found to be limiting. This, especially when it comes to various elements of some factors, namely: government policy environment (licensing and trade regulations) finance (access to both debt and equity financing) business support services (access to legal services, incubators/accelerators/advisors or consultants) market environment (access to domestic/international markets and availability of market information) and some infrastructural elements (transport, electricity and water). The limiting factors established in this study also included an element of crime (theft) lack of collaboration (between universities or local business people with the farmers) as well some ecological factors (pests and temperature).

The study also concluded that not all the factors investigated were negative indication, but also some of the individual, group and societal or environmental factors were found to be among the success factors elements, namely: farmer's level of education, elements of policy environment (labour regulations, tax administration and tax rates) elements of infrastructure (telecommunications or internet access) availability of human capital as a workforce and last but not least is the political stability and lack of informal sector competition.

It was against the above conclusions that the entrepreneurial process model currently in application at the green scheme, particularly the Etunda GSIP was not advantageous and desires argent improvements. Based on the findings of this study, it can therefore be said that the entrepreneurship process at the green scheme is currently a challenging exercise, which is not likely to improve unless policymakers and other stakeholders in or outside the country give due consideration to this entrepreneurial process or ecosystem.

5.3 Policy Recommendations

As cited in Urban and Dlamini (2020) policy typically includes the organising and mobilisation or the provision of resources and can be considered an output in the form of providing direct benefits, the provision of services to the public or a particular service provided by government (Lucas, Fuller, Piano, & Coyne, 2018). They also wrote that entrepreneurship policy scholars seem to have reached a general consensus that since "sources of market failure [are] a pervasive phenomenon," the case for government intervention is valid particularly "in areas such as venture capital markets, knowledge commercialization, R&D and skill-upgrading efforts, and clustering" (Audretsch, Grilo, & Thurik, 2007).

From a practice perspective, this study offers policymakers an initial blueprint of how agricultural entrepreneurship may be fostered. Such policy-making efforts should focus on the entrepreneurship enabling or determinant environment dimensions that, in this study, had a bearing on agricultural entrepreneurial

performance, namely: the individual, group, society or commercial environmental factors.

As per this study's key findings, that on aggregate majority of small-scale farmers respondents at the Etunda project are obstructed by some elements of policy environment (trade regulations 30% and licensing 20%), finance (access to debt finance 74% and access to grants 50%), business support services (access to legal services 93%, access to incubator 77% and access to consultants/advisors 83%), market environment (access to domestic market 86%, access to international market 74% and availability of market information 95%), Infrastructure (electricity 81%, internet 9%, water 88% and transport 97%), human capital (availability of potential scientist with qualification required 31%), and general business environment (political 18%, support from local business people 71%, collaboration between businesses and researchers 28%, theft 100% and ecological factors 98%), policies hereby need to aid these small-scale farmers in overcoming those perceived limitations. Non-financial support such as access to markets, availability of market information, transport and extension services should accompany policies as well (Urban & Dlamini, 2020), especially as researchers argues that financial support alone is not conducive to agriculture entrepreneurship and may even be counter-productive (Sinyolo, Mudhara, & Wale, 2017) if not made available together with non-financial support (Wale & Chipfupa, 2021).

Additionally, concerning the success factors found in this study, as previously indicated that majority of small scale farmers respondents experiences no

hindrance around elements such as of policy environment (labour regulations 38%), infrastructure (telecom/internet 62%), human capital (educated/trained general workforce 69%) and general business environment (political 50%). Policy administrator and developers, as cited in Bignoti, Antonides and Kavari (2021) should focus on entrepreneurship and agriculture conjointly (Kriese, Nabieu, Ofori-Sasu, & Kusi, 2021), additionally they should be more grounded around specific contexts and account for indigenous knowledge of agricultural practices (Wale & Chipfupa, 2021).

This study findings also highlights a significant entrepreneurship performance development dimensions to institutions engaged in the entrepreneurial development of farming or agricultural activities. In particular, the framework emphasises the importance of collaboration (e.g., between farmers, Universities and local business people as per this study) and at the same time ensuring that certain enabling-environment conditions (e.g., availability of market information and access to market) are in place as they collectively foster entrepreneurial performance and certain entrepreneurial outcomes for farmers. For instance, such institutions should facilitate networking amongst farmers and between farmers or other important institutions in the farming/entrepreneurial ecosystem (Wale *et al.*, 2021).

On the subject of government general support, Bignoti, Antonides and Kavari (2021) write that there is a need to help farmers make a mind-set shift away from a culture of entitlement and expectations from government. Finally, the study may encourages farmers in similar contexts what personal dimensions (e.g.,

inventiveness) they should develop for them to carry out sustainable agricultural practices, as well as the environmental aspects (e.g., motivations and social capital) that may contribute to their entrepreneurial performance.

5.4 Limitation and recommendations for future study

This study was firstly limited to the fact that it broadly focused on agricultural entrepreneurship development holistically (small scale farmers individual traits and environmental factors), as opposed to studies that may focus on a few aspects of the entire ecosystem. As mentioned previously, the choice of which dimensions to include in the model or framework adopted herein, measure and test was also dictated by the characteristics of the study's sample. Other studies with a similar objective may include other development dimensions based on their theoretical lens and context of the investigation.

Another limitation is that all the items used in the data collection instrument were self-reporting measures. While this choice was made to collect data that is most applicable to each respondent's specific individual perception, an alternative approach could be to collect more objective data about the project such as from the perspective of the management of the green scheme project. The impact of entrepreneurial performance in agriculture on farmers' livelihoods could also be investigated further, as the relationship between these constructs was not confirmed in this study. Technical details and reasons regarding the perception around the concluded limiting and success factors affecting the entrepreneurship

process for the small-scale farmers at the Namibian Green scheme found in this study should be fully explored.

Finally, whilst providing a rather not lengthy description of the sample to ensure the study's replicability and the generalizability of its results to other green scheme projects, the inability to use probability sampling across the entire population of Namibian green scheme small-scale farmers means that future research should substantiate the results of this study in similar contexts before making practical use of the adopted entrepreneurship performance indicator framework.

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APPENDICES

Appendix I: Research permission letter

NBS
NAMIBIA BUSINESS SCHOOL
UNIVERSITY OF NAMIBIA

30 August 2021

TO WHOM IT MAY CONCERN

Re: MBA Entreprenuership,Student – Mr. Michael Neema Student Number-201614375

As part of our Masters Programme, students are expected to submit a research report after completion of their course-work. They need to explore in detail, some concepts and issues pertaining management strategies. To do that effectively, they need to conduct interviews and obtain practical examples.

Mr. Neema has chosen your organization to approach for information. It is against this background that I wish to kindly request you to assist Mr. Neema with the information he requires. Accept our assurance that the data will be used for academic purposes only. A copy of the completed document will be available at the Namibia Business School for perusal. His research synopsis indicates that his topic touches on "Investigating factors affecting the entrepreneurial process among farmers at the Etunda Green Scheme project, Namibia".

Your kind assistance is highly appreciated.

Yours sincerely

NAMIBIA BUSINESS SCHOOL
NBS
30 AUG 2021
ACADEMIC SERVICES
UNIVERSITY OF NAMIBIA
Inspiring Minds & Shaping the Future

James Camm
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Namibia Business School
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Appendix II: Research questionnaire

DEAR MANAGING FARMER AT ETUNDA GREEN SCHEME PROJECT,

The purpose of this Questionnaire is to "investigate the limiting and success factors affecting your entrepreneurial process at Etunda Green Scheme project". Please do not stop thinking as deep as possible as you provide your answers, and work as quick as you can to answer all the questions by indicating with a tick/cross, the option that best represents your choice. All information shared in this study will be treated anonymous, confidential and used for academic purposes only.

If you have any queries, concern or interested in the feedback of the overall study, you may please contact the researcher at michael.c.neema@gmail.com

1. **SECTION 1: DEMOGRAPHIC INFORMATION**

   (Please tick the appropriate option for you)

   1.1. Gender

Male	
Female	
others	

   1.2. Legal ownership/classification status:

Sole proprietorship	
Partnership	
Corporations	
Others. (Please specify)……	

   1.3. How did you come to own a plot/field in Etunda?

Formal application & selection process	
Inherited from family/friends	
Purchased it	

Others (Please specify): ……

1.4. Number of managing owners involved in you field or plot:

Please specify:	

1.5. Level of education for the managing owners/founders?

(Please tick/cross the appropriate box)

Founder or Owner 1	No formal School		Any Agricultural training received?	Yes	
	Primary school				
	Secondary school				
	Graduate			No	
	Postgraduate				

Founder or Owner 2	No formal School		Any Agricultural training received?	Yes	
	Primary school				
	Secondary school				
	Graduate			No	
	Postgraduate				

Founder or Owner 3	No formal School		Any Agricultural training received?	Yes	
	Primary school				
	Secondary school				
	Graduate			No	
	Postgraduate				

Any comment:

……

……

……

……

2. SECTION 2: ENTREPRENEURIAL PERCEPTIONS OF THE ENVIRONMENT

Using the Likert scale format, the response scale for the questions is as below:

5*=No obstacle,* ***4****=Minor obstacle,* ***3****=Moderate obstacle,*

2*=Major obstacle,* ***1****=Very severe obstacle and* ***0****= don't know.*

2.1 To what degree are the following elements of the POLICY ENVIRONMENT an obstacle to the current operations of your project?

POLICY							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Business Licensing and Permits							
Customs and Trade Regulations							
Labour Regulations							
Tax Administration							
Tax Rates							
Others (Specify) ……..							

2.2 To what degree are the following elements of FINANCE an obstacle to the current operations of your project:

FINANCE							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Access to Debt Finance							
Access to Equity finance							
Access to Grants							
Others (Specify) ……..							

2.3 To what degree are the following elements of BUSINESS SUPPORT SERVICES an obstacle to the current operations of your project?

BUSINESS SUPPORT SERVICE							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Access to Legal services							
Access to Tax Services							
Access to Incubators/Accelerators							
Access to Consultants/advisors							
Others (Specify) ……..							

2.4 To what degree are the following elements of the MARKET ENVIRONMENT an obstacle to the current operations of your project:

MARKET							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Access to Domestic markets							
Access to International Markets							
Availability of Market Information							
Others (Specify) ……..							

2.5 To what degree are the following elements of INFRASTRUCTURE an obstacle to the current operations of your project:

INFRASTRUCTURE							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Electricity							
Telecom/Internet							
Water							
Gas							
Transport							
Others (Specify) ……..							

2.6 To what degree are the following elements of HUMAN CAPITAL an obstacle to current operations of your project:

HUMAN CAPITAL							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Availability of top managers with the qualifications your business requires							
Availability of potential scientists and engineers with the qualifications your business requires							
Inadequately educated/trained general workforce							
Others (Specify) ……..							

2.7 To what degree are the following elements of the GENERAL BUSINESS ENVIRONMENT an obstacle to current operations of your project:

GENERAL BUSINESS ENVIRONMENT							
	No obstacle	*Minor Obstacle*	*Moderate Obstacle*	*Major Obstacle*	*Very Severe Obstacle*	*Don't Know*	*N/A*
Political Instability							
Level of support from successful **business people** in the region							
Practices of **informal sector competitors**							
Corruption							
Collaboration between businesses and university researchers							

Crime, theft and disorder							
Ecological Factors							
Others (Specify) ……							

2.8 What other OPPORTUNITIES have you experienced/observed at Etunda?

Please specify.

……

……

……

……

……

……

2.9 Any other comment?

……

……

……

……

……

……

NOTE: If you are interested in the feedback of the overall study, please feel free to contact the researcher at michael.c.neema@gmail.com.

Thank you very much for your time.

Appendix III: Similarity Check report

Curiginal

Document Information

Analyzed document	Michael Neema 201614375 MBAE Full Thesis Report 2021.docx (D118590215)
Submitted	2021-11-15 05:46:00
Submitted by	
Submitter email	michael.c.neema@gmail.com
Similarity	11%
Analysis address	mwakipg.unam@analysis.urkund.com

Sources included in the report

W	URL: https://repository.unam.edu.na/bitstream/handle/11070/2829/mughongora_2018.pdf?sequence=1&isAllowed=y Fetched: 2021-11-07 08:31:36	53
SA	**University of Namibia / Kathy Document.docx** Document Kathy Document.docx (D110232512) Submitted by: lkandjengo@unam.na Receiver: lkandjengo.unam@analysis.urkund.com	3
SA	**University of Namibia / Agri-marketing assignment 1(activity 1) by Andreas 201713605.pdf** Document Agri-marketing assignment 1(activity 1) by Andreas 201713605.pdf (D79597588) Submitted by: 201713605@students.unam.edu.na Receiver: moodle.unam@analysis.urkund.com	1
SA	**University of Namibia / Agri-marketing assignment 1(activity 1) by Andreas N-F 201713605.pdf** Document Agri-marketing assignment 1(activity 1) by Andreas N-F 201713605.pdf (D79599262) Submitted by: 201713605@students.unam.edu.na Receiver: moodle.unam@analysis.urkund.com	2
W	URL: http://scholar.sun.ac.za/bitstream/handle/10019.1/100341/amadhila_financing_2016.pdf?isAllowed=y&sequence=1 Fetched: 2021-11-13 02:54:30	5
W	URL: https://www.elibrary.imf.org/downloadpdf/journals/001/2015/003/article-A001-en.pdf Fetched: 2021-11-15 05:49:00	51
W	URL: http://www.worldbank.org/content/dam/Worldbank/document/eca/central-asia/BEEPS-At-A-Glance-2013-Kyrgyz-Republic-en.pdf Fetched: 2021-11-15 05:49:00	4

Appendix IV: Language Editing Certificate

Dr.GM

The Rev. Dr. Greenfield Mwakipesile
ThD, MBA, HBS | mwakipg@outlook.com

CONTACT

PO Box 99539,
UNAM,
Namibia

LANGUAGE & COPY-EDITING CERTIFICATE

17th November 2021

RE: LANGUAGE, COPYEDITING AND PROOFREADING OF MICHAEL NEEMA's THESIS FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE OF THE NAMIBIA BUSINESS SCHOOL OF THE UNIVERSITY OF NAMIBIA

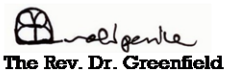
This certificate serves to confirm that I copyedited and proofread **MICHAEL NEEMA's** Thesis for the **MASTER OF BUSINESS ADMINISTRATION DEGREE** entitled: **FACTORS AFFECTING THE ENTREPRENEURIAL ACTION AMONG SMALL SCALE FARMERS IN THE ETUNDA GREEN SCHEME PROJECT NAMIBIA**

I declare that I professionally copyedited and proofread the thesis and removed mistakes and errors in spelling, grammar, and punctuation. In some cases, I improved sentence construction without changing the content provided by the student. I also removed some typographical errors from the thesis and formatted the thesis so that it complies with the University of Namibia's guidelines.

I am a trained language and copy editor and have edited many Postgraduate Diploma, Masters' Thesis, Dissertations and Doctoral Dissertations for students studying with universities in Namibia, Zimbabwe, Eswatini, South Africa and abroad. I have also copy-edited company documents for companies in the region and abroad.

Please feel free to contact me should the need arise.

Yours Sincerely,



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