

# **Entrepreneurial Development for Establishing Small Farming Businesses and Employment by Youth in Rain-Fed Crop Farming: Free State province case study**

Report to the Water Research Commission

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### **Background**

South Africa has a population of around 60 million people, of which around 36% comprises individuals between the ages of 15 and 34 – the youth. This age category entails a large portion of the South African population, which requires sufficient attention given that they are the leaders of tomorrow. However, South Africa's youth are experiencing high unemployment levels in rural and urban areas. Even though more youth are educated today than in the past, these higher levels of unemployment exist, meaning there is greater demand for employment. The better education of youth has also contributed towards the movement from rural to urban areas in search of better employment and livelihood opportunities.

Agriculture and entrepreneurship have been identified as a solution to South Africa's unemployment issues, with several initiatives being implemented to enhance participation in the rural and agricultural sectors. However, these have been unsuccessful, and youth are uninterested in participating in the farm sector. Research has shown that youth see the sector as a hard-working, backbreaking and low-returns sector, which makes it unattractive. This is, however, not a general view, and there are youth who are interested and willing to participate in the agricultural sector and enhance their livelihoods. Initiatives should prioritise these youths to ensure that scarce resources are efficiently allocated towards attracting individuals, specifically towards their participation in the rural agricultural sector.

### **Objectives**

Given the background, the research aims to develop functional pathways that enable youth to grow in the agricultural sector to enhance their livelihoods. The main objective of the research is to review and evaluate appropriate entrepreneurial development paths for establishing small-scale, rain-fed crop farming businesses in the food value chain by the youth for improved rural livelihoods in at least two selected provinces of South Africa with rural unemployment.

### **Specific Aims:**

- To evaluate natural, physical and financial assets (including market access) within a sustainable livelihoods framework for Southern Africa and to give specific attention to smallholder rain-fed farming potential in rural areas.

- To evaluate human, social and psychological assets (including incentives of secure land tenure and leadership capabilities) in relation to entrepreneurial spirit and management requirements, with particular attention given to the youth in the selected rain-fed farming areas.
- To evaluate currently available incentive schemes, and the access to and effectiveness of the operation of these schemes for the youth.
- To evaluate access to information such as market information and available advisory and support services such as extension and training.
- To determine:
  - (a) Reasons for interest/disinterest of youth in small-scale businesses in the rain-fed crop-farming food value chains.
  - (b) Motivations for encouraging the participation of youth in small-scale businesses in the rain-fed crop-farming food value chains; and
  - (c) Opportunities for small-scale businesses in the rain-fed crop-farming food value chains.
- To determine the aspirations and goals of youth for participating in rain-fed crop-farming businesses and related food value chains;
- To formulate and test appropriate development paths and farming models for establishing sustainable small-scale rain-fed crop farming businesses by the youth to increase food security, profitability, employment opportunities and livelihoods in rural areas.

## **Methods**

The research was conducted in two rural areas of the Free State province. Random sampling was used to collect primary data by interviewing 492 youth respondents, consisting of 231 from Thaba Nchu and 261 from QwaQwa. As the study is focused on youth, the age distribution under study was between 18 and 36. The youth consisted of those involved in the sector (56%) and those not involved. Involvement in the sector was mainly represented through family businesses (56%), followed by full-time involvement as part of a cooperative (21%) and full-time involvement as an individual (14%).

The research used the modified Sustainable Livelihood framework, which includes Psychological capital and entrepreneurial characteristics. The Behavioural economics approach was used to determine youths' indicated behaviour in terms of Psychological capital

and entrepreneurial characteristics. Measurements were made through qualitative and quantitative data analysis methods, such as descriptive and multivariate statistics, including principal components analysis and cluster analysis.

## **Findings**

The research findings show that the youth are limited in their endowment of resources required for agricultural participation. There were slightly more respondents who were not currently involved in the agricultural sector. The respondents involved in the industry are primarily participating through or as part of family activities, followed by full-time involvement as part of cooperatives and full-time involvement as an individual. Thus, few of the respondents who are involved full-time in the agricultural sector, and even those who are involved part-time in the sector, do not see it as a full-time occupation. Most of the respondents indicated that they were unemployed, which impacts on their household income. The income they receive is from temporary employment, which is not consistent, making the majority of the household dependent on grants. The main source of income is not from agricultural enterprises, but mostly from non-farming sources. Social grants were indicated as being an essential source of income for the rural households of the respondents.

Youth participation in agricultural-related initiatives, such as training and support programmes, is limited. More than 50% of the youth respondents have indicated they have access to or own land in the respective regions. However, the access is predominantly held through PTO (Permission to Occupy) rights, with very few having secured land rights. Land tenure and security is thus an aspect that requires attention in order to attract youth towards participating in the agricultural sector. Access to water, specifically rain, was variable and inconsistent, as illustrated by the respondents. This means they tend to use physical and municipal water infrastructure to complement water needs for production purposes, as needed. Respondents mostly own general household assets such as cell phones (smart and non-smart), radios and televisions. Computers and tablets are also owned, although to a lesser extent. Ownership and access to agricultural production assets are restricted; most of the respondents did not have access to productive assets to enhance their ability to produce agricultural products. The findings show that the respondents are poorly endowed with resources needed to improve their participation in the agricultural sector, whether primary agriculture or value-adding activities along value chains are being considered. Interventions are required to assist youth to become attracted and involved in the sector by using the resources they already have access to.

Respondents showed entrepreneurial behaviour, as they are willing to explore alternative options (problem-solving), act and allocate the necessary time and effort (motivated, persistent and determined) to succeed. However, the youth were reluctant to show more risk-averse behaviour, and are less likely to consider risky opportunities. Options to attract the youth towards the sector should thus consider their risk attitude and provide strategies to minimise or transfer risk away from the youth. This could also be achieved by ensuring that youth have the necessary knowledge to construct and use business plans that can provide strategic assistance. The respondents tend to have a mindset and behaviour willing to make necessary adjustments to take on opportunities to improve their current situations. For the youth to thrive in the agricultural sector, improvements need to be made regarding their livelihood assets that limit them in some instances, such as the availability of secure land tenure, education and effective cooperatives. The results show that the respondents still experience some shortcomings in the resources that are available to them for ensuring their participation in the value chain activities.

The respondents aspire to being involved in the agricultural sector. However, there are fewer respondents who indicated that they are willing to become involved in the sector, and there were even fewer when the interests of the youth to participate in the sector are considered. There is a clear trend found in the research showing that youth are aspiring to become involved in the sector, but are not that keen to participate in the sector. The conclusion is that there is a need to really determine who is interested to be involved in the sector and to allocate the necessary time and resources towards these youths. This will ensure that the scarce resources are used more efficiently, which could produce the necessary results to involve the youth through development in the agricultural sector.

### **Development paths and recommendations**

The heterogeneity of the youth in the Free State has been established in relation to their resource endowment and aspirations, willingness, and interest to participate in the agricultural sector as a source of their livelihoods. It is not possible to create a development path for each individual and there is a need to generate homogenous groups that represent key assets endowment (or lack thereof) to provide focus areas for the development of youth. This is achieved through a two-step multi-variate approach, where cluster analysis is used to generate clusters (typologies) of youth that can be used to inform functional development pathways. This research establishes seven groups of youth in the research areas. Of the seven, three had only one respondent who

was already endowed with key resources and participating in the sector. However, the remaining four clusters represented respondents who were named Income secure (CL2), Non-Occupational youth with negative Psycap (CL3), Social grant-reliant households (CL4), and lastly, Opportunist and determined livestock farmers (CL6). These typologies provide the opportunity to explore the research endowment within each of the typologies and then determine pathways that could inform a strategy to develop a youth by making use of the strategies. Four development pathways were developed to address the needs of youth who were included in the four youth typologies. The four pathways comprise those that are business-orientated, gender-orientated, occupation-orientated, and livestock farming orientated. Based on the pathways, it is concluded that existing programmes, policies, and support structures may be sufficient to address the challenge of involving youth in agriculture to mitigate youth unemployment. A mindset of self-help, with some assistance in the form of a knowledge or information hub, may help the youth to follow a pathway to get himself or herself involved in the agricultural sector.

### **New knowledge**

The focus of the developed pathways was to empower the youth and establish a culture of self-help, rather than waiting for intervention from the government or other third parties. The first part of the solution in a pathway is to show the youth where to find a solution for a particular challenge. Only when such self-help solutions are not available, interventions from outside parties are recommended. Lastly, when outside intervention is still insufficient, recommendations for changing policies or for formulating new programmes or projects are recommended.

The research suggests that the typology in which a particular youth is grouped should not confine him or her to a particular pathway. The specific pathways indicate an entry point for youth that aligns with their own resource endowment. Although there are unique steps within each pathway, it was found that the resources that are required to assist during the implementation of the pathways are similar, given the low resource endowment of youth in general. The dynamic nature of the developed pathways allows a person to move between the different pathways, based on the specific needs. Ultimately, the aim of the pathways is to provide youth with a roadmap that they can use to help themselves on the path to becoming actively involved in the agricultural sector.

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## Abbreviations

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ASGISA	Accelerated and Shared Growth Initiative for South Africa
BATAT	Broadening of Access to Agricultural Trust
BFAP	Bureau for Food and Agricultural Policy
CASP	Comprehensive Agricultural Support Programme
DAFF	Department of Agriculture, Forestry and Fisheries
DALRRD	Department of Agriculture, Land Reform and Rural Development
DARD	Department of Agriculture and Rural Development
DBSA	Development Bank of Southern Africa
DFID	Department for International Development
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
EPWP	Expanded Public Works Program
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
FAO	Food and Agriculture Organization
FDC	Free State Development Corporation
FET	Further Education and Training colleges
FS	Free State
FSDARD	Free State Department of Agriculture and Rural Development
FSDCGTA	Free State Department of Cooperative Governance and Traditional Affairs
FSP	Farmer Support Programme
FSPSDF	Free State Provincial Spatial Development Framework
GEAR	Growth, Employment and Redistribution
HIV	Human immunodeficiency virus
ICT	Information and Communication Technology
IDC	Industrial Development Corporation
IK	Indigenous Knowledge
LRAD	Land Redistribution and Agricultural Development Program
MAFISA	Micro Agriculture Finance Institutions of South Africa
MAP	Maluti-a-Phofung
MAPLEDS	Maluti-a-Phofung Local Economic Development Strategy
MMM	Mangaung Metropolitan Municipality
MSLF	Modified Sustainable Livelihood Framework
MTSF	Medium-Term Strategic Framework
NDA	National Development Agency
NDP	National Development Plan
NEET	not currently in any employment, education or training
NEF	National Empowerment Fund

NGP	Net Growth Path
NGP	New Growth Path
NPC	National Planning Committee
NYDA	The National Youth Development Agency
NYP	National Youth Policy
PDI	Previous disadvantaged individuals
PLAS	Proactive Land Acquisition Strategy
Psycap	Psychological capital
PTO	Permission to Occupy
QLFS	Quarterly Labour Force Survey
R&D	Research and Development
RDP	Reconstruction and Development Programme
RECAP	The Recapitalization and Development Programme
SALDRU	Southern Africa Labour and Development Research Unit
SEDA	The Small Enterprise Development Agency
SEFA	Small Enterprise Finance Agency
SLAG	Settlement Land Acquisition Grant
SLF	Sustainable Livelihood Framework
SMMEs	Small, medium and micro enterprises
SMS	Short message system
TA	Traditional Authority
TBVC	Transkei, Bophuthatswana, Venda and Ciskei states
TMDM	Thabo Mofutsanyana district
UFS	University of the Free State
UKZN	University of KwaZulu-Natal
WRC	Water Research Commission

## 1.1 Background

Outcome 7 of the presidency's action program of 2010 envisages vibrant, equitable and sustainable rural communities, with food security for all. This is not the first endeavour to be announced that has aimed at enhancing livelihoods. The South African government's strategic and policy programmes since 1994 have focused on youth employment and entrepreneurship development in rural areas and agricultural value chains. The National Development Plan (NDP) stresses the need for the country to find ways to reduce youth unemployment and to provide young people with broader opportunities, to adopt programmes that target the rural youth, to implement community development initiatives, and to achieve an inclusive rural economy and agricultural transformation. One sector that the South African government has identified in the NDP for creating employment opportunities, especially in rural areas, is the agricultural sector. Furthermore, the NDP specifies that the sector could contribute almost 1 million job opportunities by the year 2030 (National Planning Commission, 2013).

The Department of Agriculture, Forestry and Fisheries (DAFF)<sup>1</sup> Strategic Plan (2013/14 - 2017/18) aimed to implement policies and strategies supporting agricultural development in rural communities. The New Growth Path (NGP) framework identifies agrarian value chains as comprising one of the critical sectors for creating jobs with a potential for growth and development (Department of Economic Development, 2010). Similarly, the Medium-Term Strategic Framework (MTSF) 2014-2019 aims to tackle economic growth and transformation in the economy. The MTSF aims to grow and transform through creating decent work and sustainable livelihoods by increasing access to economic opportunities in all sectors of the economy, especially for historically excluded and groups that are more vulnerable, such as the youth. These programmes and strategies are meant to be implemented in rural areas, empowering young people on entrepreneurship in agriculture, with a focus on small-scale farming, to reduce poverty, unemployment, and food insecurity. However, despite all these

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<sup>1</sup> DAFF became The Department of Agriculture, Land Reform and Rural Development in June 2019 when the former Department of Agriculture, Forestry and Fisheries and the Department of Rural Development and Land Reform merged.

projects, programmes and policies, the problem of youth unemployment in South Africa is still high.

South Africa's high unemployment rate in recent times (26.7%) reflects spatial inequalities linked to historical policies of "separate development", as the unemployment rate among the youth (25–34 years) is more pronounced in the rural areas than in formal urban regions (NYDA, 2012; SALDRU, 2013; Stats SA 2016). Despite the high level of unemployment among the rural youth, they show little interest in farming or starting their own agribusinesses. The agricultural sector is documented to be perceived as being a back-breaking and non-status occupation (Swarts and Aliber, 2013). Agriculture, an economic activity perceived as "not sexy" by the youth, is considered to be a "grown-up" occupation that does not bring quick money. Perceptions like these result in the limited involvement of youth in farming and the agricultural sector. This is the case, despite the promise that agriculture shows through the availability underutilised rain-fed land for food production and opportunities along the food value chain. The attitudes of the youth towards farming need to be changed, and the government's policies should create favourable conditions for youth to become involved as workers and as owners of farming businesses.

In South Africa, the critical challenges related to smallholder agriculture are: lack of self-reliance and a dependency mindset; limited ownership or access to agricultural-related assets; limited capacity to hire needed services; lack of knowledge and skills in value addition; high transaction costs of accessing input and product markets; and lack of adequate understanding (by the relevant stakeholders) of the heterogeneity and complexity of the sector. The critical challenges of the smallholder sector in Africa include limited knowledge of farmers on farming as a business, a poor record-keeping culture, and mixing farming and family operations (Audretsch, 2009; Morgan *et al.*, 2010). All these challenges complicate on-farm entrepreneurship interventions in the sector.

There is a need for further research to be done on how to tap into this potential through appropriate on-farm entrepreneurial development paths. The long-term focus should be placed on identifying ways and means of developing agribusiness entrepreneurial spirit from a young age so that interested youth can participate in profitable farm enterprises and agricultural value chains. Research examining the challenges and opportunities in pursuing entrepreneurial development pathways in rain-fed agriculture in South Africa, linking the youth to profitable

food value chains and exploring avenues for establishing small farming businesses, would contribute to sustainable rural development, empowerment of the rural youth, youth employment creation in the rural areas, and informing policy on the relevant and priority intervention areas in this sector. Knowledge-based actions in these areas would create opportunities for the unemployed rural youth to venture into entrepreneurship programmes, creating job opportunities (for themselves and others) and raising incomes.

## **1.2 Research problem**

In South Africa, research on entrepreneurial development among youth as smallholder farmers is limited, while significant investments are continuously being made to improve the livelihoods of youth and their households. Empirical research on entrepreneurship (e.g. Henning, 2016; Mirzaei *et al.*, 2016; Nieuwoudt, Henning and Jordaan, 2017) is more relevant to commercial, sizeable non-farm sector and agribusinesses working in competitive markets (with significant capital investment), but less so or even irrelevant for the youth in the small-scale farming sector. This is because of differences between the two sectors, such as lack of access to capital, poor markets, the complexity of the farming system and heterogeneity. Although many studies have been done globally on rural farm entrepreneurship (e.g. McElwee, 2006; Vesala *et al.*, 2007; McElwee, 2008; McElwee and Bosworth, 2010), very little research has focused on youth entrepreneurship within the context of small-scale, rain-fed agriculture. The literature focusing on these aspects within a South African context is thinner.

The entrepreneurship concept, which is seldom applied in agricultural economics research, can provide many answers to understanding farmers' behaviours and generate valuable insights for effective agricultural policy and development strategies. Research that examines the challenges and opportunities in pursuing entrepreneurial development pathways in rain-fed agriculture in South Africa, linking the youth to profitable food value chains and exploring avenues for establishing small farming businesses, will contribute to sustainable rural development, empowerment of the rural youth, youth employment creation in the rural areas, and informing policy on the relevant and priority intervention areas in this sector. Knowledge-based actions in these areas would create opportunities for the unemployed rural youth to venture into entrepreneurship programmes, thus creating job opportunities (for themselves and others) and raising incomes.

Youth unemployment remains a problem. Researchers have explored exogenous factors, such as market access and other stumbling blocks, which keep smallholder farmers from participating in commercial value chains. Further research has focused on the livelihood assets within the Sustainable Livelihood Framework (SLF), which has also been extended to include endogenous factors such as Psychological capital (Psycap). New research focuses on entrepreneurial pathways for irrigation farmers, focusing on farmers and assuming a certain level of access to resources. Rain-fed agriculture is an important opportunity within the agricultural sector that is neglected in research. Furthermore, the level at which entrepreneurship has been considered is elementary and misses important information. Scientific evidence is missing concerning the potential contribution of rain-fed agriculture towards the entrepreneurial opportunities for youth participation in the agricultural sector (primary and along the value chain) to reduce unemployment.

### **1.3 Research objectives**

General Aim:

To review and evaluate appropriate entrepreneurial development paths for establishing small-scale rain-fed crop-farming businesses in the food value chain by the youth for attaining improved rural livelihoods in at least two selected provinces of South Africa that experience rural unemployment.

Specific Aims:

- To evaluate natural, physical and financial assets (including market access) within a sustainable livelihoods framework for Southern Africa and give specific attention to smallholder rain-fed farming potential in rural areas.
- To evaluate human, social and psychological assets (including incentives of secure land tenure and leadership capabilities) in relation to entrepreneurial spirit and management requirements, with particular attention to the youth in the selected rain-fed farming areas.
- To evaluate currently available incentive schemes, as well as the access and effectiveness of the operation of these schemes for the youth.
- To evaluate access to information such as market information and available advisory and support services such as extension and training.

- To determine:
  - (a) Reasons for the interest/disinterest of youth in small-scale businesses in the rain-fed crop-farming food value chains;
  - (b) Motivations for encouraging the participation of youth in small-scale businesses in the rain-fed crop-farming food value chains; and
  - (c) Opportunities for small-scale businesses in the rain-fed crop-farming food value chains.
- To determine the aspirations and goals of youth for participating in rain-fed crop farming businesses and related food value chains;
- To formulate and test appropriate development paths and farming models for establishing sustainable small-scale, rain-fed crop-farming businesses by the youth to increase food security, profitability, employment opportunities and livelihoods in rural areas.

#### **1.4 Structure of the report**

The report consists of nine chapters. Chapter 1 provides background, the problem statement, and the aim and objectives of the research. Chapter 2 provides an overview of literature related to the demographics of South Africa, the agricultural sector and its role in youth employment, and concludes with considering entrepreneurship in the agricultural sector. The conceptual framework and the areas used for the research are explained in Chapter 4. The resource endowment of youth in relation to the assets associated with the Sustainable livelihood framework is discussed in Chapter 5. Chapter 6 continues to evaluate the resource endowment of those members of the youth already involved and those not by evaluating their Psychological capital and entrepreneurial characteristics. The aspirations, willingness, and interests of youth towards participation in the agricultural sector are evaluated in Chapter 6. Youth topologies are introduced in Chapter 7, which are then used to develop and suggest functional development pathways for youth involvement in the agricultural sector in Chapter 8. Chapter 8 suggests four functional pathways, which are informed by the extension of the characterisation of the youth typologies, and gives a short overview of the support accessed by youth in the research areas. The final chapter, 9, presents the conclusions and recommendations derived from the research.

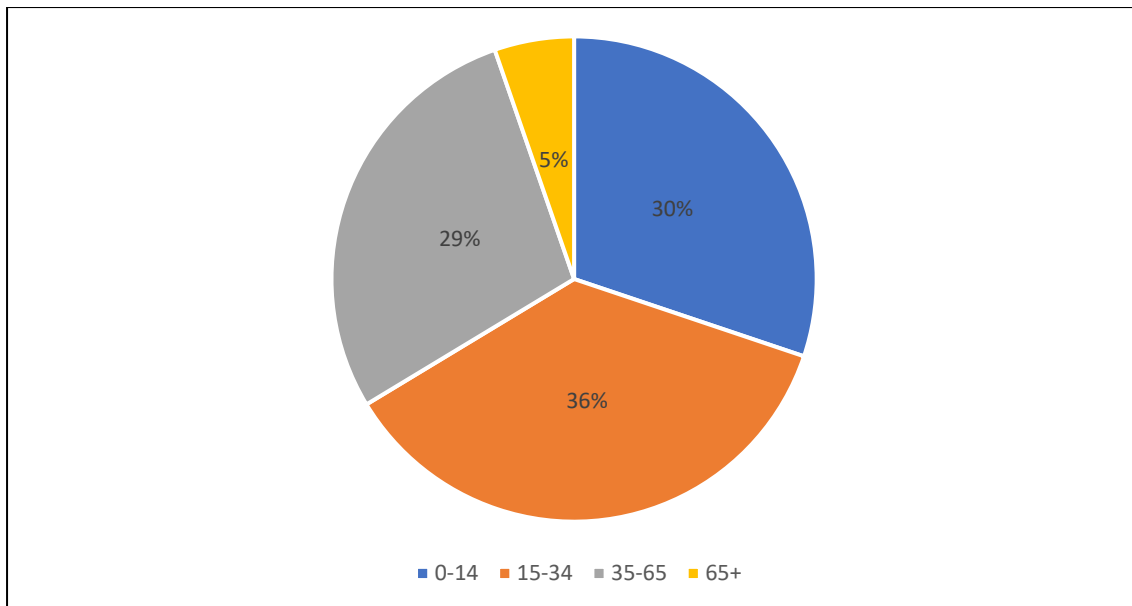


**Overview**

The literature review provides an overview of the current situation in South Africa, considering youth and their participation in the workforce. The chapter provides an overview of the current population of the country, youth unemployment, and the agriculture sector. The chapter concludes by discussing how entrepreneurship and agriculture could combine to involve youth in economic activities to reduce rural youth unemployment.

**2.1 Demographics of South Africa****2.1.1 South African Population**

South Africa had an estimated population of 60.60 million people in 2022, which is almost equally distributed between males (49%) and females (51%) (Stats SA, 2022). The age distribution of the South African population is shown in Figure 2.1, indicating that South Africa has a youthful population (Community Survey, 2016). Individuals between the ages of 15 and 64 are considered the working-age population in South Africa (Stats SA, 2017). Importantly, from the age distribution shown in Figure 2.1, most of the South African population falls under the youth category, followed by the age group from 35–65. The share of the population in each active range suggests that there may be competition for work/employment.



**Figure 2.1: Age distribution of the South African population**

**Source:** Community Survey (2016)

With youth constituting around 36% of the population (AgriSETA, 2016), it is essential to provide sufficient employment opportunities to take advantage of the youth population in the economy. However, South African youth are struggling to find employment opportunities and are experiencing very high unemployment levels (AgriSETA, 2016).

### 2.1.2 Youth unemployment in South Africa

Unemployment is defined in South Africa by two concepts – the strict (narrow) and the expanded (broad) definitions. The strict definition considers unemployed people as being those actively searching for jobs but cannot find one, and/or those who have started some form of self-employment during the past four weeks. The definition for unemployment used by Stats SA (2017) is a person between the ages of 15 and 64 who is not employed within the reference week, is actively looking for work, or has tried to start a business within the four weeks prior to the survey; can work, and had not actively looked for an employment opportunity in the four weeks preceding the interview, but had a job or business to start in the future and where available.

The broad definition expands on the narrow definition by including individuals who have given up or search for employment opportunities. It includes those who have given up and everyone who is not working, but expresses the desire to work (Standing *et al.*, 1996; Kingdon and

Knight, 2007; Yu, 2013). Stats SA officially adopted a strict (narrow) definition of unemployment in 1998, which is in line with the International Labour Organisation (Stats SA, 1998).

Statistics South Africa measures the number of youths who are not currently in any employment, education or training (also referred to as NEET), thus, being the youth who are currently not engaged in the labour market or enhancing their skills through training or education. Almost half of the South African youth now fall into this category. Females were slightly more affected than males were (47.4% compared with 42.6%). The indications are thus that South Africa has an employment problem among the youth population, as the youth are not being absorbed into the labour market. The high levels of youth unemployment in South Africa are also characterised by spatial inequalities linked to historical policies of 'separate development' under the apartheid regime. Unemployment is more pronounced in rural areas than in formal urban areas (SALDRU, 2013; Stats SA, 2016).

Increased education is a reason for individuals to consider alternative employment options to the rural and agricultural sectors. The higher educated individuals are, the more likely they are to move away from rural areas and agriculture for forms of employment in urban areas. In terms of education, the Community Survey (2016) indicated that, across all race groups, there was an increase in the number of individuals attending educational institutions from 1996. However, one remaining issue is that the number of individuals not attending any educational institution is still higher than those attending is. In general, the education of South African individuals with at least a primary education has increased. The Community Survey (2016) found that the number of youth individuals with at least a first degree doubled from 1996 to 2016. In the report, the focus on education levels is placed on individuals between 25 and 34 years of age. Overall, there has been an increase in the educational levels of the South African population since 1996. This could be one factor that might influence the high levels of unemployment witnessed in the rural sector. Highly educated individuals are more interested in an improved lifestyle, which is normally not associated with the rural sector. Youth in rural areas are more vulnerable to unemployment because they lack labour market information. Some are inexperienced with the processes involved in job applications and lack access to

information networks to provide them with adequate and relevant information. Most youths in the country have given up looking for work, particularly in rural areas.

There has been a debate in South Africa on whether the characteristic of unemployment is structural or not, as it is difficult to measure or define (Standing *et al.*, 1996). According to Simkins and Clarke (1978) and Chadha (1995), the unemployment structure in the South African market is cyclical and structural, while the approximations suggest that it is primarily structural. This is further emphasised by Fields (2000) and Cloete (2015), indicating that South African unemployment is structural, motivated by the fact that employers demand certain types of high-level skills that the majority do not have. To alleviate South Africa's employment problem, Fields (2000) pointed out that the most critical solution is to find new markets where producers can become competitive in the world market. Moreover, government intervention in the private sector should be prioritised. Agriculture has been identified as a potential solution for rural employment in South Africa.

## **2.2 The Agricultural Sector and Youth Employment**

South Africa has a well-developed commercial agricultural sector that plays a valuable role in the socioeconomic development of the country (National Treasury, 2014). The agricultural sector also provides contributions to economic development and rural livelihoods (Backeberg and Sanewe, 2010), indicating that it has a valuable role to play in the rural economy of South Africa (Jordaan, 2012) and provides a good platform for creating job opportunities, particularly in the rural areas.

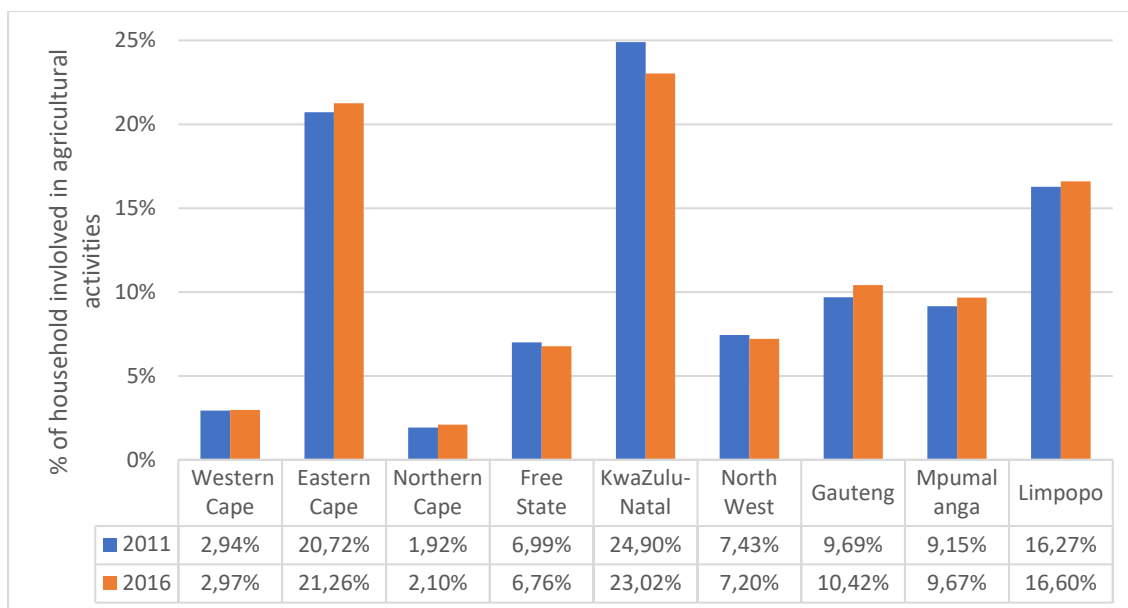
### **2.2.1 Role of agriculture in rural employment**

Agriculture plays a significant role in the employment of individuals in rural areas, both directly and indirectly. The South African agricultural sector has been identified for developing almost one million new employment opportunities by 2030, according to the South African NDP (National Planning Commission, 2012). The sector is one of those with the ability to employ more people with no skills and even no experience. Globally, agriculture is one of the leading employers of less-skilled people (FAO, 2014a).

With recent policies and laws in South Africa, such as the minimum wage policy, the agricultural sector's employment rate has decreased, as commercial farmers adopt labour-reducing technology. Farmers are opting to become more technology-intensive than labour-intensive in their operations to reduce the cost of production caused by the increased minimum wages. However, youth can still explore entrepreneurial opportunities and create employment within the sector.

The sustainability of livelihoods and incomes can be ensured through agriculture and independently as an entrepreneur within the agricultural sector. Youth in rural areas, especially those with relatively low education levels with no work experience, can develop themselves and sustain their livelihoods through involvement in agriculture (FAO, 2014a). Although studies suggest that some youth find agricultural opportunities and programmes unattractive, various opportunities within the sector could help to decrease youth unemployment and dependence on the government.

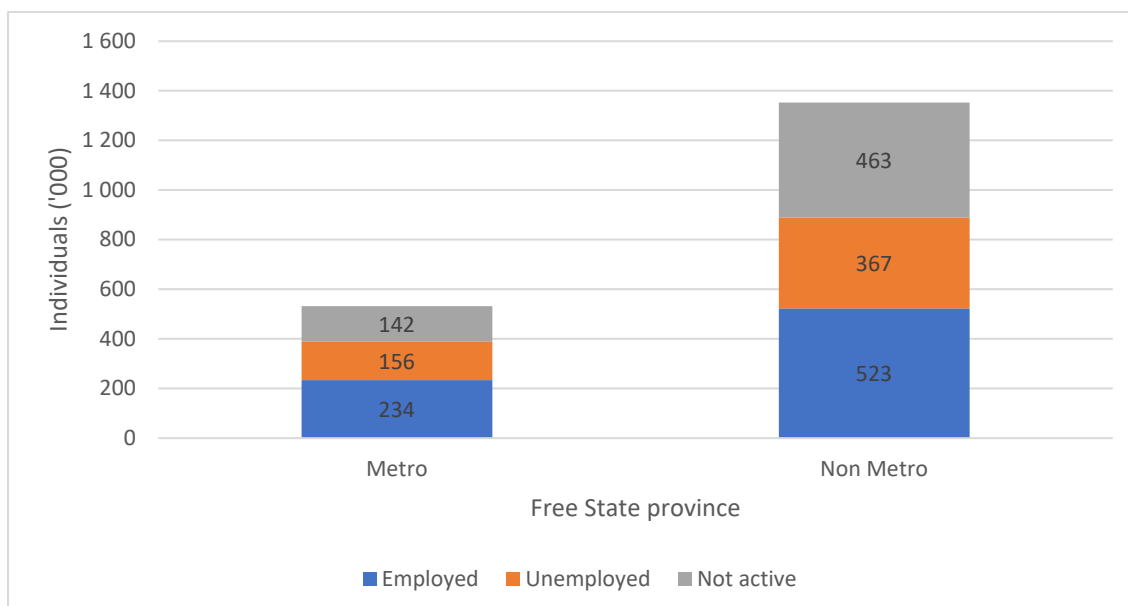
According to the Community Survey (2016), the number of households in the country that are involved in agricultural activities has seen a 19% decrease since 2011, with KwaZulu-Natal (25.2%), Free State (21.7%) and the North West (21.6%) showing the greatest provincial reductions. This can also be seen as a change in the demographics of the rural sector, as the participants move away from the agricultural or rural sector to urban regions, and even to unemployment. Participation of the South African households in the agricultural sector per province is shown in Figure 2.2.



**Figure 2.2: Comparison in the distribution of households involved in the agricultural sector – Census 2011 and Community Survey 2016**

Source: Community survey (2016)

While there were provinces with greater reductions in participation in agriculture, the Free State had the second greatest in terms of population. A closer look at the Free State province (see Figure 2.3) shows that the largest proportion of the labour force is in the non-metro sector. This situation is, therefore, expected to change, as more individuals leave the rural sector.



**Figure 2.3: Distribution of Free State population between Mangaung Metro and non-metro areas**

Source: Stats SA (2017)

Urbanisation is a reality and influences rural development (Xu *et al.*, 2019). The income gap has also been reported internationally, where the income gap between the non-agricultural and agricultural sectors has been increasing. Xu *et al.* (2019) report that, not only have there been greater financial rewards in the non-agricultural sector, but the income structure of rural households has also changed, with households earning more income from non-farming activities than from farming activities. Ranchhod (2017) has also noted that there was a decrease in agricultural employment after the implementation of South Africa's minimum wage policy in 2003. Young people are forced from rural to urban areas because of a lack of incentives, profitable opportunities and an unattractive rural environment (Khué *et al.*, 2016).

### **2.2.2 Youth in agriculture**

The proportion of youth actively participating in the agricultural sector is low, compared with adults. Still, in terms of actual or absolute numbers, more young people are participating in the agricultural sector when compared with older people (Swarts and Aliber, 2013). Today's youth are not interested in the rural agricultural sector as a means of employment, even though very high unemployment exists among the youth, not only in South Africa but also in the rest of the world. What also serves as a hurdle is the culture of youth aspirations to move away from the farms; thus, youth do not aspire to become enterprising farmers (Jayne *et al.*, 2010; Maepa *et al.*, 2014).

Individuals in the youth age category have little interest in farming or starting their own agribusinesses, as they generally perceive the agricultural sector as being, among other things, a back-breaking and non-status occupation (Swarts and Aliber, 2013). This is despite the fact that there is an under-utilised potential for the productive use of rain-fed land for food production and beneficiation in the food value chain. There is limited involvement of young people in farming. Farming, an economic activity perceived as 'not sexy' by the youth, is considered to be a 'grown-up' occupation that does not bring quick money. Most students in Africa aspire towards working in the public sector, which can most likely be attributed to the job stability and security it provides (Lorenceau, Rim and Savitki, 2021).

To integrate the rural youth into profitable value chains, ways must be found to enable rain-fed farming practices to be followed that are more productive to improve the sector's economic

performance. This, in turn, requires an assessment to be made of the goals and aspirations of rural youth (both currently in farming and those who have the potential to farm and/or be in other businesses). To inform the way forward, empirical research should be carried out that engages the youth (farming rain-fed, unemployed or engaged in other rural-based economic activities) and all the relevant stakeholders.

### **2.2.3 Challenges faced by youth in agriculture**

A study by the FAO (2014a) has identified challenges that the youth face in agriculture. Those challenges include a lack of information, limited access to land, inadequate access to financial services, difficulties in accessing green jobs, limited access to markets, and limited involvement in policy dialogue. Insufficient access to knowledge, information and education is the first and foremost challenge of the youth. Low education (formal or informal) limits the productivity of these young people within the sector. Informal education, including Indigenous Knowledge (IK), is the kind of education that is gained through experience and by asking older and more experienced farmers. Such constraints hinder youth from developing and from exploring entrepreneurial ventures and ways of acquiring new skills (FAO, 2014a).

Even in South Africa, access to land is limited, as most of the land in remote areas belongs to the chiefs. De Janvry *et al.* (2001) state that the uncertainty of their tenure or the duration of their rights to use the land by the people in rural areas affects their investment into the land. Furthermore, the lack of title deeds for the rural residents and youth makes it hard to attain bank loans. According to FAO (2014a), there is a need for loans to be made available to youth so they would be able to purchase land.

Most banks are reluctant to provide financial assistance in the form of loans and insurance to rural youth because of their lack of collateral security and financial literacy, among other things. The promotion of financial packages that specifically cater for the youth, mentoring, and training programmes, and start-up funding opportunities could help to reduce the magnitude of the challenge.

Most smallholder farmers in remote areas of South Africa have limited access to markets. This limited market access deters the youth from engaging in viable and sustainable agricultural



ventures (Zeller *et al.*, 1998). Furthermore, profit from agricultural practice might still need to be realised. The international influence of supermarkets and the high produce standards of their value chain are also making market access for young rural farmers more difficult to attain (FAO, 2014a). Training and providing market information to young farmers and business owners in remote areas could address the challenge and assist young farmers in identifying niche markets.

When measures are taken, and strategies are implemented to assist youth in overcoming these identified challenges, youth involvement in agriculture has the potential to improve (FAO, 2014a). In developing countries like South Africa, the participation of rural youth in agriculture could assist in reducing poverty and food insecurity among rural households, while creating jobs. Programmes that attract youth to value-adding agricultural businesses would also be necessary in areas where the youth do not find primary agriculture attractive.

#### **2.2.4 Government responses to youth unemployment in South Africa**

Since the transition to democracy in 1994, the South African government has introduced several policies and strategies to mitigate overall unemployment and youth unemployment (Fourie, 2015). These policies include the implementation of broader strategies such as the Reconstruction and Development Programme (RDP); the Growth, Employment and Redistribution Policy (GEAR); the New Growth Path; and the National Development Plan (NDP) 2030. The policies range to more specific policies and programmes that target different sectors such as the Department of Agriculture, Forestry and Fisheries (DAFF) Strategic Plans, the National Youth Policy, the Revised National Curriculum Policy, and the Employment Tax Incentives Bill (also known as the Youth Wage Subsidy) (Hendriks, 2016). From 1994 to 2014, when these various policies were being implemented, employment increased from 9.5 million in 1995 to 15.2 million people in 2014. However, unemployment also increased from 2.0 million to 5.2 million people in the same period (Hendriks, 2016). Whether unemployment is caused by the higher entrance rate in the market or the slow absorption of labour by the labour market remains unanswered. The policies that contribute to solving youth unemployment and unemployment in general in the country are discussed below, while contact and other information for some of the initiatives can be found in Appendix 1.

- *General support initiatives*

⇒ The ‘Reconstruction and Development Programme’, ‘Growth, Employment and Redistribution’ and ‘Accelerated and Shared Growth Initiative for South Africa’

The Reconstruction and Development Programme (RDP) is a broad, integrated socio-economic policy introduced in 1994 (African National Congress, 1994). This was one of the first broad development economic policies that the government adopted to address social and economic problems, such as poverty, unemployment and inequality (African National Congress, 1994; Moyo and Mamobolo, 2014). It was a reconstruction policy aimed at following up on the “damage” caused by the apartheid government (Corder, 1997). The five programmes within the policy included meeting people’s basic needs as aforementioned, developing human resources through extensive education and training, building the economy, and democratising the state and society.

Considering the youth unemployment problem, the RDP fund was established, providing billions of Rands per annum to help to finance several high-profile projects, including projects for unemployed youth. The first programme within the policy (meeting the basic needs of people) included the creation of jobs through public works, provision of houses, free electricity, land reform, infrastructure, health care, and social welfare to people (Corder, 1997; Hendriks, 2016). Through the provision of these services, the government aimed at job creation for all, through public works and the promotion of Small, Medium and Micro enterprises (SMMEs), with a special focus on previously disadvantaged people, i.e. Africans, women, youth and people with disabilities. Although some of the jobs would be in short-term employment, adequate income and labour standards were assured. Programmes within the policy had a special focus on youth and the challenges that the youth faced. These include the elevated level of unemployment and lack of skills. The RDP indicated that youth development should be done through reversing youth marginalisation, job creation, and empowering and promoting education and training. Rural youth were supposed to be employed by implementing agencies to work on different construction projects as a way of developing them through skills training (Moleke, 2003).

Moleke (2003) has highlighted the point that, although the RDP was viewed as the cornerstone of the government development plan and, despite some achievements in the areas of social

security (Visser, 2004; Besada, 2007), it did not meet its targets, particularly in terms of economic growth. Its targets for land reform were not met (Moyo and Mamobolo, 2014). As regards youth employment, the policy did not achieve the intended targets. Implementing agencies came to projects with their own employees (mostly foreigners) to work in the construction companies, leaving the local people in those remote areas unemployed and without skills. After some time, the RDP policy was faced with implementation challenges related to a lack of properly skilled staff, failure to provide basic services in time, and limited employment creation (Visser, 2004; Ferreira and Rossouw, 2016). Furthermore, the quality of the services provided by the SMMEs that the government was promoting and supporting as a way of creating jobs was questionable. Built houses, for example, were collapsing. Inexperience and the lack of training provided by the implementing agencies constitute one of the reasons for the failure of the programmes within the policy (Hendriks, 2016).

As a result of implementation challenges, government introduced a new macro-economic policy framework in 1996, called the Growth, Employment and Redistribution (GEAR) Strategy (Visser, 2004; Gelb, 2007). The policy aimed to reduce poverty and inequality in society through economic growth. The aims mentioned above (poverty reduction and inequality alleviation) were to be achieved by creating employment opportunities and wage growth. Specifically, the policy was to achieve at least 4.2% growth and create 400,000 jobs per year by 2000 (Department of Finance, 1996; Besada, 2007). However, GEAR did not achieve its targeted growth and employment rates (Visser, 2004; Streak, 2004).

The Accelerated and Shared Growth Initiative for South Africa (ASGISA) was introduced to address the problem of unemployment and poverty after the government was not satisfied with the 2.7% growth achieved by GEAR (ASGISA, 2006). The policy had no new targets or objectives. The policy aimed to increase growth and to reduce unemployment and poverty, as well as to increase investment (ASGISA, 2006; Chagunda, 2006). One of the policy's targets was helping unemployed youth get jobs and learnerships, and to become involved in business. The following were the suggested interventions for addressing youth unemployment: building new Youth Advisory Centres, intensifying the youth cooperative programme, and monitoring programmes implemented by previous policy on skills training and business empowerment.

The Youth Advisory Centres that were built provided services that included career information, job opportunities, business development opportunities, and economic development services. These centres facilitated soft skills training for youth and referred qualifying candidates to employment agencies such as the HURAMBE Employment Agency. These centres also provided mentorship and training for aspiring entrepreneurs. This was a good initiative, as its focus was not only on assisting youth in finding employment, but also on providing guidance for the youth who wanted to be entrepreneurs. According to Brynard (2011), these centres were mostly found in townships and urban areas, but not many in rural areas, and the few that were found there were not fully functional. The policy also targeted unemployed graduates by providing them with jobs and learnerships. This was done in partnership with the Umsobomvu Youth Fund Initiative, which created a database of unemployed graduates to register on. There were no reports about the policy's fate, as it was replaced by the New Growth Path in 2010 (Brynard, 2011).

#### ⇒ The New Growth Path

The New Growth Path (NGP) was introduced in 2010 (Meyer, 2013) and aimed to create employment by addressing structural unemployment. The policy, at the time, was the country's long-term development vision with a target of creating 5 million additional jobs by 2020, thus reducing unemployment from 25% to 15%. The jobs were intended to be in the agriculture, mining, manufacturing, tourism, and public sectors. The agriculture sector was targeted to create jobs for 300,000 smallholder farmers in smallholder schemes by 2020 (Department of Economic Development, 2010). In creating the employment, this policy had five job drivers: infrastructure, main economic sectors, seizing the potential of new economies, investing in social capital and public services, and spatial development. The policy also had a focus on youth. The youth were meant to receive exposure to various work experiences in the form of providing internships for them, both in the public and private sectors, while the policy also intended to provide opportunities and training for aspiring entrepreneurs. One of the job drivers, infrastructure development, was to create jobs and skills acquisition for youth in urban and rural areas through programmes such as the National Youth Policy (NYP). This development would offer jobs and address the underdevelopment in remote areas. Services that were hindered by a lack of or poor infrastructure in remote areas, such as telecommunication, would then be solved. Accessing information for rural youth would then be relatively more straightforward.

The policy also focused on creating jobs by expanding other sectors, such as manufacturing. The policy emphasised creating jobs for the youth through direct employment schemes by the state. It further highlighted the subsidies and expansion of macro-economic packages that are labour intensive, such as agriculture and mining, as ways to encourage the private sector to invest and extend their existing operations in an attempt to create employment. Moreover, the policy was introduced as a remedy to the damage caused by the global economic recession (Koma, 2013). However, according to Meyer (2013), since the introduction of the policy, there has been debate on what the policy aims to achieve and how it could be implemented. The main criticism of the NGP, as underlined by Mayer *et al.* (2011), is that it states what needs to happen, but fails to provide the procedures and interventions for achieving this. The policy was replaced by the NDP 2030 in 2012.

⇒ National Development Plan 2030

The NDP 2030 was approved by the South African cabinet in 2012. The plan was released following the National Commission's *Diagnostic Report*, released in June 2011, which set out South Africa's achievements and shortcomings since 1994. The report pointed out that failure to implement policies was one of the main reasons for slow progress, and set out nine primary challenges that the country was facing. Among the challenges that the country then faced, were the facts that few people were at work, the quality of school education for black people was poor, and South Africa remained a divided society (National Planning Commission, 2011). Thus, the NDP 2030 was developed as an intervention strategy for dealing with the many alarming issues in South Africa.

The NDP 2030 aims to address the problem of poverty and inequality by 2030, as well as the problems identified in the diagnostic report (National Planning Commission, 2013). Rural development is the most important strategy for poverty reduction and employment creation in rural areas (Johnston and Clark, 1982). The plan underlines the present challenges in rural areas, such as poverty, unemployment among youth and women, and poor school infrastructure. As far as rural challenges are concerned, the NDP provides solutions for challenges, such as improving poor infrastructure in school, expanding agriculture for small-scale farmers and introducing new technologies to commercial farmers to create jobs while improving living standards. Agriculture is identified as being the most important form of

employment in rural areas, with the potential to create 1 million jobs through the expansion of smallholder irrigation farming.

Reducing the unemployment rate provides a solution for eliminating poverty and inequality in South Africa (Zarenda, 2013). Thus, finding ways to reduce the alarming levels of youth unemployment is one of the aims of the policy. The NDP 2030 has interventional strategies that target unemployment, focusing more on education and training. In the document produced by the National Planning Commission (2012), the policy highlights the following interventions that are specifically intended for the youth, both in rural and urban areas:

- Improving the existing youth programmes like the EPWP and introducing new community-based programmes that will provide life-skills training, entrepreneurship training and opportunities for participating in community development and outreach programmes.
- Increase the number of National Youth Policy (NYP) colleges.
- Provide full financial assistance to learners from poor families.
- Build community safety centres to prevent crime and include youth in initiatives within their communities.
- Provision of tax incentives to employers to decrease the cost of hiring young people.
- A subsidy to be paid to the replacement sector so that they can identify, train and place matric graduates into work.
- Increase the number of learnerships provided.
- Formalisation of the graduate recruitment scheme to attract highly skilled young people.
- Expand the role of government-owned enterprises in training artisans and technical professionals.
- Improving the school system by training teachers and increasing the learners' mathematics and mathematics literacy achievement rates to at least 50 percent.

⇒ Revised National Curriculum Policy

Policy debates in developed countries about youth unemployment revolve around observations that the high rates of youth unemployment are a pure outcome of the effectiveness of free

market forces, while other observations are that the youth are faced with a long-term challenge of unemployment because of the lack of both experience and improved skills. Lack of information is said to be one of the causes of unemployment (O'Higgins, 2001). Following this, the South African Department of Education formulated a policy that provided career guidance for learners in Grade 9 to Grade 12 in high schools. This policy was implemented as an essential subject, called Life Orientation, to all learners, documented in the Revised National Curriculum Statement Policy of 2002. It targeted to alleviate unemployment by providing youth at the high school level with information about career options that one can follow.

According to du Toit (2003), the Revised National Curriculum Statement Policy of 2002 has a shortcoming. The career guidance provided at high school level needs to provide formal, adequate information about the labour market, occupations and training opportunities. Accurate and updated information about the skills and careers on demand in the labour market is crucial. Such information is provided by private career information institutes and networks that are expensive to access and thus not available to disadvantaged learners, mostly located in rural areas. After 15 years of implementing the policy, the youth in the rural areas still need more information about careers and options for further education. Adjustments need to be made to the policy for rural youth to access the intended benefits of the policy. Adjustment on the implementation plan, including how they could provide updated information to rural youth, is essential.

⇒ The National Youth Policy and the Youth Employment Accord

The National Youth Policy (NYP) 2015-2020 was introduced in 2015 with the main aim of addressing youth issues. Globally, youth unemployment is a challenge, and this policy was specifically formulated to develop interventions and strategies to overcome it, referring to the National Development Plan 2030. The National Youth Commission (2015) states that the policies implemented before the introduction of NYP 2015-2020 had impacted on the socio-economic status of youth. These included improvements in skill acquisition and access to education. However, more can still be done, considering the increasing levels of unemployment. The goal of the NYP 2015-2020 is to consolidate youth initiatives that improve their capabilities to participate in and transform the economy.

The objectives outlined in the policy document as documented in the NYP 2015-2020 are as follows:

- Consolidate and integrate youth development into the mainstream of government policies, programmes and the national budget.
- Strengthen the capacity of key youth development institutions and ensure integration and coordination in the delivery of youth services.
- Build the capacity of young people to enable them to take charge of their own well-being by building their assets and realising their potential.
- Strengthen a culture of patriotic citizenship among young people and help them become responsible adults who care for their families and communities.
- Foster a sense of national cohesion while acknowledging the country's diversity, and inculcate a spirit of patriotism by encouraging visible and active participation in different youth initiatives, projects and nation-building activities.

In its document, the National Youth Development Agency (NYDA) (2015) identifies gaps that need to be improved to help to reduce youth unemployment. These gaps include the limited involvement of the private sector in intervening with job creation opportunities, the lack of economic participation of the youth, and the “avoided” social and health challenges that youth face. These challenges include the high rates of HIV infections, substance abuse, and violent and risky behaviour, as well as the need to improve nutrition, especially of the youth in rural areas. Furthermore, the improvement and maintenance of Youth Development institutions were initiated by both the state and the civil society (National Youth Commission, 2015). Examples of those institutes include the South African Youth Council and the National Youth Development Agency.

Generally, the youth development institutes may be perceived as being ineffective because of the rising unemployment, lack of information and lower skills training of the youth. Reasons for these perceptions are that there is a lack of clear mandates and a fragmentation between main stakeholders, resulting in duplicated responsibilities and time-wasting, giving fewer results (National Youth Commission, 2015; Hendriks, 2016). Furthermore, more monitoring and evaluation needs to be done of the existing programmes with the institutions. Less effort is made to gather and act upon the challenges and lessons experienced within the institutions.



The institutions were created to tackle the challenges that youth face, and yet they do not have the capacity to deliver on this mandate. Hendriks (2016) has highlighted the point that some of the institutions did not even have computers and that some were not even operative at the time of the study. Tackling youth unemployment is more than just creating temporary jobs and the acquisition of moderate skills. According to the National Youth Commission (2015), interventions to create jobs are very necessary, as are the strategies to eliminate the root causes of this challenge. Education should remain a priority for policymakers, the government and the youth themselves.

Related to the NYP 2015-2020 is the establishment of an organisation known as the Youth Employment Accord, which set out to achieve the goal of New Growth Path goal of creating five million new jobs by 2020 (National Youth Commission, 2015). The organisation establishes ways for youth employment creation and skills development. An agreement was reached to implement the Youth Employment Strategy from 2013, with the aim of providing large numbers of youth with employment. The aim was to achieve this by incorporating measures and incentives to ensure youth engagement in the economy through training, internships and apprenticeships. The Youth Employment Strategy has six improvement target areas for youth employment, namely education and training, work exposure, public sector measures (public work programmes), youth target set-asides, youth entrepreneurship and youth cooperatives, and private sector measures (Department of Economic Development, 2013). Since the introduction of the Youth Employment Accord, the employment of youth in agriculture has increased dramatically (Department of Planning Monitoring and Evaluation, 2016).

⇒ National Youth Development Agency (NYDA)

The National Youth Development Agency (NYDA) was launched in 2009, with the aim of promoting the development of the young people in South Africa and focusing on reducing the challenges, such as unemployment and low total entrepreneurship activity, faced by the youth (NYDA, 2019). The agency was built up, based on the obligations from relevant frameworks, such as the National Youth Policy (2009-2014). The NYDA has different funding strategies, products and services that are offered, namely the national youth services programme, education and training, the NYDA grant programme mentorship, and training in market linkages and business management. The NYDA provides both financial and non-financial

support (NYDA, 2015). Grants are provided, depending on the need of the individual, cooperative or Community Development Facilitation Project. Credit reviews are carried out for all grant applicants, and funding is not considered for a grant applicant who is under debt management.

Support platforms that the NYDA covers include marketing, training (government training, business management training and governance training), financial assistance, voucher programme, and sales pitches and mentorship (NYDA, 2019). The agency's key performance areas focus on sustainable and improved livelihood opportunities for young people, social cohesion and nation building, achieving an environment that promotes youth development, and on developing and enhancing a credible and capable youth development agency (NYDA, 2019).

The performance for the 2018/2019 financial year (NYDA, 2019) determined that business development support services were granted to a total of 23 942 beneficiaries, and that a total of 1 103 youth recipients received grant funding, including individuals, cooperatives and enterprise beneficiaries:

- 825 enterprises supported
- 181 individual youth supported
- 97 cooperatives supported.

The achievements of the NYDA's aim of enhancing youth participation in the economy have been seen in the outcomes and through achieving the targets. The outcomes indicate increases in accessing social-economic opportunities, in viable business opportunities being pursued, and in the support for youth participation in the economy. A total of 2316 youth-owned enterprises were supported with financial interventions, and 4859 youth enterprises were supported with non-financial business development interventions.

⇒ National Empowerment Fund (NEF)

The National Fund Act, 105 of 1998, created and implemented the National Empowerment Fund (NEF). The programme was established with the aim of promoting black economic participation by granting black-owned businesses support through financial and non-financial support (NEF, 2017). The NEF's investment activities are driven by an investment agenda that aims to ensure that, without deviating from sound economic principles, the funding will provide meaningful economic empowerment for black people.

The funding services (NEF, 2017) include:

- The Imbewu fund
- Entrepreneurship Finance, Procurement Finance, Franchise Finance
- Supporting start-up businesses and providing expansion to small and medium enterprises
- funding that ranges from R250 000 to R15 million
- The uMnotho Fund, which:
  - gives support by providing capital support for the expansion of qualifying businesses, as well as by purchasing shares in white-owned businesses
  - gives support by providing access for capital markets, new ventures
  - provides funding that ranges from R2 million to R75 million
- The Rural and Community Development Fund, which:
  - supports rural economic development and growth
  - provides funding that focuses on new ventures, business acquisition and business expansion
  - provides funding that ranges from R1 million to R50 million
- The Women Empowerment Fund, which:
  - grants support to business that are more than 50-percent owned and managed by black females
  - grants funding between R250 000 to R75 Million.

Each application for funding is assessed (NEF, 2017) in terms of the following criteria:

- the commercial viability of the business case being presented
- the business must comply with all relevant laws and regulations
- there must be operational involvement at the managerial and board levels by black people
- minimum percentage of black ownership or interest of 50.1% is a requirement
- the business must be able to repay NEF funding
- the business must create a reasonable number of jobs
- geographic location of the business is also important, with a focus on rural or economically depressed areas being encouraged
- meaningful black women participation is viewed more favourably
- Rural and Community Development Projects must have meaningful participation by communities

- possibility of co-funding with private or public sector institutions is encouraged in larger projects.

In accordance with the NEF's objective to increase black economic participation, a few initiatives are being looked at by the NEF concerning regional activity and business training sessions. Regional activity payments have assisted in job creation, and in disbursements to women and to rural regions. The 2020 report states that a total of R81,7 million was invested in six South African provinces, including the Free State province, which represented a 27% annual disbursement against the target of 25% for the year. In the Free State, the financial allocation for disbursements was set at R20,9 million (NEF, 2020). There is a set goal to achieve for business training, and a total of 134 individuals were trained. The training included marketing and sales business, business networks, understanding of financial documents, and the creation of business plans (NEF, 2020).

⇒ Industrial Development Corporation (IDC) and Department of Agriculture, Land Reform and Rural Development (DALRRD) Agri-Industrial Fund

The Industrial Development Corporation (IDC), in cooperation with the Department of Agriculture, Land Reform and Rural Development (DALRRD), has launched a joint Agri-Industrial Fund. The fund is a R1-billion fund that was initiated by DALRRD and allocated to IDC to handle, through its blended financing programme. The money will be used to create and implement high-impact, black-owned, large-scale commercial agriculture projects, among other things (IDC, 2020).

The aim of the fund is to support agro-processing businesses that are economically viable, including those in the food and non-food sectors (export-oriented crops of high value, livestock, and poultry). It also aims to increase the use of local and regional resources in order to supply the domestic demand, and to promote and improve international trade. Overall, it aims to address issues faced by black farmers (IDC, 2020).

The criteria for the grant of funding (IDC, 2020) are:

- an applicant must be a 60% black owned entity
- funding should be utilised for purchasing infrastructure and equipment
- the operation should be in existence and already in production on privately owned or land reform farms
- business must be focused in the agricultural sector value chain.

⇒ Small Enterprise Development Agency (SEDA)

The Small Enterprise Development Agency (SEDA) support grant was established in 2004 through the National Small Business Amendment Act, 29 of 2004. SEDA's mission is to provide business-related information, advice, consulting, training, and mentoring in all areas of business growth. These services are intended to provide solutions for a variety of corporate operations, including production, human resources, finance, marketing, and export development (SEDA, 2016). Prior to beginning any intervention, a SEDA Business Advisor examines the client's needs, and the client, in collaboration with the SEDA Business Advisor, prepares a development plan with specific development interventions based on the assessment results (SEDA, 2016). SEDA's target market includes small, medium, and micro enterprises (SMME), as well as potential partners with a business idea.

#### Performance highlights:

The performance information reported here for the year under review supports the strategic indicators in the SEDA 2017/18 Annual Performance Plan. Overall, SEDA achieved most of its set targets and received an unqualified audit on finance and performance information. Key performance highlights are (SEDA, 2018):

- “42,848 clients were reached through Provincial promotional and marketing actions”
- “30,049 clients who attended entrepreneurship awareness session”
- “10,732 diagnostic assessments conducted on client's businesses”
- “9,110 enterprises were trained in business management”
- “901 cooperatives adopted and assessed”
- “861 clients trained on national and international standards”
- “2,860 clients supported through incubation”
- “6,957 new jobs created by supported clients”
- “19,064 jobs sustained by supported clients.”

⇒ Small Enterprise Finance Agency (SEFA)

The Small Enterprise Finance Agency provides financial support to small, medium and micro enterprises (SMMEs) and cooperatives. It was established in 2012 in terms of Section 3 (d) of the Industrial Development Corporation Act, No. 22 of 1940. It provides services in various sectors, including agriculture, with a focus of land reform beneficiaries (SEFA, 2020). SEFA

is divided into different funding schemes, and in this study, the focus will be on the small enterprise manufacturing support programme. The support is provided in the form of a loan, giving a maximum payment of R15 million per small enterprise, and up to 20 percent of the amount may be provided as a grant (SEFA, 2021).

SEFA targets rural area and township-based entrepreneurs, although small-scale entrepreneurs in urban areas are considered, with a primary focus on black people, the youth and women (SEFA, 2020). The programme prioritises manufacturing industries, such as furniture, chemical manufacturing, and agro-processing businesses. The SEFA business development services provided for agro-processing include technical skills training, and further provide the entrepreneurs with machinery and equipment (SEFA, 2021).

The purposes of the programme (SEFA, 2021) are:

- ⇒ to provide financial and business development support to entrepreneurs who are still undeveloped in their sectors
- ⇒ to facilitate the funding of aggregate input costs of raw materials
- ⇒ to provide infrastructure and market access opportunities to small enterprises
- ⇒ to increase job creation in manufacturing industry sub-sectors, including agro-processing
- ⇒ to assist in improving the rural and township area economies.

The funding criteria of SEMSP (SEFA, 2021) are that an applicant must provide:

- ⇒ a project execution plan
- ⇒ a business profile
- ⇒ a purchase order or copy of contracts
- ⇒ a 12-month cash flow projection
- ⇒ company statutory documents.

The SEFA (2020) qualifying criteria are that the enterprise must:

- ⇒ be a registered legal entity in South Africa in terms of the Companies Act, 1973
- ⇒ be 100 percent owned by South African citizens
- ⇒ be predominantly black owned and have majority percentage black management team (51 percent)
- ⇒ have been operating for at least two years prior to the application.

The annual performance of SEFA for the year 2019/2020 indicated that beneficiaries of the support comprised black-owned business, small, medium and micro enterprises (SMMEs), people with disabilities, and enterprises in rural towns and villages. The total facilities disbursed to youth-owned enterprises in the year amounted to 89% of the youth being supported (SEFA, 2020).

⇒ Free State Development Corporation (FDC)

The Free State Development Corporation (FDC) is an economic development agency established to offer a large selection of services to persons and potential investors in the Free State. The corporation provides the following services: financial and non-financial support for Small, Medium and Micro Enterprises, and property portfolio development and management (FDC, 2018). The mission of the FDC is to drive economic development through empowerment in the Free State. The support service provided by FDC is in a form of a loan. The loan products available are as follows: bridging finance (one-off order / non-construction related), bridging finance (construction related), cooperatives development fund, franchise development fund, general enterprise development fund, informal sector fund, and youth fund.

⇒ Cooperatives development fund:

The objective of this fund is to support the expansion and sustainability of cooperatives and the attaining and supplying of products produced. The size of the loan is based on the capital required by the cooperative, but does not exceed R500 000 per investment.

⇒ Youth fund:

The objective of the youth fund is to ease unemployment among the youth through business initiatives. Financing is provided to start-ups, expansions and buy-in/out operations. A maximum amount of R500 000 and a minimum of R50 000 is provided as a loan. The FDC aims to provide business development support services to individuals whose accounts are assumed to be in financial distress. It has been found that the percentage of individuals who were financially distressed was 73%, which was above the initial target of 60%. Existing and new SMMEs that were financially assisted comprised 33%; however, the target was 36%, but this was not reached (FDC, 2018).

Agriculture can be seen and highlighted as a sector that could provide a solution to the youth unemployment issue by empowering the youth to become involved in the agricultural sector. The empowerment of the youth could be achieved through the use of support initiatives, which are provided by either the public sector or the private sector. The support can be provided in the form of training, extension services, and financial and input support (Agu, 2013). However, as seen from some of the examples in the above discussion, the initiatives implemented have not been successful in reaching their desired goals. There are several reasons or explanations found in literature for the unsuccessful nature of these initiatives. According to Trevor and Musole (2018), the constraints faced by the youth are usually not understood by the initiatives, while the distribution of resources to the different farmers is not made according to what the farmers require (Ngcobo, 2018). Nevertheless, Chipfupa and Wale (2020) have stated that livelihood assets and Psycap influence the behaviour of individuals significantly, in particular regarding how individuals respond to agricultural policy incentives and opportunities. This could also indicate how youth would respond in terms of their access to livelihood assets and participation in support initiatives within, specifically, the agricultural sector.

- *Agricultural Support Initiatives*

⇒ The Department of Agriculture, Forestry and Fisheries Strategic Plans

The DAFF Strategic Plans for 2013/14 to 2017/18 and 2015/16 to 2019/20 are guided by long-term government policies, namely the NGP and NDP 2030. The plans place much focus on poverty, unemployment, food security, rural development and skills development. In the NGP and NDP 2030, agriculture is identified as a sector with a potential to create more jobs, and thus these sector-specific plans provide solutions and interventions as to how this could be achieved. Most importantly, the plans place special attention on solving unemployment problems in rural areas, especially among youth. They provide interventions for solving rural unemployment by encouraging the use of unutilised land, using conservation agriculture, strengthening smallholder farmers, and linking them to commercial farmers (DAFF, 2013; DAFF, 2015b).

The plans emphasise the need to involve youth in agriculture career opportunities, which could change the state of agriculture, leading to youth job creation. The Land Care Programme and EPWP are part of these strategic plans and have an objective of creating jobs targeting 55% women, 40% youth and 2% people with disabilities (DAFF, 2013; DAFF, 2015b; Carter, 2017). As far as the plan is concerned, more has been achieved in term of increasing hectares



planted with aim of increasing food security in the country. In terms of jobs creation, in the second quarter of 2016, unemployment was reduced by 5%, as compared with the previous quarter, showing that more jobs are being created in the sector (DAFF, 2014).

⇒ *Farmer Support Programme of South Africa*<sup>2</sup>

Fundamentally, the government has, over the years, initiated support initiatives that are in place to reduce the constraints faced by marginalised groups, such as the youth, women, and rural farmers. In 1986, the Development Bank of South Africa initiated the Farmer Support Programme (FSP). The FSP aimed to address and reduce the constraints faced by smallholder farmers, while also increasing their productivity in the rural areas (Mogano, 2018). This programme has increased income earnings (Baloyi, 2010). Okunlola *et al.* (2016, cited by Ngcobo, 2018) noted that the success rate of the Farmer Support Programme (FSP) in South Africa has been low. In 1994, a support programme, known as the Broadening of Access to Agricultural Trust (BATAT), was implemented by the government. The focus of the programme was reconstruction and development, where the focus of the programme was shifted from white farmers to opening access to more support initiatives for the black homeland farmers. It was later concluded that BATAT was not working and was not achieving its goal (Vink *et al.*, 2012). Nonetheless, the programme later failed, since it had not been able to achieve the main aims, and the Comprehensive Agricultural Support Programme was introduced as the substitute to the BATAT programmes.

⇒ Land Reform

With the intention of redistributing 30 percent of the white-owned farmland to previously disadvantaged black South Africans, the South African government in 1994 introduced the land reform programme. The programme aims to enhance the lives/livelihoods of the rural people and further improve food security. However, the programme has been faced with the challenge of not having a well-designed agricultural support programme in place that encourages greater agricultural production (Nenngwekhulu, 2019). To try to improve the purview of the programme and further assist the beneficiaries, the government has introduced several programmes to assist the land reform beneficiaries (Lahiff, 2008).

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<sup>2</sup> Review of programmes from Songca (2021), M.Agric study funded by project (K5/2789//4).

During the first five years of the land redistribution programme (1994–1999), the focus of land redistribution was to offer land to the poor and disadvantaged for housing and small-scale agricultural activities (Ranwedzi, 2013). The Settlement Land Acquisition Grant (SLAG) was later implemented, aimed primarily at families with a monthly income of less than R1500. Poverty reduction was a major goal, and the impoverished were clearly the target population. A financial grant of R16 000 was given, which allowed poor and landless black South Africans to organise an association to seek, buy and develop farm property. The applications involved farm-worker settlements and farm-worker equity, as well as group settlements with some production, cooperative production and/or commonage schemes (Ranwedzi, 2013). However, it was determined that the SLAG policies encountered weaknesses in the implementation process and in the group project qualities that SLAG had created, as well as causing disagreements over what the beneficiaries could receive as benefits (Ranwedzi, 2013).

⇒ Land Redistribution and Agricultural Development (LRAD)

In 2001, the Department of Agriculture and Land Affairs created the LRAD sub-programme to replace the settlement/Land Acquisition Grant, and people from disadvantaged backgrounds are assisted to purchase land for commercial farming (Dawood, 2018). The goal of the LRAD is to increase the access of black people to agricultural land and to contribute to redistribution, over the duration of the programme, of approximately 30 percent of the country's commercial agricultural land. LRAD is intended to provide beneficiaries with grants to gain access to property exclusively for agricultural purposes, namely for the purchase of land, and to fund land improvements, investments in infrastructure, and capital assets. Several grants (ranging from R20 000 to R100 000) can be obtained by beneficiaries, depending on their own contributions in labour and/or cash. The participants in LRAD are mainly responsible for their active engagement in the growth of agriculture.

In the LRAD policy context, the aspect of communicating LRAD information is not discussed, and there is no recorded strategy elsewhere regarding the promotion and marketing of LRAD. The presence of the Land Bank and the Department of Agriculture (DoA), however, provides a mechanism for increasing the take-up of LRAD. These institutions have their own publicity and promotional campaigns (e.g. pamphlets, radio shows, and farmers' day presentations). They also have an abundance of offices in the nine South African provinces, from which information on LRAD can be made available to farmers.

The criteria (National Department of Agriculture (NDA), 2001) for application for a grant are:

- Must be 18 years or older
- Must intend to utilise the land for agricultural purposes, with the aim of farming full-time
- Must be a previously disadvantaged person
- Should have a bank account with any of the South African financial institutions
- Be prepared to attend training programmes after land acquisition
- Must not be employed by the government.

The programme strategy was to follow the ‘willing buyer–willing seller’ principle, and the government would provide the potential beneficiaries with financial grants to purchase the land on their own. However, the programme was criticised for its slow progress and the low level of success it achieved, and in addition, the lack of willingness by white landowners to sell was an issue (Ranwedzi, 2013). The programme was discontinued in 2010 and a new state-driven programme, Proactive Land Acquisition Strategy (PLAS), became the focus of land redistribution.

⇒ Proactive Land Acquisition Strategy (PLAS)

In 2006, the Proactive Land Acquisition Strategy (PLAS) was adopted. Its aim was to assist local governments in developing area-based planning, as well as to strengthen and increase collaboration among organisations involved in land redistribution (Malatji, 2017). In the PLAS programme, the strategy changed from ‘willing buyer–willing seller’ land purchases by a potential beneficiary, to the government having control of the purchasing of land and leasing it to the potential beneficiaries for a long duration of 30 years (Ranwedzi, 2013). The strategy considers two options: a needs-based strategy and a supply-driven strategy (Ranwedzi, 2013). The plan focused on four main aspects (Malatji, 2017):

- to speed up the process of land redistribution
- to ensure that land could be bought in areas, agricultural corridors, and other locations with strong agricultural potential in order to satisfy the Accelerated and Shared Growth Initiative for South Africa goals
- to improve beneficiary identification and selection, as well as land planning for future settlements
- to make the most productive use of the land that had been bought.

The target groups were (Mahlangu, 2017):

- Black people (African, Coloureds and Indians)
- Emerging and commercial farmers
- Youth, women and unemployed agricultural graduates
- Black people in urban areas with the necessary farming skills and people leaving under insecure tenure rights.

⇒ Recapitalization and Development Programme (RECAP)

The Recapitalization and Development Programme (RECAP) was introduced with the aim of recapitalising farms that were obtained through land reform programmes (Nenngwekhulu, 2019). The focus of the programme is to support land reform beneficiaries with financial grants, the acquisition of mechanisation, production input support, market and value chain integration, and mentorship and capacity building for financing infrastructure development (Nenngwekhulu, 2019). RECAP was introduced (Nenngwekhulu, 2019) with the following objectives:

- to improve and increase agricultural production
- to assist emerging farmers to becoming commercial farmers
- to increase food security
- to create and make job opportunities available in the sector.

⇒ Comprehensive Agricultural Support Programme (CASP)

CASP is a support programme directed at providing support to land reform beneficiaries and to individuals who were previously disadvantaged in the acquisition of land privately owned (Business Enterprises, 2015). CASP was motivated by six pillars, namely: information and knowledge management; technical management; providing production, training and building capacity; marketing and business development; on- and off-farm infrastructure; and a financing mechanism (Afful and Mafsiyaneng, 2018). The initiatives target groups and individuals who are the hungry and vulnerable, beneficiaries of land reform, household food producers, and those operating within the macroeconomic environment, including the youth (Business Enterprises, 2015).

The objectives of the programme (DAFF, 2019) are:

- to create both off- and on-farm jobs, and increase and improve the rural economy
- to reverse the inequities in farmland access

- to increase the reduction in poverty, crime and violence, leading to a contribution to national and household food security
- to promote sustainable farming.

The evaluation criteria for applicants (DAFF, 2015a) are:

- applicants must be South African citizens
- only previously disadvantaged South Africans will be eligible for funding
- subsistence and smallholder farmers (women, disabled people and youth) are prioritised first
- priority is given to projects that will generate employment opportunities.

The focus on commodities is directed towards grain, red meat, poultry, vegetables, fruit, fish, and ostrich production. According to DAFF (2018), the implementation of the programme led to the achievement of successful support between the years 2008/09 and 2011/12 for:

- 81 commercial producers
- 1921 subsistence producers
- 1737 smallholder farmers, with a total of 28 950 smallholder producers being supported with agricultural extension advice.

In 2020/2021, the performance of CASP in the Free State indicated that the following outputs were achieved (Department of Agriculture, Land Reform and Rural Development (DALRRD) 2020):

- 982 subsistence and 130 smallholder farmers were supported
- 28 youth and 10 women were supported under CASP
- 31 projects were assisted with on- and off-farm infrastructure
- 880 beneficiaries of CASP were trained on farming methods and 32 beneficiaries were supported regarding marketing, equipment and infrastructure.

The goal of the grant is to develop a supportive and favourable agricultural services environment for subsistence, smallholder and black commercial farmers. The outcomes of the support indicate that the support is still endeavouring to achieve its main aim. In the years 2019/2020, the report indicated that the total number of farmers supported with production inputs and mechanisation comprised 1433 subsistence, 6111 smallholder and 154 commercial farmers. Farmers who were trained under the support initiative totalled 26 896. These results

are all greater than what the target was (DAFF, 2019). Business Enterprises (2015) has noted that, between 2004 and 2012, only 7% of the participants in the programme were youth beneficiaries.

⇒ Micro Agriculture Finance Institutions of South Africa (MAFISA)

MAFISA was created and established in 2004 as the financial support provider of CASP, with the aim to provide access to loans for individuals involved in agriculture in South Africa. It is well known that access to financial resources, especially credit, is an obstacle experienced by the intended recipients of the support, and one of the reasons behind the implementation of this programme was to provide smallholder and rural farmers with a possible avenue to gain access to credit (Ramashia, 2018).

Four financial institutions are involved as intermediaries in the distribution of the MAFISA funds in provinces. For example, the Land Bank is the administrator of the programme and provides access to the MAFISA credit scheme, working on behalf of the provincial departments. Having four institutions involved in the distribution of the funds has led to challenges being experienced in the implementation of the credit scheme, which include lack of economic financial experience and management in provincial departments, as well as a lack of capacity.

The South African government gave the scheme a once-off amount of R1 billion, with the aim that the scheme would be able to sustain itself from the interest payable on the recovered loans and from the interest payable on its bank deposits (Ramashia, 2018). The farmers are offered loans ranging from R10 000 to R500 00, and the utilisation of these funds cover either production inputs or small equipment.

The main objectives of MAFISA include the improvement of livelihoods, the reduction of poverty, and the creation of business opportunities and employment (Cornerstone Economic Research, 2014). It is further stated by National Treasury that the beneficiaries who the programme is aiming for include subsistence producers, smallholder producers, females, the youth, disabled individuals, farm workers, and communal producers.

According to DAFF (2010), the eligibility criteria for MAFISA assistance are that:

- the applicant be a South African citizen

- the applicant must be from a historically disadvantaged (designated) group
- the applicant must be in possession of a valid South African identity document
- the enterprise pursued must indicate an ability to repay the loan (i.e. must be viable)
- the applicant be of the age of 21 and above (if between 18 and 21, there is a need for parental/guardian consent)
- the household gross monthly non-farm income must not be more than R20 000
- the total enterprise turn-over must not be more than R1 000 000
- applicants can apply as an individual, group or an entity
- the enterprise must be in respect of either farming or agribusiness.

⇒ Ilima / Letsema

Ilima / letsema was implemented to support farmers by facilitating and providing for the availability, accessibility and affordability of production inputs to rural farmers. The support is centred on the Land Reform Programme, with the object of ensuring socio-economic development (Mogano, 2018). The goal of the grant is to reduce poverty and improve food production in the rural areas. The programme was purposely implemented to increase agricultural production and to provide infrastructure to those who require it. The assistance of this programme focuses on any form agricultural production (grain, livestock, horticulture, and aquaculture production) (DAFF, 2019).

According to Mogano (2018), the main objectives of the Ilima / Letsema programme are to:

- provide inputs (such as seeds and fertilisers) to smallholder farmers
- create opportunities for developing agricultural development corridors
- lead to an increase in the use of land that is productive for ending or improving the issue of food insecurity
- aim to improve household food security for the community and families
- activate fallow land in the former homelands.

The key performances of the initiatives (DAFF, 2019) have been:

- R583 million in total allocated for disbursements
- 104 community gardens, 31 978 subsistence farmers and 7257 smallholder farmers supported with production inputs and mechanisation support
- 203 black commercial farmers supported with production inputs
- A total of 23 380 jobs created under the Ilima / letsema programme

- 67 612 vulnerable households supported with inputs for vegetable gardens.

The 2020/2021 key performance indicators of the initiatives show that the following were supported (DALRRD, 2020):

- 3 418,3 hectares were planted (including maize, sunflower, pasture and vegetables)
- 154 jobs were created
- 6250 household food gardens, 2436 subsistence farmers, 108 smallholder farmers and 5 black commercial farmers were supported.

#### ⇒ Youth in Agriculture and Rural Development (YARD)

Youth in Agriculture and Rural Development (YARD) was established in 2008 to stimulate and advance the participation by the youth in agriculture. Furthermore, YARD aims to promote and develop youth skills and to produce leaders in agriculture and rural development, and also to understand the needs of the youth and respond by implementing efficient and effective programmes, policies and services (National Development Agency (NDA), 2008). YARD is a youth support structure that was established and endorsed by the government to assist rural communities to achieve specific objectives (NDA, 2008). These objectives (Agriculture and Rural Development, 2008) are as follows:

- The needs and constraints of the youth are to be understood so that policies, programmes and services are implemented to accommodate the needs of the youth
- to increase and improve the participation by youth in agriculture
- to promote economic development and empowerment towards the youth and encourage improvement in decision making and market participation by the youth
- to promote and develop leadership skills within all categories of the youth.

#### ⇒ LandCare

The National LandCare programme is a community-based initiative that is supported by the government. Junior land care is a fragment of the LandCare programme that is intended to enhance the livelihoods of the South African youth, more especially in the rural areas (NDA, 1999). Junior land care was implemented in 2001 to address the problems of skills development, youth unemployment and environmental education, mainly in rural areas (DAFF, 2015a). Both the public and the private sectors drive the partnerships and cooperation of the programme. The programme aims to preserve natural resources and utilise them in a



sustainable way in order to improve and increase awareness and education regarding the natural resources, and lastly, to create jobs with the aim of addressing poverty. The creation of employment falls under the programme, but is also funded through the Expanded Public Works Programme (EPWP) (Gov, n.d.).

After the implementation of the programme in the nine provinces of South Africa, the LandCare grant has supported several projects. With all the projects supported by LandCare, the programme adheres to a target of 55 percent women, 40 percent youth and 2 percent disabled individuals (Gov, n.d.).

The objectives that apply in this programme (DAFF, 1999) are as follows:

- to provide a framework through collaborations for people, community groups and the public and private sectors, with the aim to maximise natural resource production and sustainability through management and conservation
- to educate, share knowledge and information to develop the skills and capacity of the landowners
- to reduce and prevent risks that contribute to irreversible damage
- to promote the maintenance of biodiversity.

The eligibility criteria (DAFF, 2015a) for applicants are:

- should be a South African resident (citizen)
- women, youth and people living with disability are given priority
- priority is given to applications for community funding.

Youth involvement remain scant, despite the indications of promise of the agricultural sector and the identified issues regarding youth involvement in the labour force in South Africa, high unemployment, and availability of the support initiatives. To ensure the sustainability of livelihoods of rural individuals through agriculture, youth must be involved in farming and other economics activities. Youth can develop themselves and sustain their livelihoods through involvement in agriculture (FAO, 2014a).

## 2.3 Entrepreneurship

The following section will provide background on entrepreneurship, including the different definitions found in literature concerning entrepreneurship and its possible role in agriculture.

### 2.3.1 Defining entrepreneurship

The importance of entrepreneurship in driving economic development is recognised by many authors (Schumpeter, 1934; Leff, 1979; Baumol and Strom, 2007; Naudé, 2010). Entrepreneurship is seen as essential for job creation (Schumpeter, 1934; Malchow-Møller *et al.*, 2011). Entrepreneurship among the rural youth could contribute to addressing the problem of high levels of rural youth unemployment. Youth entrepreneurship is regarded as integrating youth into the labour market (Schoof, 2006).

The entrepreneurial function of farmers was identified as early as the 19<sup>th</sup> century by Wilcox (1932). Although the entrepreneurial aspect of being a farmer was recognised long ago, it is only in recent years that the topic of ‘entrepreneurship in agriculture’ or the ‘farmer as entrepreneur’ has received more attention. Knudson *et al.* (2004) have confirmed this, stating that entrepreneurship has received very little attention in agricultural economics. The topic of entrepreneurship or the entrepreneur has, nevertheless, become a topic of investigation in the agricultural sector in recent years (see Vesala *et al.*, 2007; McElwee, 2008).

Literature has failed to accept and decide on a single definition of entrepreneurship (Lans *et al.*, 2014; Phelan, 2014; Hadebe, 2016). Schumpeter (1934) described entrepreneurship as carrying out new combinations and involves doing things already done, but doing them differently. Kao (1993) defined entrepreneurship as a way of doing something new and different, with the aim of wealth creation for people and value addition to society. Kirzner (1973) combines these views when he mentions that the entrepreneur explores previously unexplored opportunities by adjusting current products or introducing a new product. Several other definitions of entrepreneurship, as defined by different scholars, are presented in Table 2.1.

**Table 2.1: A sample of definitions of entrepreneurship**

Source	Definition
BusinessDictionary.com	The capacity and willingness to develop, organise and manage a business venture along with any of its risks in order to make a profit.
Dollinger (2008)	Management and utilisation of resources to create innovative economic organisation for profit or growth in a risk and uncertain environment
European Commission (2003, p7)	‘A mindset and process to create and develop activity by blending risk-taking, creativity, and innovation with sound management, within a new or existing organization’
Frederick and Kuratko (2010, p11)	‘Dynamic process of vision, change, and creation’
Herrington (2011, p116)	‘Starting a new business venture using limited resources’
Maluleke (2016)	It is about risk-taking, innovation, seizing opportunities, efficiency and profitability and corporate citizenship
Rukuni (2011)	Seeing and exploiting opportunities (unmet market needs or gaps) where others do not, the courage to act, do new things never tried before, and being innovative and creative.
Schumpeter (1934)	Creative destruction, i.e., willingness and ability to convert a new idea into a successful innovation, e.g. destroying old and creating new combinations for products, services, markets, organisations and production methods.
Singh (2013)	An entrepreneur is an individual who recognises an opportunity or unmet need and takes risk to pursue it
Wikipedia	Entrepreneur - a loanword from French, first used in 1723 – qualities of leadership, initiative and innovation in new venture design.
Allen (2015)	A mindset that is opportunity focused, innovative, risk-taking and growth-oriented

**Source:** Adapted from Chipfupa (2017)

There is no universally agreed-upon definition of entrepreneurship (Maluleke, 2016), although there are some similarities between the different definitions provided by scholars in the literature. The similar traits of entrepreneurship and an entrepreneur are summarised by Chipfupa (2017):

- Risk-taking, tolerance for failure, being determined and persistent;

- Seizing an opportunity;
- Proactive, curious, hardworking, strong drive to achieve, independent, self-confident, positive attitude;
- Problem-solving;
- Innovation or creativity – working on new, not already existing, goods or services;
- Value addition, efficiency, and profitability – to be at a competitive edge;
- Embracing change/growth – entrepreneurs are not necessarily sources of change, but rather managers of change in terms of exploiting the opportunities that change creates. An entrepreneur must grow their business;
- Internal locus of control, self-reliance, and motivation; and
- Visionary and goal-oriented – an entrepreneur must visualise where the business is destined.

There is one common aspect concerning entrepreneurship in literature: the creation of a new organisation. This new organisation can be either a new venture (starting a new business from nothing) or a new venture within a current business environment. Entrepreneurship is represented by the emergence and growth of new businesses (Nieman and Nieuwenhuizen, 2009) and is a process that consists of at least three phases (Baron, 2007); phase one includes the identification of an opportunity or opportunities for a viable and feasible business, and this generally occurs before the business is launched. The second phase involves the entrepreneur launching the business by gathering the necessary resources to start business activities. Phase three is where the entrepreneur manages the business to ensure not only its survival, but also the growth of the business. The phases of entrepreneurship clearly show the establishment of a new business, the growth of the business, and long-term survival, which indicates an improvement in the livelihood of the entrepreneur. In terms of poverty reduction, or involving the youth in the rural sector, the establishment of new long-term businesses could reduce poverty levels of not only the entrepreneur, but also of the surrounding rural environment.

Carton *et al.* (1998) state that two approaches exist that can be used to define entrepreneurship. The first is to consider what an entrepreneur is, and then to consider the entrepreneur's behaviour and accordingly define an entrepreneur. The second is to provide a definition of

entrepreneurship and the expected behaviour. This is to define the entrepreneur within the entrepreneurial process. Hébert and Link (1989) identified twelve roles or themes linked to entrepreneurs that are in a way similar to those listed by Chipfupa (2017). These themes encompass the views that the entrepreneur is: the one who assumes the risk and uncertainty; the one who provides the capital support; an innovator; a decision maker; an industrial leader; a manager or supervisor; an organiser of the economic resources; an owner; one who employs factors of production; a contractor; an arbitrageur; and an allocator of resources between different users. These different aspects mentioned reflect in the definition provided by Bygrave and Hofer (1991, cited by Phelan, 2014) where the authors explain that the entrepreneur is a person who has identified an opportunity and creates a new business to exploit the identified shortcoming in the market.

Traditionally, entrepreneurship research has primarily been concerned with the start-up of new firms or existing firm levels (Schendel, 1990; Cooper *et al.*, 2000). Empirical research has focused mainly on the innovative activity contributed by relatively large firms. The smallest firms have received relatively less attention and quantification. Most of the suggestions that have been made about the sources (or the lack of them) of innovative activity have been based on observations of the behaviour of larger firms (Acs and Audretsch, 1988).

Within the field of agriculture, little is known about on-farm entrepreneurship in smallholder agriculture, from a business perspective. Most of the empirical findings are relevant, if at all, to commercial agriculture. Smallholder and subsistence agriculture remains on the sidelines as far as research and development on entrepreneurship are concerned. Entrepreneurship is poorly contextualised in agriculture, especially for smallholder agriculture. There is very little knowledge relevant to youth and youth participation in smallholder agriculture.

### **2.3.2 Entrepreneurship and Agriculture**

Research from mostly western countries offers an insightful discussion about entrepreneurship and farming. Given the confusion and inconsistencies found in the literature on general entrepreneurship theory, one can expect that the same situation would be applicable to farm entrepreneurship. The concept of entrepreneurship in farming, however, is very complex, as is evident from the literature where there are opposing views of farmers as entrepreneurs. According to Vesala *et al.* (2007), some researchers connect entrepreneurship with profit

maximisation through the enlargement of scale in primary production, while others connect entrepreneurship solely to value-adding activities and on-farm business diversification.

McElwee (2008) asserts that a complex relationship exists between the farm and the farming business, and that one needs to split the identities of the farm as the business and the farmer. McElwee (2004) has provided a definition for farmers that gives key aspects, such as involvement on a part-time and full-time basis in activities associated with the farm and the agricultural sector. The main source of income from these activities is derived from working on the soil, growing crops and raising livestock (McElwee 2004, as cited in McElwee, 2008). McElwee (2008) discusses four farmer typologies, which include the 'farmer as entrepreneur'. In this typology, McElwee (2008) explains that family farms and tenant farmers can be expected to be entrepreneurial, as "they are able to use the farm's resources and features and characteristics in flexible and innovative ways". Focusing on the farmer as an individual provides the opportunity to measure the entrepreneurial skills and competencies of the individual.

Entrepreneurial skills have already been proven to have a positive impact on the level of technical efficiency of smallholder irrigation farmers within South Africa (Jordaan, 2012), while entrepreneurial competencies have a positive influence on the operating efficiency, as found in the study by Nieuwoudt *et al.* (2017). The entrepreneurial skills of the farmers are thus expected to influence the farmers' abilities to enhance the performance of their farming businesses, and consequently increase food security. The entrepreneurial and management abilities of the youth that enable them to prosper in their businesses need to be considered in the development paths of small-scale farmers. The performance of the business is not only influenced by the competence of the individual, but also by other factors directly associated with the individual's goals, self-efficacy, passion and vision, which have an important multi-faceted influence on the performance (Lans *et al.*, 2014).

Changes in international and national policies demand an increase in the entrepreneurial orientation of farmers (Agnete Alsos *et al.*, 2003). The changing environment for agri-food systems in response to the global forces of globalisation and liberalisation (Louw, Kirsten and Madevu 2005) means that "all members of the food supply chain must make more strategic choices to realign their businesses and better serve consumer needs" (Boehlje, 1999, cited by Louw *et al.* 2005). Smallholder farmers who want to participate in commercial agri-food chains

have to manage production, marketing, finances, and human resources. Farmers also have a social responsibility; they have to plan for the succession of the farming enterprise and decide on the optimal business structure that will allow them to reach their goals (Ontario Soil and Crop Improvement Association, 2009). Thus, smallholder farmers require various management skills to operate in commercial agri-food chains.

The high rate of unemployment experienced by the youth increases their fears and reduces their expectations of finding employment and enhancing their livelihoods (Bennell, 2000). The benefits that are associated with entrepreneurship provide the potential to align marginalised youth within the economy (Curtain, 2000). This can be achieved when the opportunities identified through the agricultural sector complement entrepreneurship. By doing this, the youth can be provided with a stable platform to initiate educational, employment and monetary incentives. The social and economic worth of young entrepreneurs lies in their endeavours to achieve financial prosperity, which can be accomplished through overcoming circumstances (Querol-Areola, 2006). Thus, rural youth can overcome difficulties and enhance their living conditions by participating in the agricultural sector by establishing their own farming businesses, thus combining the opportunities provided by entrepreneurship and the agricultural industry. Entrepreneurship through agriculture presents a great number of benefits, which include increased employment as well as improvements in rural areas. This snowball effect can significantly aid financial and unemployment issues among the youth (White and Kenyon, 2000).

Youth are encouraged to become entrepreneurs in the agriculture sector as a way of decreasing unemployment and enhancing knowledge, which can be beneficial for generations to come (Rigou and Koutsouris, 2011). Participation in agricultural-related activities or support programmes refers to a wide range of business activities involving the agricultural value chain, which starts with producing and ends with the consumer (Nxumalo and Oladele, 2013). In rural areas, the expectation would be that those areas would involve mostly primary agriculture, as there are limited markets available in rural areas that provide expansion opportunities (Wale and Chipfupa, 2018). Agricultural participation plays a crucial role in poverty alleviation, given the opportunities that agriculture presents. Youth must become more market-orientated and strategically anticipate new opportunities within their environment, given the indication of limited access to new markets.

Several South African programmes target youth, in both rural and urban areas. There is a need to provide evidence on how rural development initiatives in rain-fed agriculture have influenced the participation by rural youth in farming. For young people, agriculture is often seen as outdated, unprofitable and hard work (Conway *et al.*, 2014). Further, it has been reported that there is a culture of entitlement and dependency for receiving enhanced livelihoods that is placed on the government and other institutions that aim to create opportunities in South African society (Herrington, 2011; Wale and Chipfupa, 2018).

Empirical evidence on how the youth can be attracted to farming remains scant, despite the importance of farming for shaping the country's future policies that are aimed at creating a sustainable rural economy, while addressing South Africa's socio-economic challenges linked to rural–urban migration. This evidence can inform policy on the long-term destination of smallholder agriculture and shed light on what needs to be done to ensure a succession plan.

## **2.4 Summary**

The review of the literature shows that South Africa is experiencing high unemployment levels among the youth population. Despite the high levels of unemployment, the youth are reluctant to see the agricultural sector as a viable sector for employment. Youth are moving away from the rural sector to urban areas, looking for job opportunities. In many cases the youth prefer, and look for, public sector employment, which requires skills they do not possess, while it leads to an over demand for the limited work opportunities. Consequently, the many members of the youth remain unemployed.

This remains the case, despite the several initiatives that have been introduced by the South African government focusing on youth and the youth–agricultural nexus. These initiatives refer to agriculture as a key sector in the economy that provides opportunities to not only reduce unemployment, but also to enhance rural livelihoods. To have the envisioned influence, the youth must adopt the agricultural sector as a source of livelihood in which they can operate and earn a living. Entrepreneurship has been identified to involve youth in the rural sector. Through the establishment and fostering of rural agricultural businesses, primary and value-added activities by them, the youth could not only enhance their own livelihoods, but also those of their siblings and expanded household.



## Overview

Chapter 3 describes the research procedures and informing concepts used in conducting the research. The sustainable livelihood framework is used as a foundation for the research, with the addition of Psycap and entrepreneurial characteristics. Psycap and entrepreneurial competencies are informed by behaviour economics to illustrate the possible behaviour of the youth in provided scenarios.

### 3.1 Foundations of the Conceptual Framework

The research aims to identify the means to involve youth in the agricultural sector, consequently assisting in reducing unemployment and thus reducing poverty in rural areas. With the focus on reducing poverty or increasing the livelihoods of individuals, a framework is required that is focused on the individual and the factors influencing an individual's livelihood. Measuring people's livelihoods has become a popular method for research on poverty alleviation or enhancing livelihoods (e.g. DFID 1999; Kuipers, 2014, Chipfupa, 2017). To ensure a sustainable livelihood, an individual must have certain assets at his or her disposal, which people use to achieve their livelihood objectives. According to the DFID (1999; 3):

*“a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”.*

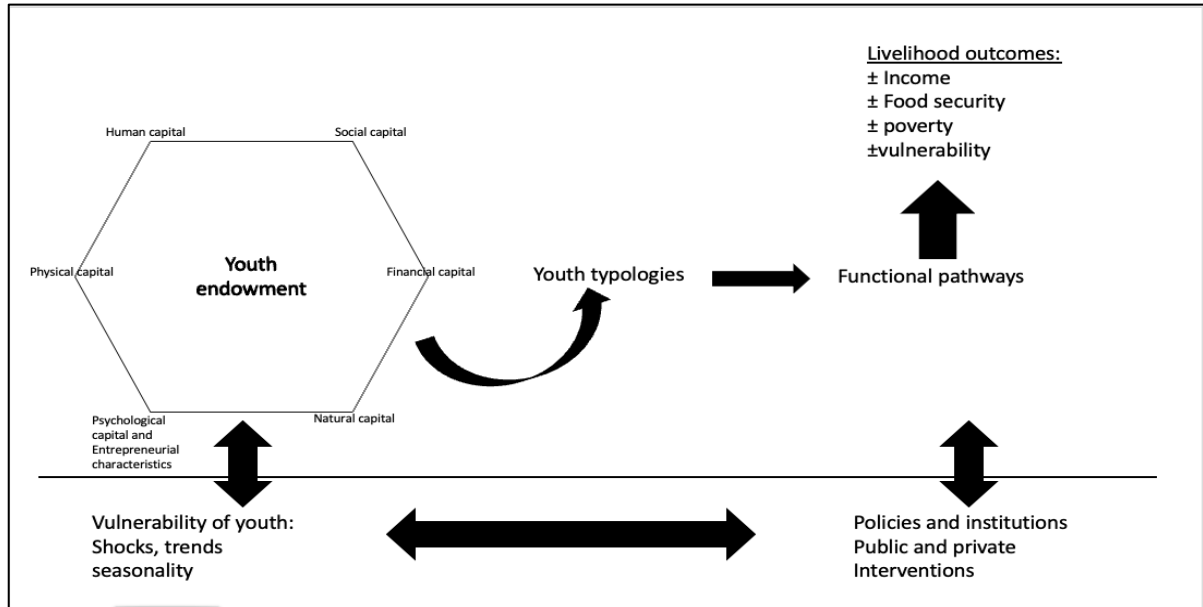
Kuipers (2014) mentions that livelihoods research is conducted at household and community levels. The household plays an important role in the creation of new ventures, or entrepreneurship, with the mobilisation of financial, human, and physical resources (Aldrich and Cliff, 2003). The household is commonly used in describing a livelihood, where the household is defined by a group of people using a common place for preparing food (Chambers and Conway, 1992). Kuipers (2014) mentions that livelihoods research is conducted at

household and community levels. The household or family plays an important role in the creation of new ventures, or entrepreneurship, with the mobilisation of financial, human and physical resources (Aldrich and Cliff, 2003). Livelihoods are consequently influenced by the particular group of people under consideration, and their behaviour in relation to what they do with the tangible and intangible assets or materials in determining their daily lives (Chambers and Conway, 1992). The livelihoods approach aims to relieve people's poverty by considering how their asset endowment is converted into improved living conditions (DFID, 1999). The sustainable livelihoods approach considers livelihood assets as being key to the building of a sustainable livelihood, where a sustainable system is explained by the accumulation of assets over time (DFID, 1999).

The youth are often referred to as the world's future leaders. This also applies to South African youth, who are estimated to comprise about 36% of the South African population (AgriSETA, 2016). The results from the Community Survey (2016) confirm and indicate that South Africa has a youthful population, with the youth (15–34 years of age) accounting for about 36.2% (Community Survey, 2016). These future leaders of the country are struggling to find employment opportunities. They are experiencing very high levels of unemployment, with a reported unemployment rate of 70% among the youth of South Africa (Stats SA, 2016, as cited by AgriSETA, 2016). Unemployment among the youth has become a global concern (Bezu and Holden, 2014) that needs to be addressed.

As seen from the previous indications, livelihoods are not only concerned with the current access to resources, but also include the build-up or accumulation of resources over time. Youth are at an even greater disadvantage compared with older individuals, as emphasised by Kew, Namatovu, Aderinto and Chigunta (2015), who explain that the youth experience, or can experience, similar obstacles that others do. However, the youth are disadvantaged because of their lack of asset accumulation, credit history and work experience (Kew *et al.*, 2015). The youth requires additional focus to ensure that the correct assistance is provided to them at identified areas of shortcoming or lack of resource access and build-up in order to improve their chances of participation in the agricultural sector. An individual's livelihood is influenced by the environment in which they exist, including the availability of resources. When one considers that individuals are not isolated decision-makers and use their networks and social connections (Aldrich and Cliff, 2003), it is essential to consider the livelihood assets of the youth that influence their decision-making. The SLF is concerned with how individuals use the

resources available to them and convert these into achieving a positive livelihood, especially the poor with limited access, who must be very innovative in their resource usage to achieve positive outcomes (DFID, 1999). The modified sustainable livelihood framework proposed by Chipfupa (2017) forms the basis for the research, as shown in Figure 3.1.



**Figure 3.1: Conceptual framework based on the modified Sustainable Livelihood framework**

Source: Adapted from Chipfupa (2017)

### 3.1.1 Modified Sustainable Livelihood Framework (MSLF)

A thorough understanding of the livelihood assets is important in the formulation of appropriate development paths. The SLF consists of five different assets: human, social, natural, physical and financial capital (DFID, 1999). The framework was extended to include Psycap by Chipfupa (2017), which served as a proxy indicator for entrepreneurship. These factors have a role to play in enabling the successful participation of youth in agri-food chains to enhance food security in rural areas, while reducing unemployment among the youth.

- *Human (intellectual) capital*

Human assets (human capital) represent the “skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives” (DFID, 1999; 19). Human capital can be explained by factors such as education, experience, skills and management qualities that enhance the performance of a business (Han and Lin, 2008). Luthans *et al.* (2004) show that human capital is what you know

by referring to experience, education, skills, knowledge, and ideas. According to DFID (1999), human capital can be necessary for achieving positive livelihood outcomes. After considering various definitions of human capital available in the literature, Han and Lin (2008;390) found it essential to broaden the contents captured in the description of human capital. The authors define human capital “as the core asset of an organisation, namely knowledge, skills, experience, competence, attitude, commitment and individual personal characteristics”. Human capital can therefore be seen as a strategic asset for an organisation (Mouritsen, 1998), and an organisation must invest, develop and protect the human capital at its disposal to prevent a ‘*brain drain*’ (Han and Lin, 2008). Human capital can be seen as the investment in an individual’s training to prepare for an employment opportunity that requires a prescribed set of qualities and skills. The employment can be paid salary employment, working for an organisation, or self-employment, where one already owns a business. Human capital is the resource required to use any of the other four assets forming part of the SLF (DFID, 1999).

Given that human capital is crucial for efficiently using other types of livelihood assets (DFID, 1999), it is essential to consider the skills of the youth under consideration. An example is provided by Brush, Greene and Hart (2001), who state that human capital can assist in the acquiring of other resources, such as financial and physical capital. Maybe even more importantly, attention should also be paid to developing the skills and capacity of the youth. Continuous personal development has a major role in terms of the skills development of farmers. Unger *et al* (2011) and Lans *et al.* (2014) explain that a positive relationship between human capital and firm performance (success) can be found in the literature.

The measuring of human capital has evolved over the years. Most frequently found in research are the factors of education and experience. Education has also been found to be a factor that draws individuals away from the agricultural sector (Bezu and Holden, 2014). The authors, who found a positive correlation between education and non-farm employment, mention that this relation is one of the most consistent ones found in the literature. This indicates that higher-educated youths would seek off-farm employment to earn a higher income, rather than consider the rural agricultural sector for employment. Davidsson and Honig (2003) mention that informal education is also a practical learning method. This can also be seen in the measuring of human capital referred to by van der Merwe (2012), who included the participation in training courses to extend human capital measurement, together with age, gender, education and farming experience. Davidsson and Honig (2003) focused more specifically on attending

classes or workshops that concentrated on starting new businesses along with previous attempts to start a business, level of education, and work experience in terms of full-time paid work (supervisory and managerial experience were also considered). Kuipers (2014) considered education, skills, knowledge, capacity to work and good health. Kuipers argued that good health makes it possible to attend school or to improve one's skills, and that individuals with health problems do not have the full capability to work.

- *Social capital*

The social assets of youth refer to the social resources that they can draw upon in pursuit of their livelihood objectives. Social resources can be developed or enhanced through interactions, memberships in formalised groups, and relationships of trust (Kuipers, 2014). Luthans *et al.* (2004) explain that social capital can be simply explained by “who you know” and this refers to resources such as trust, relationships and contact networks. Nahapiet and Ghoshal (1998) explain that social capital comprises the actual and potential resources available through a person's relations network. Stam, Arzlanian and Elfring (2014) highlight the importance of social capital, being the resources in an entrepreneur's network, on the performance of small businesses. The social resources are developed through networks (horizontal and vertical), membership in formalised groups, and relationships of trust, reciprocity and exchange. The contribution of mutual trust and reciprocity in lowering the cost of working together emphasises the importance of considering and building the social assets of the farmers (DFID, 1999). Luthans *et al.* (2004) state that there have been suggestions that social capital measures involve the size, structure and compositions of networks.

Given the small scale of operations typically associated with smallholder farming, collective action is necessary to benefit from economies of scale. It is essential to note the recommendation made by the NPC (2012) in terms of developing strategies to provide poor producers with greater market power through collective action in agricultural value chains, while improving their access to information. Collective action can contribute to overcoming some of the transaction cost constraints experienced by smallholder farmers. Collective action can also contribute to social learning by the farmers to enhance their human and social capital. There are, however, several vehicles to facilitate collective action (i.e. cooperative, new generation cooperative, trust, company, closed corporation, etc.).

Jordaan (2012) argues that incentives should be aligned so as to stimulate business development, rather than incentivising collective action. Collective action should be used to develop the business rather than to only gain access to government grants or financial resources, as is currently the case in South Africa. Networks and farmer organisations (collective action between farmers) have an essential role to play in the small-scale farming sector. Several success stories have been mentioned in the literature, but South Africa still has a very high failure rate among cooperative farming. Louw *et al.* (2005) argue that strengthening collective activities is important for reducing transaction costs, increasing negotiating power, and sustaining the capacity building for farmers to enhance their competitiveness.

ICT plays an important role in Human and Social capital. The use of technology has become a popular means of teaching, where several short courses, modules and even degrees are provided through online platforms. Zaremohzzabieh *et al.* (2016) found in their research that ICT services have allowed Malaysia's rural youth to become more like their urbanised counterparts, but without moving to cities. The use of ICT can be used to counter the movements away from rural sectors without limiting the training and employment opportunities for the youth. It is just as important to have reliable and sufficient infrastructure available to ensure effective services to the rural areas. As the technology is also used as a means of communication, it would also play an important role in networking (Smallbone *et al.*, 2002), where information can or is shared through emails, chat groups, and WhatsApp, to mention a few platforms.

- *Financial capital*

Financial capital refers to the financial resources that people use to achieve their livelihood outcomes (DFID, 1999; Kuipers, 2014). DFID (1999) argues that, of all the livelihood assets, financial capital is the one that is least available to the poor. More specifically, the evaluation of financial capital is concerned, among other things, with the availability of formal and informal financial service organisations, the services they provide and the conditions under which they operate, and the level of access to the services. Different sources of financial capital are available, and these comprise wages, savings, allowances and pensions (Kuipers, 2014). Most rural households in South Africa receive their financial capital from a mixture of salaries, wages, social grants, income from business, and pension remittances (StatsSA, 2012, as cited by Thamaga-Chitja and Morojele, 2014). The sources indicate that farmers, emerging and smallholders, receive their financial capital from employment opportunities (labour market),

self-employment and social grants. There are, however, obstacles and difficulties in gaining access to these sources, which have already been investigated and discussed in the literature. Several of these will now be discussed shortly.

A lack of access to financial capital is a significant constraint experienced by emerging and smallholder farmers in South Africa (Jordaan, 2012). Access to capital is also a problem experienced by most farmers. Ndlela (2015) supports the view that small-scale farmers have less capital and that their access to credit is more limited than for large-scale farmers. Emerging or smallholder farmers also have trouble in accessing financial institutions (Senyolo, 2007). Not only is their access to financial institutions limited, but the process of credit applications also negatively influences emerging and smallholder farmers' access to credit capital (Aliber and Hall, 2012; Chauke, Nekhavhambe and Pfumayaramba, 2013). Factors or problems associated with the credit application process that make it difficult for the farmers include complicated procedures, collateral requirements, long waiting periods, and waiting times for payments (Senyolo, 2007; Manganhele, 2010; Kiplimo *et al.*, 2015). Credit is one source of financial capital used by commercial and smallholder farmers in the agricultural sector to finance their operations.

Sinyolo, Mudhara and Wale (2017a) state that most smallholder households in South Africa receive some portion of their income from social grants. This shows the importance of social grants as a source of financial capital for smallholder farmers. Social grants are an essential source of income in South Africa, and there may be concerns that the grants might be a source of disincentive to participate in economic activities (Sinyolo, Mudhara and Wale, 2017b). Several research studies have been conducted on the impact of social grants in the non-agricultural sector (e.g. van den Berg, Siebrits and Lekezwa, 2010; Ardington *et al.*, 2016; Ranchhod, 2017). Research results have been inconclusive, with mixed results on the impact of social grants on participation in economic activities (Sinyolo *et al.*, 2017b). Some research has also been done on the effects of social grants in the rural and agricultural sector (e.g. Neves *et al.*, 2009; Sinyolo *et al.*, 2017a).

Another source of financial capital is off-farm income, which can be used to complement the farming business's surplus production income. Bezu and Holden (2014) refer to several researchers who mention that additional income is sourced from non-farm activities. In cases where the farmers do not possess any land, it serves as the only source of income.

- *Natural capital*

Natural resources, such as land, water, forests, air and protection against coastal erosion and storms, are all resources categorised under natural capital (DFID, 1999; Kuipers, 2014). Natural resources are essential for individuals who depend on resource activities for their livelihoods (DFID, 1999), and this is also true in the case of primary agriculture. Farmers rely on the land they work on as one of the most critical factors in their farming business. Land is a scarce resource, and with an increasing world population, land may become even more scarce. As mentioned, land is essential in the livelihoods of rural populations (Bezu and Holden, 2014). In South Africa, the majority (87%) of farming land is owned by white farmers (National Treasury, 2014), which limits the amount of land available to youth in rural areas who have limited access to financial resources to purchase or rent land.

Swarts and Aliber (2013) also, in part, refer to productive assets, specifically land, as a factor that renders the agricultural sector unattractive to the youth. To correct the skewness of land ownership in the country, the government, through the Department of Rural Development and Land Reform (DRDLR), has put several programmes in place to enhance access to land and reduce food inadequacy. The land reform programmes aim to assist smallholder farmers with “... *infrastructure, marketing, finance and extension services*” (National Treasury, 2014). However, since its introduction, the land reform programme has not been as successful as hoped (National Treasury, 2014), since set targets have not been achieved.

An important factor to remember is that emerging and smallholder farmers in South Africa typically do not have secure land tenure rights and water use rights, and thus do not have a frame of reference to make decisions under secure land tenure and water use rights. Land tenure may therefore be an important factor in the decision-making of the youth in considering the agriculture sector for employment. The fact that the farmers do not have a frame of reference for decision-making under such circumstances puts much pressure on the knowledge elicitation process. Care should be taken to gather information that accurately represents how decisions would have been made under secure land tenure and water use rights. Natural resources are essential, but housing, access to electricity and drinkable water are also important aspects that must be considered.



- *Physical capital*

Physical capital is explained by the DFID (1999) as comprising the basic infrastructure and items of producer of goods that individuals need to support their livelihoods. Infrastructure can be explained as encompassing the changes made to the physical environment to meet the needs of the people to become more productive, while producer goods are the tools and equipment used to be more effective (DFID, 1999). Kuipers (2014) explains that communication and transportation are also considered to be physical assets. Infrastructure or access to infrastructure is very important in developing the agricultural sector (Makhura and Wasike, 2003). Díaz-Pichardo, Cantú-González and López-Hernández (2011) also mention that the availability of physical resources on agricultural land, such as irrigation infrastructure machinery and equipment, do have an impact on the performance of a farming business. Physical assets have been named in several research studies as being resources, the lack of which, limits the participation of smallholder and emerging farmers in the market. The agricultural sector of developing countries is, unfortunately, characterised by small-scale farmers with limited access to physical infrastructure and information in terms of market and extension services. In some cases where there is access, the services or structures provided may be of poor quality (Business Enterprises, 2015). Senyolo (2007) mentions that the lack of infrastructure, such as electricity, dams and roads, increases emerging farmers' costs.

To survive and succeed, entrepreneurs need to study and evaluate the market potential, which can only be made possible with the acquisition of market information (Garri and Konstantopoulos, 2013). This is the process involved in bringing information about the external environment into the organisation's boundary (Norman and Thomas, 2013). Such information should be reliable, updated and usable, allowing it to penetrate new markets, launch a new product, or develop novel market strategies (Miles and Arnold, 1991). In pursuit of any of these objectives, Garri and Konstantopoulos (2013) found that the information generally required by farm entrepreneurs is related to the product's behaviour, the consumption behaviour of the market, competitive product(s), the social, political, cultural dimensions of the needs, and the sum of the factors affecting the market.

Farmers use multiple information sources to increase their awareness of available business opportunities, including government agencies, private institutions, non-governmental organisations, university/research specialists, other farmers and neighbours, and this

information is accessed through various forms of media (contact training workshops or meetings, magazines, newspapers, TV, radio, etc.). The literature indicates that the source of information and perhaps the media used are more likely to influence farmers' perceptions of innovation, and thus the ultimate business decisions they are likely to make (Khoshnodifar *et al.*, 2016).

Today, ICT services have become a significant source of information. The use of ICT services has increased access to information, not only in retrieving the information more readily and quickly, but also in allowing farmers to access global information with the press of a button. ICT services have the potential to decrease and overcome several shortcomings that farmers experience in terms of high transaction costs (Nakasone *et al.*, 2014). The internet has become one of the leading platforms over the years, which is used to search for information, communication and entertainment (Zaremohzzabieh *et al.*, 2016).

ICT is expected to play a valuable role in the application and facilitation of farming operations, as discussed by Maumbe and Okello (2013), such as “*improving the timeliness of on-farm operations, facilitating input procurement transactions, overcoming rural agricultural production and market information asymmetries, transfer of rural financial remittances, and providing key agricultural data and market information ....*” (Maumbe and Okello, 2013;3). The use of ICT services in a farming business could influence the livelihood of the household (Maumbe and Okello, 2013; Nakasone *et al.*, 2014). By using information and communication technologies, farmers can become aware of trade opportunities and other innovative practices (Nakasone *et al.*, 2014), while valuable information about emergencies (pest outbreaks, wildfires and weather conditions) can be communicated and distributed quickly (Maumbe and Okello, 2013, referring to Davis, 2008).

Chambers and Conway 1992) and Iwara *et al.* (2021) state that not only should tangible assets (exogenous) be considered, but also intangible (endogenous) assets. The DFID (1999) also indicates the SLF must be used as a flexible tool and be continuously developed. Luthans *et al.* (2004) mention that managers have recognised the importance of intangible assets in the business environment. The intangible assets include aspects such as human (intellectual) capital, where ‘human’ refers to the individuals who are working for the business, and ‘capital’ “... to the resource withdrawn from consumption that are invested for future anticipated

returns” (Luthans *et al.*, 2004;45). Luthans *et al.* (2004) propose that there is a need to move away from human and social assets, or perhaps to consider only human and social assets and to include their positive psychological assets. Several research studies have followed the suggestion to include psychological capital in the measuring of livelihood assets (e.g. Hadebe, 2016; Chipfupa, 2017).

- *Psychological Capital and entrepreneurial characteristics*

Positive psychological capital consists of four states that are measurable, can be developed, and can be managed in the workplace to ensure better performance. Luthans *et al.* (2007a; 3) explain positive psychological capital of an individual as:

“... (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success”.

Hadebe (2016) mentions that Psycap is an important characteristic for smallholder farmers, as it would assist them during the entrepreneurial process. This is an important aspect when considering involving youth in the agricultural sector. Establishing new businesses, for example small farming businesses or small businesses along the value chain, would not only involve the entrepreneurial youth in the sector but also potentially employ others in the future. However, creating a new venture can be difficult, with various new ventures typically failing. With increased or higher levels of psychological capital, youth individuals should tend to increase their tenacity to see the entrepreneurial process through and build a successful farming business (Hadebe, 2016). This, as described by Hadebe (2016, referring to McElwee, 2005), would make them successful farmer entrepreneurs who would be able to manage their farming business from establishment, survival, growth, through to maturity (phases of the entrepreneurial process). Psycap has become a popular topic in recent research, and also in the rural agricultural sector, with several researchers including the topic in their measuring analyses, as already seen in the earlier discussion. Several researchers have taken the original work and developed alternative indexes and measures of Psycap. This research can thus be

drawn upon to measure the Psycap of the youth in understanding their involvement in the rural agricultural sector.

Phakathi and Wale (2018) found, using a Psycap composite index, that small-scale producers with negative psychological capital expect the government to do everything for them. The opposite is true for small-scale producers with a positive psychological index, who were persistent and productive, even in constrained and complex situations (Phakathi and Wale, 2018). Hadebe (2016) found that psychological capital has a positive statistical significance influence on the variations of the measured on-farm entrepreneurship index. The result from the research indicated that smallholder farmers with greater levels in each of the Psycap states would be more attracted to starting their own farming business or farm entrepreneurship. There are, however, no indications on the behaviour of an individual considering the adoption of technology, being innovative and creative, and embracing change, for example. There is thus a need to include entrepreneurial characteristics to complement the Psycap dimensions to gain a better understanding of the cogitative abilities of youth and their behaviour.

Chipfupa (2017) used the MSLF to develop farmer typologies in the KZN province of South Africa. The MSLF incorporates Psycap as a sixth asset. Chipfupa argued that Psycap can be used to explain the difference in resource usage in similar situations or scenarios, which are attributable to cognitive differences, and Psycap was used in his research as a proxy for entrepreneurship. McElwee (2008) explains that family farms and tenant farmers can be expected to be entrepreneurial, as “they are able to use the farm’s resources and features and characteristics in flexible and innovative ways”. Focusing on the farmer as an individual provides the opportunity to measure the entrepreneurial skills and competencies of the individual. As the research is focused on youth as individuals, it is also important to consider their entrepreneurial characteristics. The entrepreneurial and management abilities of the youth that enable them to prosper in their businesses need to be considered in development paths of small-scale farmers.

Several approaches have been used to measure entrepreneurship and the entrepreneur. Phelan (2014) provides a good review of the different approaches used thus far: the traits approach; behaviour approach; opportunity identification approach; entrepreneurial human capital, skills and competencies; entrepreneurial skills, and lastly, entrepreneurial competencies. The traits approach is focused on the individual personally in terms of achievement motivation, locus of

control, and risk taking (Phelan, 2014). The traits and characteristics of the person (entrepreneur) are what set entrepreneurship in motion (Gartner, 1988). The belief exists, and is found in literature, that an entrepreneur is a charismatic person with attributes that are unique to the entrepreneurial person (Phelan, 2014). The behaviour approach shifts the focus to a different view of the individual. The personality characteristics of the entrepreneur have an influence on what the entrepreneur does (behaviour) and, therefore, Gartner (1988) continues and mentions that research must focus on “what the entrepreneur does and not who the entrepreneur is”. Entrepreneurship is seen as a process, and the entrepreneur is the individual who performs (what the entrepreneur does) various roles from setting the process in motion (identification of an opportunity) through to managing a new venture as a mature business.

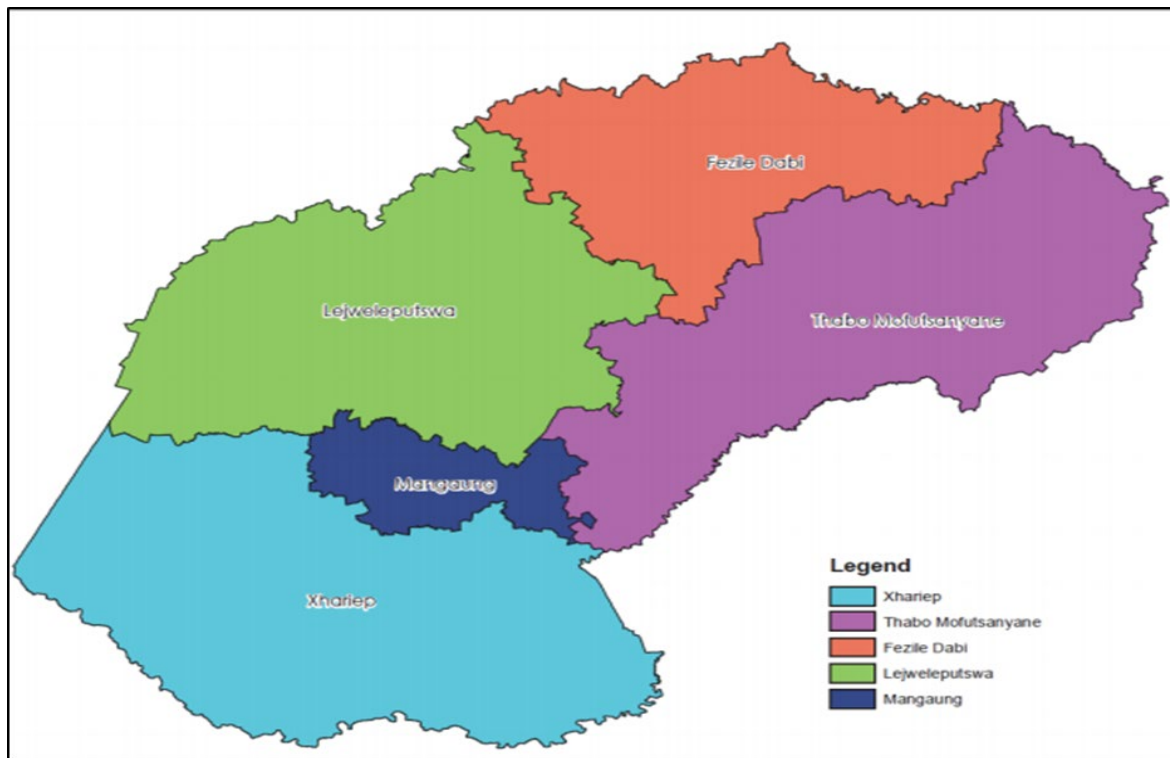
### **3.2 Description and selection of research areas in the Free State Province**

The following section provides background on the Free State province and the procedure followed to select the research areas studied in the Free State.

#### **3.2.1 Free State Province**

- *Districts of the Free State Province*

The Free State province is divided into four district council municipalities and one metropolitan municipality (Stats SA 2014). The five districts are shown in Figure 3.2 below and comprise Mangaung, Xhariep, Lejweleputswa, Thabo Mofutsanyane, and Fezile Dabi (Stats SA, 2014).

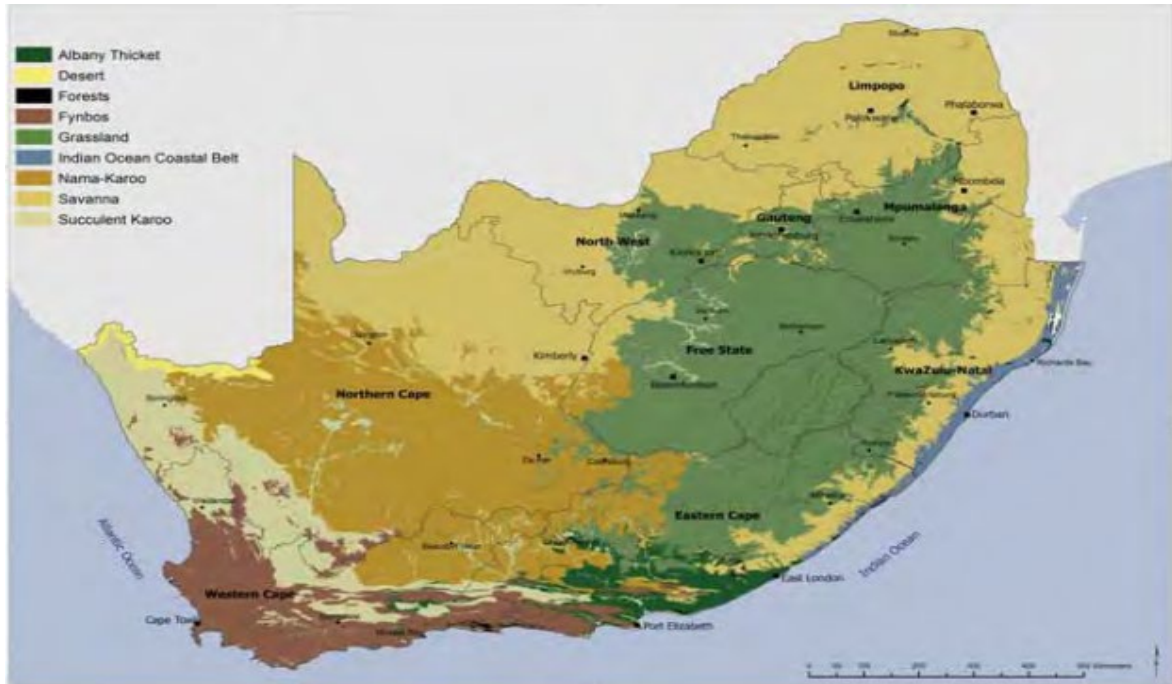


**Figure 3.2: Illustration of the five districts of the Free State province**

**Source:** Stats SA (2014)

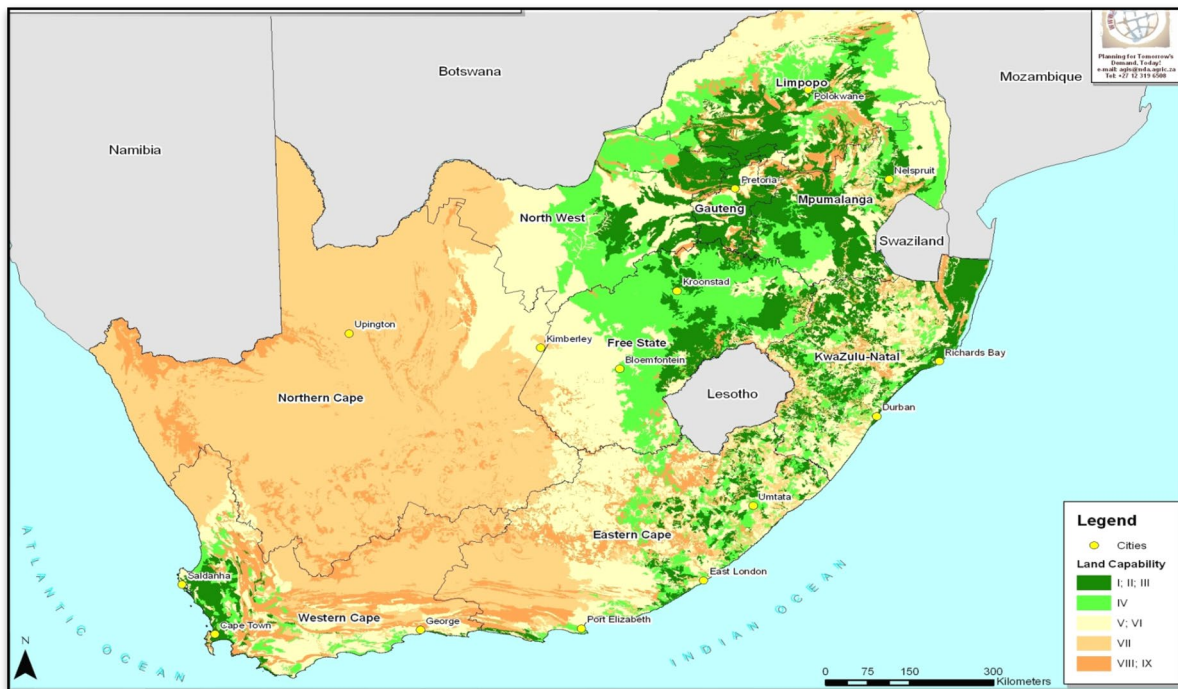
In the Free State, the government and previous disadvantage individuals (PDIs) owned about 7.8% of the agricultural land in 2016. This is an increase in land ownership, up from 1.6% in 1994, for the Free State province (Agri SA, 2017). Most of the land in the Thaba Nchu and surrounding areas, and in the Maluti-a-Phofung Local Municipality area is state land. The area of Thaba Nchu includes areas of commonage, with areas of land controlled under the Settlement Land Acquisition Grant (SLAG) and the Land Redistribution and Agricultural Development Programme (LRAD) in between (BFAP, 2013) as shown in Figure 3.3.





**Figure 3.4: Grassland Biome distribution in South Africa**

Source: SANBI (2013)



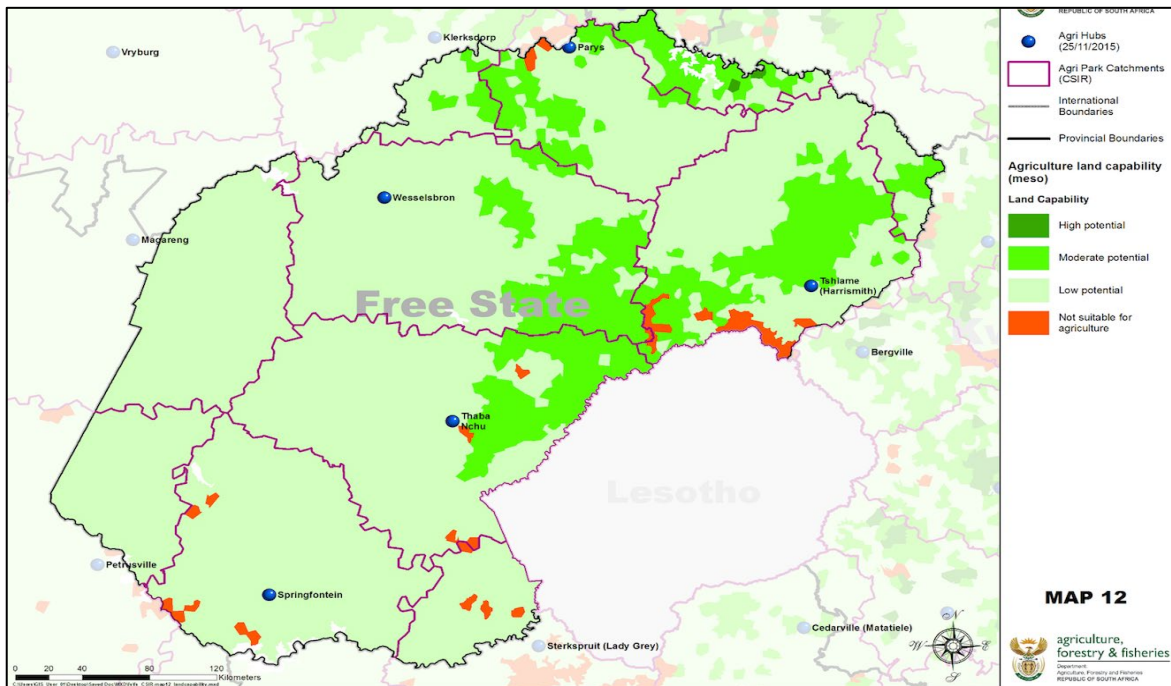
**Figure 3.5: Land capabilities of South Africa**

Source: Collett (2017)

The land capabilities of the Free State province, which is between moderate and low potential, is shown in Figure 3.6 below. From Figure 3.5 and Figure 3.6 above, it can be seen that the southern and south-western regions of the Free State province are low capability land, which



is more suitable for grazing or livestock activities. The municipal districts in the southern areas, around Xhariep, were therefore not considered in the research because of the limited crop production. The central, northern and eastern areas of the province have medium to high capability land, and include the districts of Mangaung Metropolitan Municipality, Thabo Mofutsanyana District and Lejweleputswa District.

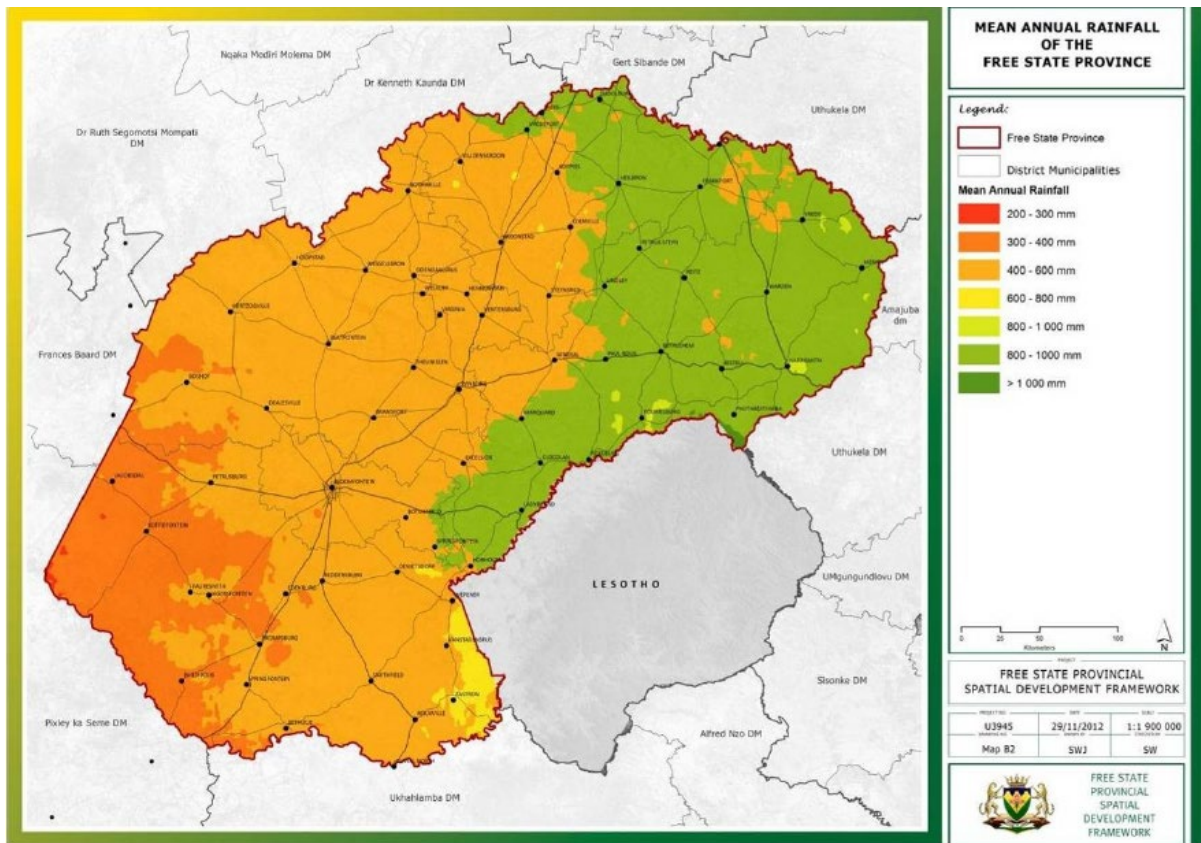


**Figure 3.6: Land capabilities of the Free State**

Source: DRDLR (2015)

- *Annual Rainfall and Evaporation of the Free State*

An important aspect to consider in terms of the water availability for commercial or agricultural use, as mentioned in the previous section, is the impact of rainfall on the land. The Free State province is about 1 300 m above sea level and is characterised by hot summers and rather cold winters (FSDCGTA, 2014). Some snow can also be experienced in the eastern parts of the province, close to the higher mountain ranges of the Drakensberg. The Free State province receives summer rainfall, mostly in the months starting from October to March, as shown in Figure 3.7 below. Rainfall in the province reduces from the eastern side to the west of the province (AMT, 2015), which is clearly demonstrated in Figure 3.7. The western regions of the province may experience lower rainfall, less than 300 mm, as it is closer to the arid areas of the country (FSDCGTA, 2014). Frost can also be experienced in the province during the winter months of May to September in the western areas and in the east as late as October.



**Figure 3.7: Mean average rainfall for the Free State Province**

**Source:** FSPSDF (2013) citing Department of Water Affairs

The natural resources of the Free State province, in terms of climate and soil quality, provide the opportunity for producing a rather wide variety of commodities, crops and livestock (AMT, 2015).

- *Existing agricultural activities in Free State*

The Free State province has an important role in the overall agricultural sector of South Africa. A shift has been noticed in the number of farming units in South Africa, with a reduction in the number of units, but an increase in the average farm size (AMT, 2015). The number of smallholder farmers in the Free State is almost equal to the number of commercial farmers (AMT, 2015). Agricultural activities in the province comprise crop, animal, horticulture, dairy, game, aquaculture, fruit and agro processing (Mapsez, undated). Former homeland areas account for 232 200 hectares in the Free State province, and of this, 81% is grazing land, while the remaining land can be used as arable land (AMT, 2015). Maize, soya beans, wheat, sorghum, sunflower, potatoes, groundnuts are among the crops that are being produced in the province (Mapsez, undated), while livestock production including cattle and sheep (sing and

dual purpose) is carried out. The Eastern Free State areas are also favourable for producing deciduous fruits, which include apples, berries, peaches, plums and apricots (Mapsez, undated). The commodities produced in the various regions are shown in Table 3.1 below. The list in Table 3.1 might not be a complete list of commodities, as it may vary depending on yearly circumstances.

**Table 3.1: District of the Free State and commodities produced**

<b>District</b>	<b>Area of production Commodity</b>
Lejweleputswa	Maize, Sunflower, Red meat, Vegetables, Peanuts, Dairy
Thabo Mofutsanyana	Maize, Wheat, Potatoes, Sunflower, Red meat, Dry beans, Fruits, Wool, Dairy, Cherries
Mangaung Metropolitan Municipality	Vegetables, Wool, Red meat
Fezile Dabi	Maize, Sorghum, Sunflower, Peanuts, Dairy, Red meat
Xhariep	Wheat, Potatoes, Red Meat, Peanuts, Wool

**Source:** Adapted from AMT (2015) citing FDC (2014)

According to the agricultural land classifications in South Africa (Collett and Mitchell, 2012), land in Classes I – III is considered to have very high to good agricultural potential, while Class IV has moderate potential. Land in Classes V – VIII is classified as non-arable; hence, it is not suitable for any agricultural activities, although some cultivation does take place in such areas. Table 3.2 below shows land in Classes I – IV for all the provinces in South Africa. This land includes the former homelands and the Transkei, Bophuthatswana, Venda, and Ciskei (TBVC) states, forestry plantations, protected areas and areas under cultivation. KwaZulu-Natal province has the largest amount of land with the most agricultural potential, i.e. land that falls in Classes I – III, followed by Mpumalanga and then Limpopo provinces. The Free State has the fourth largest hectareage of the most productive land. However, when land with moderate potential is accounted for, Table 3.2 shows that the Free State province has the largest land area with moderate to very high agricultural potential, while KwaZulu-Natal has the third and fifth largest land in the same category, respectively.

Table 3.3 displays the 2012 statistics of the amount of land with moderate to very high potential under cultivation in each province. The statistics demonstrate that most farming or crop production activities occur in the three provinces where the project is being implemented. The

Free State province has the largest moderate to most productive land under cultivation, followed by the KwaZulu-Natal province. It is reported that Free State province also has significant production areas of maize in Classes V and VII.

**Table 3.2: Total land with agricultural potential per province (hectares)**

<b>Land Classes</b>	<b>EC</b>	<b>FS</b>	<b>GP</b>	<b>KZN</b>	<b>LP</b>	<b>MP</b>	<b>NC</b>	<b>NW</b>	<b>WC</b>
Class I	2 733	-	-	-	-	-	-	-	-
Class II	78 787	12 701	389 310	406 931	96 921	872 007	-	21 940	-
Class III	1 191 729	2 241 476	704 594	2 690 673	2 437 993	2 085 727	-	1 755 340	895 807
<b>Sub total</b>	<b>1 273 249</b>	<b>2 254 177</b>	<b>1 093 904</b>	<b>3 097 604</b>	<b>2 534 914</b>	<b>2 957 734</b>	<b>-</b>	<b>1 777 280</b>	<b>895 807</b>
Class IV	1 830 877	5 345 077	123 144	1 155 649	2 741 093	1 596 612	-	2 803 769	851 225
<b>Total</b>	<b>3 104 126</b>	<b>7 599 254</b>	<b>1 217 048</b>	<b>4 253 253</b>	<b>5 276 007</b>	<b>4 554 346</b>	<b>-</b>	<b>4 581 049</b>	<b>1 747 032</b>

**Table 3.3: Total land with agricultural potential under cultivation per province**

<b>Land Classes</b>	<b>EC</b>	<b>FS</b>	<b>GP</b>	<b>KZN</b>	<b>LP</b>	<b>MP</b>	<b>NC</b>	<b>NW</b>	<b>WC</b>
Class I	879	-	-	-	-	-	-	-	-
Class II	15 416	8 634	134 609	83 730	24 995	354 745	-	10 816	-
Class III	418 762	1 088 651	157 725	427 052	563 135	536 521	-	656 402	427 488
<b>Sub total</b>	<b>435 057</b>	<b>1 097 285</b>	<b>292 334</b>	<b>510 782</b>	<b>588 130</b>	<b>891 266</b>	<b>-</b>	<b>667 218</b>	<b>427 488</b>
Class IV	393 450	1 973 285	14 263	1 155 649	379 602	387 451	-	964 317	448 879
<b>Total</b>	<b>828 507</b>	<b>3 070 570</b>	<b>306 597</b>	<b>1 666 431</b>	<b>967 732</b>	<b>1 278 717</b>	<b>-</b>	<b>1 631 535</b>	<b>876 367</b>
<b>LAND CLASSIFICATION DESCRIPTIONS</b>									
1. Very high potential	No limitations	HIGH	5. Restricted potential	Severe limitations due to soils and slopes		NON-			
2. High potential	Minor limitations	POTENTIAL	6. Very restricted potential	Non-arable		ARABLE			
3. Good potential	Moderate limitations	AGRICULTURAL	7. Low potential	Severe limitations - non-arable		LAND			
		LAND	8. Very low potential	Non-arable					
4. Moderate potential	Permission required to plough land	MODERATE POTENTIAL							

Source: DAFF 2012

The Free State province was targeted for the research project, given that it hosts the UFS. Table 3.4 shows that the Free State has the third-lowest poverty headcount. Eastern Cape and Limpopo are the worst affected provinces in terms of poverty. When youth unemployment is considered, Free State province has the fourth highest rate, at 39.4%.

**Table 3.4: Poverty and unemployment rate by province**

	<b>Poverty levels (head count (UBPL))<sup>a</sup></b> 2015	<b>Unemployment rate(15-64yrs) <sup>b</sup></b> (Jan-Mar 2018)	<b>Youth unemployment (15-34yrs)<sup>c</sup></b> 2015	<b>Absorption rate among youth (15-34yrs)<sup>b</sup></b> 2015
Western Cape	37.1	19.7	29.9	43.2
Eastern Cape	72.9	35.6	41.0	22.9
Northern Cape	59.0	29.5	45.1	32.0
Free State	54.9	32.8	39.4	34.0
KwaZulu-Natal	68.1	22.3	33.4	28.1
North-West	64.3	25.8	39.7	28.3
Gauteng	33.3	28.6	39.8	38.9
Mpumalanga	59.3	32.4	38.8	31.4
Limpopo	72.4	19.9	30.4	22.6
South Africa	55.5	26.7	36.9	31.7

**Sources:** <sup>a</sup> Statistics SA (2017); <sup>b</sup> Statistics SA (2015); <sup>c</sup> Statistics SA (2018)

### 3.2.2 Research area selection

- *Study area selection criteria*

The research team contacted the Extension Manager of the Thaba Nchu area, the Manager of Specialised Services of Thabo Mofutsanyana, and a representative of the Lejweleputswa region. The research team scheduled initial meetings to obtain more information on the current situation in each of the mentioned areas. In the Lejweleputswa district, it came to the team's attention that the representative had since moved to another district and could, therefore, not provide any further assistance and provide the team with a new contact person. Owing to scheduling differences, the team could meet with extension officers in the region and or with the Extension Manager of the region.

The following considerations were taken into account in selecting the study areas:

- *Level of youth unemployment* – to the extent possible, the targeted areas were among those with high levels of youth unemployment.
  - *Importance of rain-fed farming and rain-fed farming potential* – this potential was assessed by analysing the land capabilities of each area, rainfall patterns and contribution of rain-fed agriculture to the livelihoods of rural people.
  - *Limited effects of drought* – as much as possible, the research targeted areas where there are limited effects of drought. This was assessed through key informant interviews with the FSDARD officials in the provinces and districts with historical knowledge of areas.
  - *The gravity of research fatigue* – to avoid the problem of research fatigue and enhance the credibility of data collected, the research avoided over-researched areas where information was available.
  - *Commitment and enthusiasm of the FSDARD district offices or other partners* is critical to the research project's success. Commitment and enthusiasm of the FSDARD offices is an indicator of the potential cooperation that would be received during the study. The FSDARD offices are the gateway/entry point to the communities.
  - *Current projects/programmes/policies and successes/impacts in the area* – areas where there were/are projects/programmes and successes/impacts targeting youth in rural areas were preferred rather than those without.
  - *Logistical possibilities* – this consideration was made, given the location of the UFS. Thus, in the selection, the study avoided areas that could present logistical challenges, given the budget allocated for the research.
  - *Potential multiplier and demonstration impact of the research in the study area and beyond* – more emphasis was given to areas with a potential for producing results that could be scaled-up to other districts or provinces.
- *Comparing identified areas and the selection criteria*

The identified regions in the Free State were compared and scored against the specified criteria through using information derived from the discussions and information in the reports (spatial developments plans, growth and development plans, and Statistics South Africa provincial

reports). The field visits were performed in areas suggested by the Department of Agricultural and Rural Development in the Free State, with a greater focus on rain-fed agriculture. The regions were proposed based on youth unemployment and rain-fed agricultural activities, with a focus on crop production and ongoing projects. Four regions were suggested, of which one, Xhariep, was mostly devoted to livestock production with limited crop production, and was thus excluded. The selection criteria in relation to the three regions will now be shortly discussed in relation to the criteria and are summarised in Table 3.5 below.

### ***Youth unemployment***

With regard to youth unemployment, the general sentiment arising from all the discussions is that youth unemployment is very high in all areas visited for the project. From the discussions, it was ascertained that it was not possible for the officials to provide exact figures of the unemployment among the youth. When the topic of youth unemployment was mentioned, all the officials were clearly troubled by the high levels of youth unemployment in their respective districts. Another troublesome factor was that the unemployed youth also included youths with secondary and tertiary education, indicating that it is the trained and capable youths who are without employment. There is a consensus arising from the discussions that the youth lack interest in becoming involved in rain-fed farming as a business or form of livelihood in all the areas that were visited. However, there was some indication of interest in agriculture from youth in considering the sector as a form livelihood or improving livelihoods. Whether these interests are attributable to forced interest because there are no other options available still needs to be determined. As shown in Table 3.5, all three areas have high levels of unemployment, confirming the overall indications that South African youth are struggling with finding employment.

### ***Rain-fed farming and the impacts of drought***

The agriculture potentials in the different districts were also discussed with the officials and details were sourced from various available reports. All three districts have been identified as potential areas for the Agri Park initiative – either as a hub centre or producing areas. *Rain-fed farming* is important in all the districts, especially for smallholder dryland crop production. The crops that are grown under rain-fed farming include maize and beans, as well as vegetable production. Mixed farming is an important farming system in the rural setting, with many of the farms being mixed-enterprise entities. The livestock enterprises, especially cattle production, have grown to constitute an important source of smallholders' livelihoods,



especially as an indication of wealth. From discussions in some of the regions, it was quite clear that a mind shift is needed in terms of livestock use. In Thaba Nchu, it was mentioned that support for livestock production is sometimes provided through facilitating livestock auctions, but there is still room for improvement for the initiative.

**Table 3.5: Evaluation of the Free State districts based on the criteria articulated in Subsection 3.2.2**

	Rain-fed farming potential	Effect of drought	Youth unemployment rate score <sup>3</sup>	Current youth projects/programs/success stories	Is area over researched?	Commitment and enthusiasm of the local DARD office
Mangaung (Thaba Nchu)	<ul style="list-style-type: none"> <li>Limited agricultural potential due to rainfall, poor soils and slope not suitable for farming</li> <li>Production levels marginal</li> <li>There is potential for low density livestock farming</li> <li>Marginal land potential depending on production systems;</li> <li>Limited potential with producers being mixed-production farmers</li> <li>Dryland production with some irrigation from municipality provided water;</li> <li>However, further access to water as a resource has been mentioned as a problem.</li> </ul>	Drought indeed has impacted negatively on farming activities and youth participation in agriculture	Score = 3 (Mangaung= 37.2%)	DARD recently started a youth study group, currently functional. There were some YARD programmes that are non-functional (the DARD office will make an effort to provide the documentation on the projects) 2 successful youth farmers (mixed farming) About 5 at an emerging phase.	- Yes, there has been extensive academic research done in Thaba Nchu. - No/limited academic research directed at youth.	Advisory representative Moeti Phalole. Engagement of contact person with issues in the research is high. Keen for contact person to participate in the research. Previously allocated seemed too busy to engage with the issues in the project (official generally believes the extensive academic has had no impact thus far). Commitment from contact person to arrange contact with youth in the area.
Thabo Mofutsanyana (Maluti-a-Phofung focus on QwaQwa)	<ul style="list-style-type: none"> <li>Stated that the area may have some of the most fertile land in the Free State province (TMDM, undated);</li> <li>Medium to high potential arable land;</li> <li>There exist opportunities which could result in agricultural potential businesses (also shown in the mentioned success projects running in the area);</li> </ul>	Limited effects over the past two years Drought resisting trials have also been conducted in the area.	Score = 4 (45.8%)	Several youth programmes in the area; Success story/ies are also available and accessible. (MCV Agriacomologic Cooperative and ELANDSRIVIER 1.23)	No, limited research could be recalled in the area by the WRC and ARC.	Overall committed and recommended additional individuals who may further assist.
Lejweleputswa	<ul style="list-style-type: none"> <li>65% of agricultural production from Tswelopele and Nala (FSDARD, undated);</li> </ul>	Drought effects included loss of animals, but the officials could	Score = 4 (48.7%)	No current project in the area reported by the extension officers.	No, research has been conducted in	<ul style="list-style-type: none"> <li>Extension officers from Odendaalsrus and Wesselsbron</li> </ul>

<sup>3</sup> Unemployment rate is based on 2011 Census statistics. Scoring of youth employment done using the national average of 36% as follows: 1=26% and below 2=27-32.9% 3=33-39.9% 4=40-45.9%; 5=46% and above.

Rain-fed farming potential	Effect of drought	Youth unemployment rate score <sup>3</sup>	Current youth projects/programs/success stories	Is area over researched?	Commitment and enthusiasm of the local DARD office
<ul style="list-style-type: none"> <li>• Predominantly maize production (Bothaville area);</li> <li>• High water table (north western part);</li> <li>• Mostly non-arable, moderate potential grazing land, Marginal potential arable land (FSDARD, Undated);</li> <li>• In some areas the extension officers did report that the farmers are experiencing soil problems which lead to lower yields;</li> <li>• Access to water has also been reported as a shortcoming to increase their production.</li> </ul>	<p>not recall any failed farming businesses due to the drought. Mostly felt by communal farmers.</p>	<p>(effect of mine layoffs has an important impact on unemployment in the area).</p>	<p>YARD does not exist anymore in the area. It appears from the conversations that the youth have come to the extension officers with ideas of their own projects to establish vegetable gardens.</p>	<p>the area but is limited.</p>	<p>are very enthusiastic and committed to assist in the research.</p>

As the districts are primarily dedicated to rain-fed farming, a challenge mentioned across all communities is water availability and the effects of the drought. The results of the drought, however, did not seem to have had a significant influence on the districts. In most of the communities, it was mentioned that the farmers, especially communal farmers, felt the effects of the drought, but very few had to cease farming. Apart from the drought, water availability was mentioned as a problem that, if resolved, could contribute to enhanced farming performance.

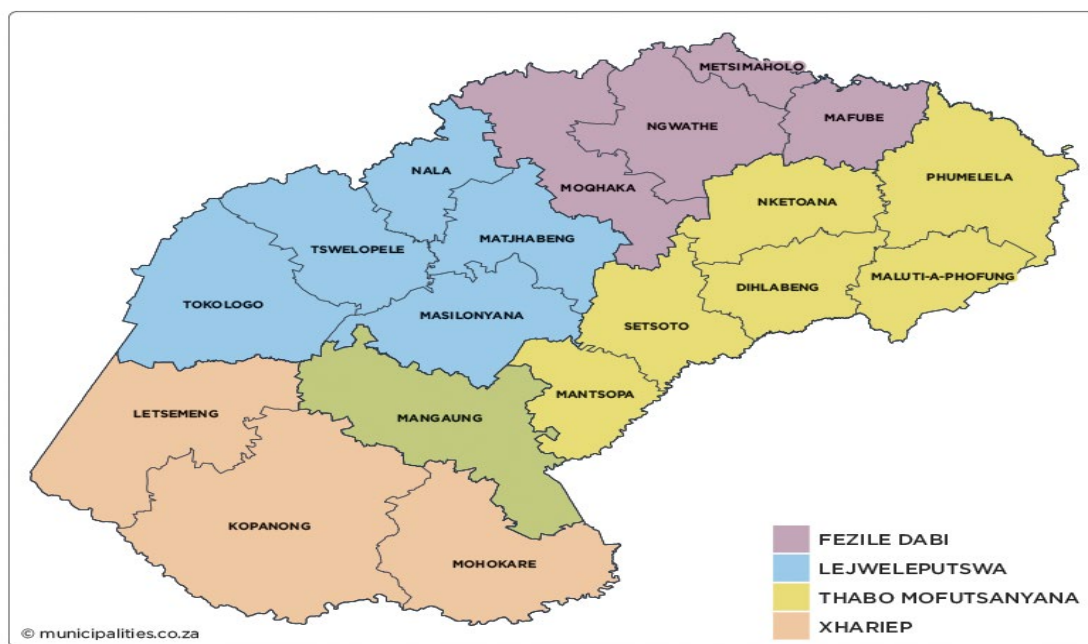
### **3.2.3 Selected districts in the Free State**

Given the information discussed in Table 3.5, the districts in the Free State province that were selected for the project are Thaba Nchu in the Mangaung Metropolitan Municipality (MMM) and the Maluti-a-Phofung (MAP) in the Thabo Mofutsanyana district. The districts are both rain-fed agricultural regions, with medium agricultural potentials. The Thaba Nchu region has been mentioned to constitute marginal land, but has higher potential when used under different production systems.

Both the Mangaung Metropolitan Municipality and the Thabo Mofutsanyana District Municipality have high levels of youth unemployment. From the discussions, it was noted that limited to no previous research exists related specifically to youth and rain-fed farming in the districts. Although it was mentioned and observed from previous research that the MMM (especially the Thaba Nchu region) has been researched previously on topics such as rainwater harvesting. Although previous research has been conducted in the MMM, the representative from DARD is still willing and committed to assisting in research that focuses on youth (this is also his focus area in the district). The existing dearth of research in the study areas that focuses on youth is an indication that this project, focusing on the youth, will likely have a positive impact at both local policy level and the community level. The local DARD offices in all the districts consulted showed rather high levels of commitment and interest in the research. Although success stories are very scarce or limited, there were indications from the Thabo Mofutsanyana district that there were some examples of youth projects that are going forward and could be included in the research. Documents providing basic information of the projects were almost immediately provided electronically to the research team, which is also an

indication of commitment from the region. Regarding the other district of interest to this study, there were no clear indications of any real successful projects that have focused on the youth.

In terms of logistics, the Thaba Nchu district is very close to Bloemfontein, where the UFS research team are based, while the second region (QwaQwa in the MAP) is farther away. However, QwaQwa is in a similar direction (north east) from Bloemfontein, thus making logical arrangements easier when traveling. Figure 3.8 below shows the location of the study sites in Free State province. The Lejweleputswa region is located to the western region of the Free State.



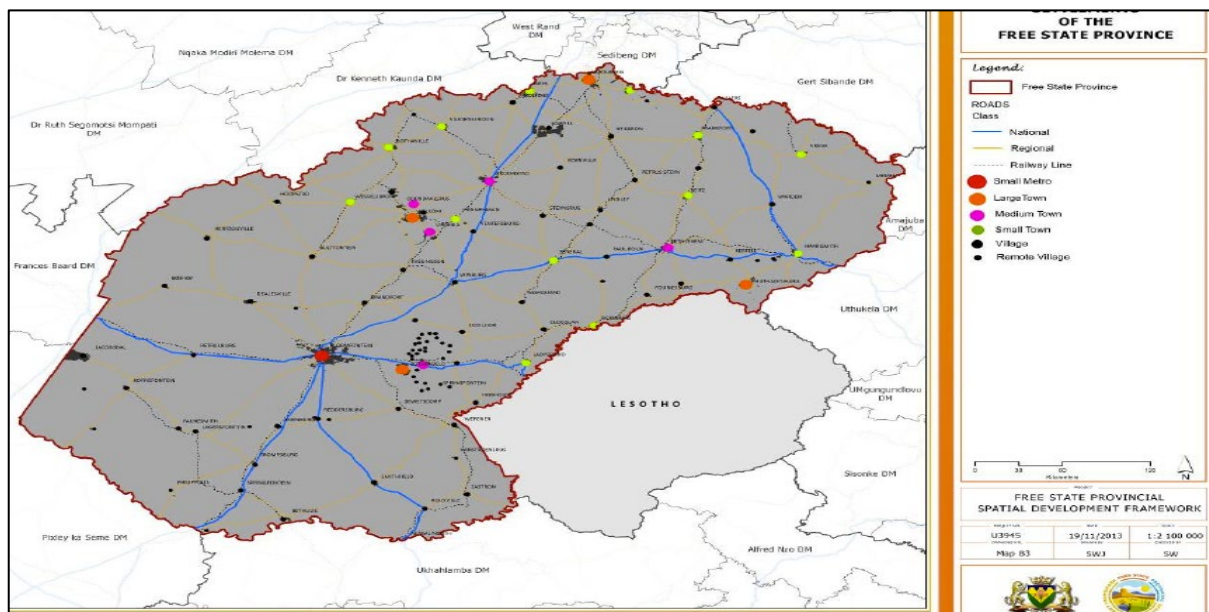
**Figure 3.8: Indication of the selected districts in the Free State province**

**Source:** Adapted from <https://municipalities.co.za/provinces/view/2/free-state>

- *Mangaung Metropolitan Municipality (Thaba Nchu district)*

Thaba Nchu district is located approximately 60 km east of Bloemfontein within the Mangaung Metropolitan Municipality. Thaba Nchu and surroundings are former homeland areas from the previous regime, which are now referred to as Tribal Authorities. The district consists of about 42 villages, which are spread in two towns situated close to one another (Thaba Nchu and Botshabelo) as reported by Botha *et al.* (2003) and Viljoen *et al.* (2012). The towns and villages are depicted in Figure 3.9 below. The villages have diverse economic activities, and mixed farming is practised in all villages (Botha *et al.*, 2003). Botha *et al.* (2003) do, however, report

that the areas south of Thaba Nchu were more successful in livestock production at the time of their study.



**Figure 3.9: The different towns, villages and their sizes of the Free State province**

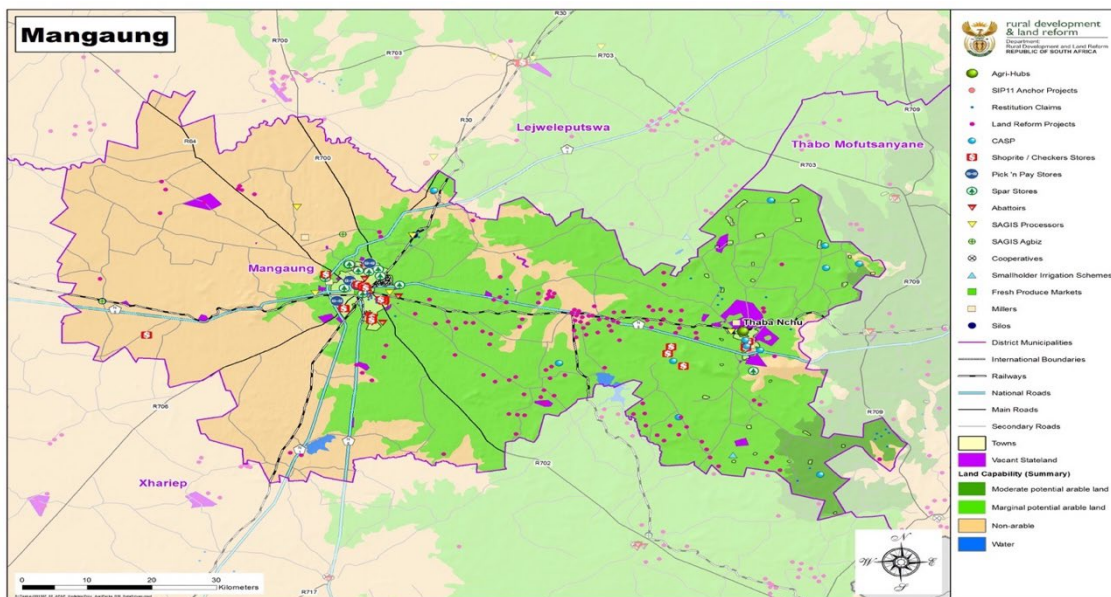
**Source:** adapted from Free State Department of Cooperative Governance and Traditional Affairs (FSDCGTA) (2014)

The areas surrounding Thaba Nchu (a medium-sized town) and Botshabelo (a large town) are characterised as Trust land (villages and remote villages) that is used by small-scale and subsistence farmers (Mangaung, 2016). The challenges experienced in Thaba Nchu and surrounding areas remain largely the same as previously recorded by Viljoen *et al.* (2012), who highlighted “high unemployment, urbanization of farm workers, exodus of skills from small towns, active immigration to mines and economic centres, ....”. The farmers in the area consists mostly of older individuals and this may also influence the success of introducing new ideas, as it is believed that it is difficult ‘to teach an old dog new tricks’ (FSDARD, 2018).

Unemployment among the youth is also a problem in the area, at a 37.2% unemployment rate, with the townships of Mangaung, Botshabelo and Thaba Nchu being mostly influenced (FSDARD, 2015). In the Thaba Nchu area, especially the rural areas, it has been mentioned that the observed levels of unemployment can be as high as 60% (FSDARD, 2018). Observation in the Thaba Nchu area is also complemented by previous research, where high unemployment was reported by Viljoen *et al.* (2012) in the same area. It was mentioned in their

research report that the Rietfontein village of Thaba Nchu is a poor village with unemployment levels “which is visible from the many young people who have finished grade 12 and are sitting at home” (p19). There is a clear problem of unemployment in the Free State and in the rural areas of the MMM, especially when Thaba Nchu, Botshabelo and the rural areas surrounding the towns are considered (FSDARD, 2015).

Thaba Nchu, Botshabelo and surrounding villages are characterised by “poverty, hardship and suffering, hunger, poor housing with water and electricity often being a major problem, illiteracy and demotivation” (Botha *et al.*, 2003; 147). Thaba Nchu has been a research area for several previous projects, including WRC projects, where the livelihoods and other factors were considered to enhance the living quality of the residents. However, in discussion with representatives from the FSDARD, the area was indicated as being an area with high unemployment among the youths, with the area practising rain-fed agriculture and where there are current activities taking place to involve the youth in agricultural activities. These are all requirements for the current projects. The Thaba Nchu area and surrounding villages constitute semi-arid land with unpredictable rainfall. The average rainfall for the area is about 550 mm, rarely exceeding 750 mm per annum (Viljoen *et al.*, 2012; FSDCGTA, 2014).



**Figure 3.10: Land capabilities and projects indication for the Mangaung Metropolitan Municipality**

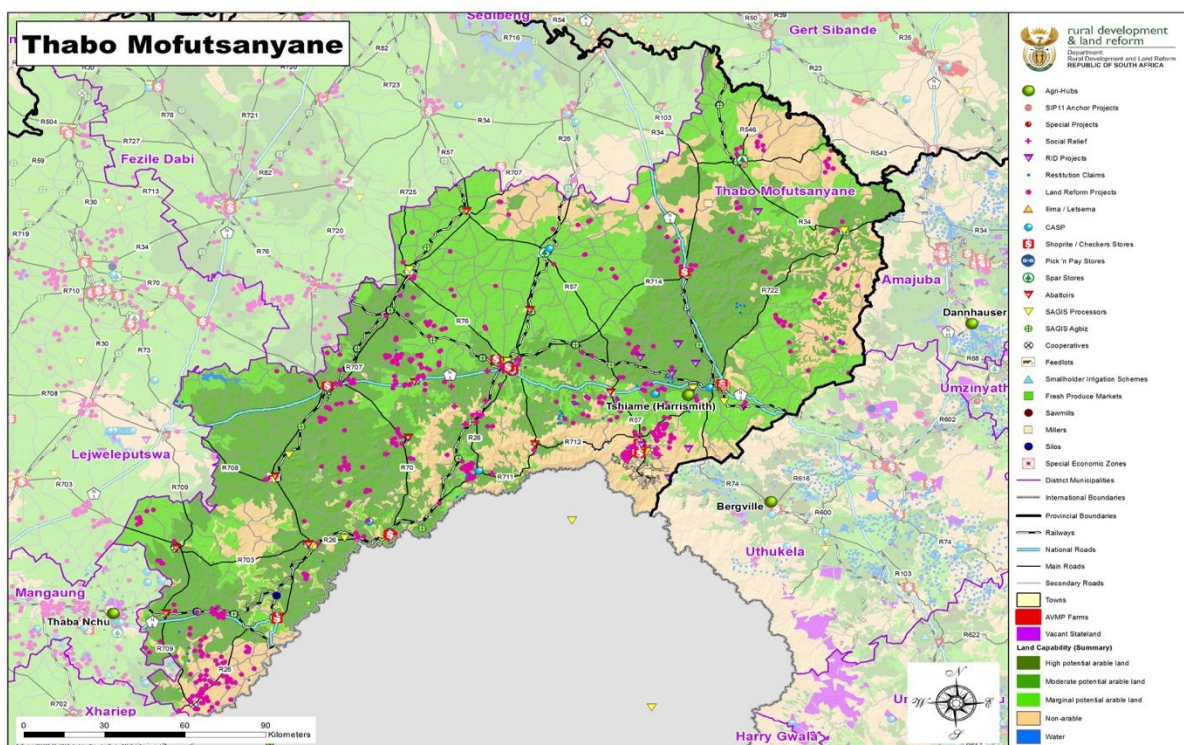
Source: DRDLR (2015)

- *Thabo Mofutsanyana district (QwaQwa)*

The Thabo Mofutsanyana District Municipality (TMDM), indicated by the yellow shading in Figure 3.8, is to the eastern part of the Free State province that borders KwaZulu-Natal and Kingdom of Lesotho. With a total land coverage of 4 421 km<sup>2</sup>, Maluti-a-Phofung consists of the areas of four former transitional local authorities, QwaQwa rural, Kestell, Phuthaditjhaba and Harrismith (Final integrated Development plan Maluti a Phofung, 2017).

In the Maluti-a-Phofung municipal area, agriculture employed only 5% of the total workforce (Final integrated Development plan Maluti a Phofung, 2017). Maluti-a-Phofung has a very high unemployment rate, when compared with other areas in the Free State and even with the Thabo Mofutsanyana Local Municipality (Final integrated Development plan Maluti a Phofung, 2017). The unemployment rate for the Maluti-a-Phofung area has been determined to be 41.8%, and youth unemployment of 53%, according to Census 2011 (MAPLEDS (Maluti-a-Phofung Local Economic Development Strategy), 2015).

The Thabo Mofutsanyana district is seen as being one of the most fertile areas of the Free State province, which could result in very good agricultural production and opportunities (TMDM (Thabo Mofutsanyana District Municipality), undated). The distribution of land in the area is shown in Figure 3.11 below in terms of the potential arable land.

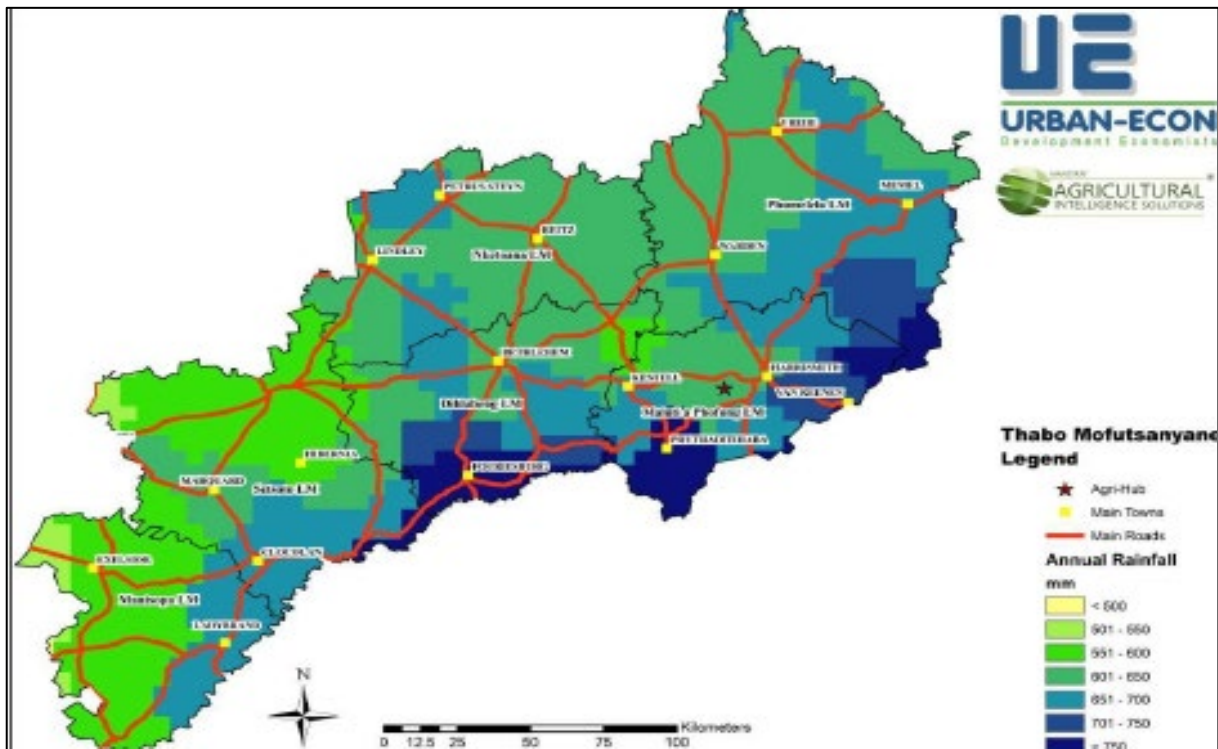


**Figure 3.11: Thabo Mofutsanyana land potential**

Source: DRDLR (2015)



The annual average rainfall in the eastern escarpment rim can at times be more than 900 mm per annum (DARD, 2016). Thabo Mofutsanyana’s rainfall differs between the western areas, with about 501 mm to 750 mm falling in the eastern regions (DARD, 2016), as shown in Figure 3.12.



**Figure 3.12: Annual rainfall for the Thaba Mofutsanyana Local Municipality**

**Source:** DARD (2016)

The Maluti-a-Phofung area is thus very well situated in an area with sufficient rainfall for most agricultural practices (DARD, 2016). The north-eastern rim of the province is classified as semi-arid, with maximum temperatures ranging between 22 °C and 29 °C (DARD, 2016). According to discussions held with extension officers during field visits, the drought conditions, experienced before 2021, did not have any severe impact in the region. It must, however, be noted that the drought still had an impact on the region.

### 3.3 Data collection

The data were collected in three primary stages. The first stage was focused on the MSLF assets, which were complemented in Stage 2 with the perceptions, aspirations, willingness and interest of youth towards the sector. Stage 3 consisted of feedback sessions in the form of focus group discussions with role players in the research areas.

### 3.3.1 Data collection stages

The research made use of three primary stages of data collection. The first consisted of exploration visits and meetings with representatives in the three possible research areas, as discussed above. The second stage consisted of rural surveys in the two identified study areas, commencing in the second half of 2018. This research continued in 2019, when a second part was added to the questionnaire concerning the perceptions, aspirations, willingness and interest of youth towards the agricultural sector. The data collection was interrupted in March 2020 owing to the COVID-19 pandemic and consequent lockdowns. After easing the lockdowns in late 2021 to levels that allowed the research team sufficient freedom to attend fieldwork, further surveys continued. These were, however, less successful than the initial visits were and were stopped in order to proceed with the third stage of data collection. During the third phase of data collection, focus group discussions (FGDs) were conducted with youth in the respective study areas (Table 3.6) to validate and extend selected typologies. Permission to access youth in the study areas was granted and arrangements were organised by the respective extension officers and village leaders. As expected in qualitative research, the study sample size cannot be pre-determined (Deliens *et al.*, 2015), and the turnout of youth in a specific village determined the size of the focus group.

Each focus group was facilitated by a moderator and assistant moderator to ensure that translations could be made from English to local languages whenever deemed necessary. Each focus group discussion started with a presentation of the youth typologies developed, as discussed in Chapters 7 and 8, representing youth in the respective study areas. Thereafter, discussions were facilitated by the moderator. Participation was voluntary and for smaller focus groups (less than 10 participants), each participant had an opportunity to comment if they wanted to. All focus group discussions were recorded with the permission of the participants. The assistant moderator also assisted to take notes during discussions. Interviews were also held both telephonically and face-to-face with key informants for youth development to ascertain the availability of support and institutional capacities to support development in agriculture.

**Table 3.6: Details of group participants in FGDs**

<b>Focus Group Discussion</b>	<b>Date</b>	<b>No of participants</b>
<b>FGD1</b>	16/03/2022	6
<b>FGD2</b>	17/03/2022	2
<b>FGD3</b>	24/03/2022	27
<b>FGD4</b>	13/07/2022	11
<b>FGD5</b>	14/07/2022	9
<b>FGD6</b>	15/07/2022	2

### **3.3.2 Visits to research areas**

Two study areas in the Free State province were selected according to their agricultural potential, proximity to research institutions, unemployment, especially considering youth unemployment and willingness of officials from the Department of Agriculture and Rural Development to assist in accessing youth in their respective regions. The two areas in the Free State include the Thaba Nchu area of the Mangaung Metropolitan Municipality (MMM) and QwaQwa in the Maluti-a-Phofung Local Municipality of the Thabo Mofutsanyana district. In this report, these two regions are referred to as Thaba Nchu and QwaQwa.

In the Thaba Nchu area, a specific extension officer was assigned to assist the research team after several meetings with the Extension Manager and various extension officers of the region. The extension officer is also responsible for the youth in the area, thus making him the appropriate person for assisting the research team. After consulting with the Extension Manager and the allocated extension officer, it was recommended that the extension officer should assist by arranging access to youth. The extension officer arranged meetings with the youth in the region, including backyard garden farmers, non-agricultural youth, and unemployed youth. The extension officer coordinated the youth in the various villages to gather at a central point on the day of the visit. When villages were visited, the research team, along with the extension officer, had to obtain permission from the headman to enter the village for the research. Through the assistance provided by extension officers, the research team managed to reach a diverse group of young people in their respective areas.

The survey in QwaQwa was also conducted with the support of the local extension officers or other delegated individuals in their respective areas on the recommendation from their Extension Manager and Manager of Specialised Support Services. The extension officers showed great interest and enthusiasm in the study and its objectives. Upon arrival in QwaQwa, the team worked with the various extension officers for the duration of the visits; in some cases where the extension officers were unable to assist, other individuals were provided to assist the research team. These were mostly in special cases, such as the death of a family member, where the assistance was delegated to additional individuals. The officers were happy to assist throughout the visits, and strategically organised and gathered youths for easy access.

The officers have indicated their availability to assist with any necessary information whenever they can. The research team also used other means of accessing youth in the area through private individuals and local youth centres. Research areas were visited for either short or long periods, depending on the availability of the extension officers and the research team to travel. In general, the visit to the Thaba Nchu region is relatively easily accessible for the UFS team and can be visited daily, while the QwaQwa area is further away from Bloemfontein (around 350 km). Visits to QwaQwa were planned to accommodate and facilitate access to as many youths as possible in the available time, normally between three and five days. This was to ensure that the available time of the extension officers and research team was used as effectively as possible.

A few limited issues were experienced when conducting the research in the Free State. In most cases, the youth were willing to consent to participate in the study in both regions, with only a few being unwilling to participate. In fact, the few withdrawals that were experienced were from the participants who had already agreed to participate. It was more of a time constraint aspect that affected these youth, who therefore could not complete the interviews. As already indicated, the regional Free State Department of Agriculture and Rural Development (FSDARD) offices and the extension officers in the regions were willing to assist the team in providing access and assisting in visits to youth. One of the few delays experienced during the fieldwork was attributable to a change in personnel in the QwaQwa office, as the contact person in QwaQwa retired at the beginning of 2019. Some delays were experienced in communicating with the proposed contact person to receive further communication on the availability of extension officers.

### **3.3.3 Sampling**

The sampling method used for the project is similar to that used by Wale and Chipfupa (2018), which is random and convenient. An effort was made to collect data from both the rural and central areas of Thaba Nchu and QwaQwa to ensure that a variety of youth activities would be captured in the research survey. Enumerators used in the data collection included UFS research team members, with further assistance from research assistants and students from the Department of Agricultural Economics. The enumerators pretested the questionnaire, which also served as an opportunity to familiarise themselves with the questionnaire and identify possible problem areas. After the pretesting, some minor adjustments were made. Participants were thoroughly informed that participation in the research was entirely voluntary. It was also made clear to the respondents that they could withdraw from the study at any time during the interview, without providing a reason. However, they could not withdraw after the completed questionnaire had been submitted. All respondents received a unique identification code to ensure that they remained anonymous. The research process and questionnaire have received ethical clearance and are being conducted under ethical clearance number UFS-HSD2018/0947.

### **3.3.4 Questionnaire**

A questionnaire (see Appendix 2) was developed in collaboration between the University of KwaZulu-Natal and the University of the Free State. The questionnaire comprised open-ended, close-ended and Likert-scale questions and options, where the youth could rate their choices in level of importance and according to their likelihood of making a particular choice. The questionnaire consisted of two sections. The first section focused mainly on aspects of the MSLF, such as youth participation in agriculture, human capital, natural capital, physical capital, financial capital, psychological capital, and entrepreneurial characteristics. A second section was added during the second primary data collection phase, which covered respondents' perceptions and aspirations, and their willingness and interest towards agricultural participation.

- Human Capital

The Human Capital aspects in the questionnaire included current participation in the agricultural sector, the number of household members staying in the household, and the age, gender, marital status, principal occupation, and level of education of all household members. Other youth details included whether an individual had any agriculture-related tertiary qualification, years of experience in the agricultural sector, and whether they had received any business or agricultural training. Furthermore, the Human Capital category measured the individual's benefits received from governmental rural support programmes, as well as the effectiveness of these programmes.

- Natural Capital

The Natural Capital category of the questionnaire requested information about access to land and the number of plots owned and means of ownership, if any. Respondents were also asked to indicate the size of their plots in hectares, or square metres.

- Physical Capital

Physical Capital measured asset ownership, which includes access to and ownership of livestock. The ownership of household items covered articles such as cell phones, televisions, and agricultural production assets, including water tanks, ploughs and tractors. The respondents were, in all cases, free to add assets that were not listed, but which they owned.

- Financial Capital

Financial Capital measured the youths' income sources, savings, and credit access.

- Psycap and Entrepreneurial Characteristics

Entrepreneurial characteristics were measured in relation to risk-taking, tolerance for failure, seizing an opportunity, being determined, having a problem-solving attitude, being proactive, having a strong drive to achieve, being independent, innovation, creativity, efficiency, and profitability, embracing change, internal locus of control, visionary and being goal orientated. The instrument required respondents to indicate on a Likert-type scale the extent to which they were likely to act in a particular scenario.

## Evaluation of assets within the Sustainable Livelihood Framework of youth in the research areas

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### **Overview**

In Chapter 4, the SLF is used to characterise the youth in the Free State, based on their endowment in livelihood assets. The discussions consider both research areas, Thaba Nchu and QwaQwa, and refer to youth involved and not involved in agriculture and related activities to gain a better understanding of rural livelihoods in the province. Ultimately, however, the two regions are considered as one survey area, and the purpose is not to make comparisons for analysis between the regions. The chapter first considers the assets related to human and social capital, which are followed by assets considered within natural, physical, and financial capital.

### **4.1 Demographical Background**

This section focuses on the total number of respondents' demographic factors, including age, gender and marital status. The total number of youth participants involved in the research totalled 492, consisting of 231 in Thaba Nchu and 261 in QwaQwa. As the study is focused on youth, it is expected that the age distribution would be between 18 and 36, as shown in Table 4.1. The average age of the respondents is around 26 years, with Thaba Nchu at 26.6 and QwaQwa at 25.6. About 48% of the respondents in Thaba Nchu are younger than 25 years of age, with slightly more respondents (57%) in QwaQwa being 25 and younger.

**Table 4.1: Age distribution of the sampled youth**

Age	Thaba Nchu			QwaQwa			Combined		
	Freq	Percent	Cum. Percent	Freq	Percent	Cum. Percent	Freq	Percent	Cum. Percent
18	7	3	3	11	4	4	18	3.7	4
19	7	3	6	5	2	6	12	2.4	6
20	9	4	10	16	6	12	25	5.1	11
21	11	5	15	26	10	22	37	7.5	19
22	17	7	22	18	7	29	35	7.1	26
23	23	10	32	26	10	39	49	10.0	36
24	15	6	39	24	9	48	39	7.9	44
25	21	9	48	22	8	57	43	8.7	52
26	14	6	54	18	7	64	32	6.5	59
27	9	4	58	13	5	69	22	4.5	63
28	12	5	63	10	4	72	22	4.5	68
29	16	7	70	14	5	78	30	6.1	74
30	12	5	75	12	5	82	24	4.9	79
31	11	5	80	6	2	85	17	3.5	82
32	11	5	84	9	3	88	20	4.1	86
33	14	6	90	12	5	93	26	5.3	92
34	8	3	94	8	3	96	16	3.3	95
35	6	3	97	6	2	98	12	2.4	97
36	8	3	100	5	2	100	13	2.6	100
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	
<b>Mean</b>	26.62			25.58			26.07		
<b>SD (Mean)</b>	0.319			0.29			0.216		
<b>Range</b>	18			18			18		
<b>Min</b>	18			18			18		
<b>Max</b>	36			36			36		

**Source:** Research survey

The average age for the youth involved in the agricultural sector was found to be higher than that for the youth who are not involved in the agricultural industry. The respondents involved in agriculture had an average age of 26.87, compared with an average age of 25 for those not involved. There were more male participants than female participants, as seen in Table 4.2. The research also found that of all the participants, males (63.5%) were more involved in the agricultural sector than the females were.

**Table 4.2: Gender of respondent youth**

Gender	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq	Percent	Freq	Percent
Female	113	48.9	99	37.9	212	43.1
Male	118	51.1	162	62.1	280	56.9
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research Survey



Gender is generally considered to be a factor that influences participation in the agricultural sector. Henning, Jammer and Jordaan (2022a)<sup>4</sup> and Jammer (2020)<sup>5</sup> found that females are more likely to be involved in agriculture as part of family businesses. The results from these studies correspond with those of Mueller, Dos and Quisumbing (2018), who referred to the feminisation of the agricultural sector. Feminisation of the sector refers to women taking over roles in rural areas, as men migrate to other sites. This suggests that females should receive a focus in future interventions to involve youth in the agricultural sector. Females might take leading roles in rural households as they become more involved because of other members migrating for other occupational opportunities. Kuipers (2014) indicates that livelihoods are influenced by households,<sup>6</sup> and it is therefore also essential to consider the size of the household that the youth are involved with. Youth were found to be engaged in households ranging from being the sole member to the largest household, at 15 members. The average household sizes are 3.94 members and 3.64 members for Thaba Nchu and QwaQwa, respectively, as shown in Table 4.3.

**Table 4.3: Household size for youth respondents**

Household size	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum. %	Freq	%	Cum. %	Freq	%	Cum. %
1	26	11.3	11.3	18	6.9	6.9	44	8.9	9
2	30	13.0	24.2	20	7.7	14.6	50	10.2	19
3	42	18.2	42.4	39	14.9	29.5	81	16.5	36
4	49	21.2	63.6	51	19.5	49.0	100	20.3	56
5	40	17.3	81.0	58	22.2	71.3	98	19.9	76
6	21	9.1	90.0	30	11.5	82.8	51	10.4	86
7	12	5.2	95.2	27	10.3	93.1	39	7.9	94
8	8	3.5	98.7	11	4.2	97.3	19	3.9	98
9	1	0.4	99.1	2	0.8	98.1	3	0.6	99
10	2	0.9	100.0	1	0.4	98.5	3	0.6	99
13	-	-	100.0	3	1.1	99.6	3	0.6	100
15	-	-	100.0	1	0.4	100.0	1	0.2	100
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	
<b>Mean</b>	3.94			4.63			4.31		
<b>SD (Mean)</b>	0.127			0.134			0.094		
<b>Range</b>	9			14			14		
<b>Minimum</b>	1			1			1		
<b>Maximum</b>	10			15			15		

**Source:** Research Survey

4 Henning, Jammer and Jordaan (2022a), article published under project (K5/2789//4).

5 M.Agric study funded by project (K5/2789//4).

6 'Household' is defined as comprising individuals who reside and eat together for at least three days per week.

The average household size for Thaba Nchu was found to comprise four family members (21.2%), while QwaQwa had one more member involved in the household, at five family members (22.2%). The results indicate that youth are still involved and part of households, which is as expected, since a youth might still be in the transitioning phase of their life. However, there were members of the youth who indicated that they were the only household member. When considering the marital status of respondents, most of the youth are single (Thaba Nchu (83%) and QwaQwa (88%)), as shown in Table 4.4. When considering respondents currently involved in agricultural activities, it is found that 84% are single, while 87% of the youth not involved are single.

**Table 4.4: Marital Status of the respondent youth**

Marital status	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum.%	Freq	%	Cum.%	Freq	%	Cum.%
Single	191	82.7	82.7	229	87.7	87.7	420	85.4	85.4
Married	36	15.6	98.3	26	10.0	97.7	62	12.6	98.0
Divorced	0	0.0	98.3	2	0.8	98.5	2	0.4	98.4
Widowed	4	1.7	100.0	4	1.5	100.0	8	1.6	100.0
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

**Source:** Research Survey

The research indicates that, although youth may be single, they are still involved and live with others in a household. There is thus not only a reliance by youth on larger households, but the larger households would also be dependent on the youth to provide and contribute to the overall well-being of the household. This provides further evidence and motivation for youth to become involved in the agricultural sector through family activities. The family or household are essential in the rural perspective in regard to the formation and enhancement of livelihoods, as there is an need on the family or household members to advance the livelihoods of all involved.

## **4.2 Evaluation of Human and Social Capital**

### **4.2.1 Human Capital**

Human capital consists of skills, knowledge, ability to perform labour and good health, which enable individuals to pursue different livelihood strategies and achieve their livelihood objectives (DFID, 1999). Human capital can be explained by factors such as education, experience, skills, and management qualities that enhance the performance of a business (Han

and Lin, 2008). Luthans et al. (2004) explain that human capital can be defined in relative terms as what you, as an individual, know. The ‘what you know’ is a combination of experience, education, skills, knowledge, and ideas. According to DFID (1999), human capital can be considered as necessary for achieving positive livelihood outcomes. This sub-section now proceeds to focus on the respondents’ human capital, including involvement in agriculture, occupations, and education levels.

- *Youth involvement in agriculture*

Youth participation in the agricultural sector has been reported to be low, and several initiatives by private and public institutions have been initiated to enhance youth participation. This research aims to contribute to the current understanding of rural youth and their participation in economic activities, and to improve their participation by providing strategies specifically within the agricultural sector. To do this, it is essential to determine the current levels of participation. It was found that 56% of the respondents were in some way involved in the agricultural industry, as seen in Table 4.5.

**Table 4.5: Youth involvement in the agricultural sector**

Type of youth	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum %	Freq	%	Cum %	Freq	%	Cum %
Fulltime as individual	21	9	9	46	18	18	67	14	14
Fulltime in cooperative	14	6	15	23	9	26	37	8	21
Part time (part of family)	93	40	55	77	30	56	170	35	56
Not involved	103	45	100	115	44	100	218	44	100
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

Source: Research Survey

Most youths are part of family businesses in the sector, which does not come as a surprise since, in some cases, younger individuals are included in family operations during their transitional years, with the potential intention to take over the business in the future, or to venture into other occupational opportunities. Another alternative for explaining youth involvement as part of family businesses could be attributed to them having no other options because they are unemployed or are not pursuing any further education or training activities. Although agricultural cooperatives constitute a form of business practice that assists and enhances overall agricultural participation, the research shows that very few youths are involved in agricultural cooperatives. This is a somewhat surprising indication from the research and requires further understanding as to why youth are not considered for or are

engaged in agricultural cooperatives. The result is a good indication and does provide contrary views, as found in the literature, that youth are not actively involved in the agricultural sector.

Observations made during the exploration phases of the research (Stage 1) were that, when youth involvement in agriculture is mentioned, the response would generally be along the lines that gaining access to the youth who are involved in the agricultural sector might be a difficult task, as there are limited numbers of youths involved in the industry. Further investigation into the occupations of the respondents provides more details on how they are engaged through their daily jobs or engagements, as shown in Table 4.6. Unfortunately, the indications from the research do not provide a positive image in terms of the respondents' current occupations. In Thaba Nchu, the research shows that 32% of the respondents are currently in a working environment (full-time farming, salaried job, or self-employed), 13% are students, and, the most worrying, 55% are currently unemployed. In QwaQwa, more numbers of economically active youths are observed, when compared with Thaba Nchu. There is an increase in the full-time farmers, 13.4%, compared with 9.5% of the youth. Some 33.3% of the youth in QwaQwa are currently involved in some kind of economic activity, including being full-time farmers. However, the majority of the youth in QwaQwa was found to be, as in Thaba Nchu, unemployed, at about 45%, followed by those who are students (21%).

**Table 4.6: Respondents' current occupations**

Occupation	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum%	Freq	%	Cum%	Freq	%	Cum%
Fulltime farmer	22	9.5	9.5	35	13.4	13.4	57	11.6	11.6
Salaried job	10	4.3	13.9	6	2.3	15.7	16	3.3	14.8
Temporary job	20	8.7	22.5	15	5.7	21.5	35	7.1	22.0
Self employed	22	9.5	32.0	31	11.9	33.3	53	10.8	32.7
Student	30	13.0	45.0	55	21.1	54.4	85	17.3	50.0
Unemployed	126	54.5	99.6	117	44.8	99.2	243	49.4	99.4
Other	1	0.4	100.0	2	0.8	100.0	3	0.6	100.0
	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

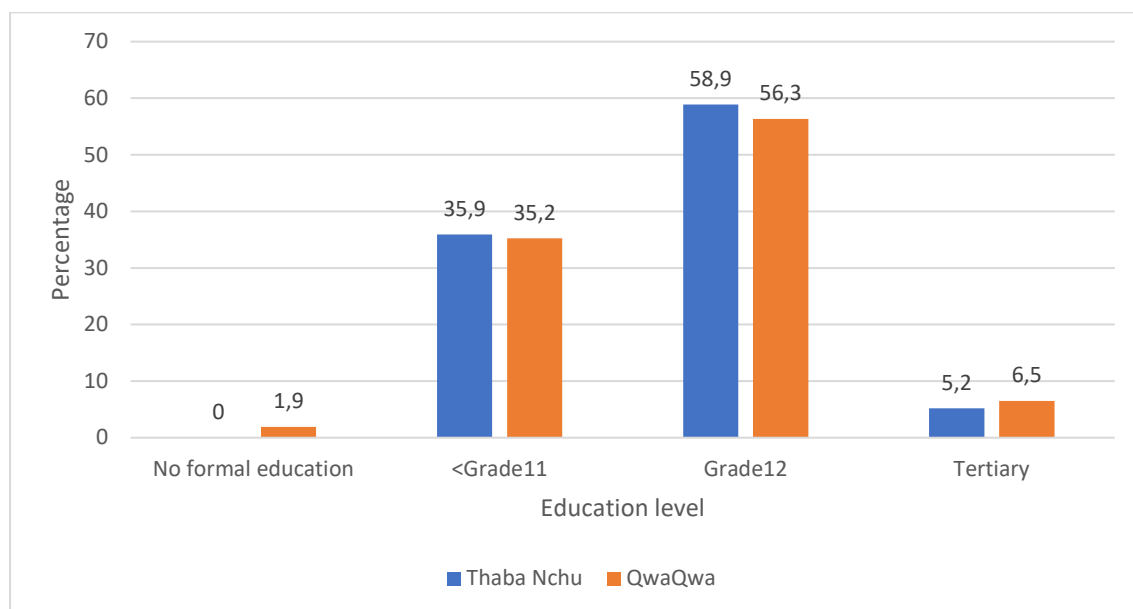
Source: Research Survey

Table 4.6 indicates that unemployment problems exist (49.4%) in the Free State research area, which corresponds with indications from literature that indicate that youth are struggling to find work or are not otherwise included in the labour force. This should take into consideration, however, that a further 17% of the youth, who are currently involved in training and education, might return to rural areas, and enter the labour force in due course. Clear strategies are required to absorb around 70% of the youth into economic activities. Further, the results indicate that,

although numbers of the youth stated that they had some involvement in the agricultural sector, very few showed it as a formal occupation. This suggests that youth are involved in family farming operations, assisting the family, rather than the youth operating their own farming businesses.

- *Education and agricultural experience*

Education has been found to push individuals away from the agricultural sector (Bezu and Holden, 2014). The authors found a positive correlation between education and non-farm employment, mentioning that this relation is consistently seen in the literature. This indicates that highly educated or better-educated youths would rather seek off-farm employment to earn a higher income than consider the rural agricultural sector for employment. This research shows that most respondents have received some form of formal education, as shown in Figure 4.1, with 57.5 % of respondents having completed a Grade 12 education – 59% in Thaba Nchu, and 56% in QwaQwa. QwaQwa has the largest number of respondents with no matric education, including those with no formal education at 1.9%, and those with lower than grade 12 at 35.2%. The youth in Thaba Nchu indicated that 36% have attained lower than a grade 12 education, with all the youth indicating to have received some form of formal education.

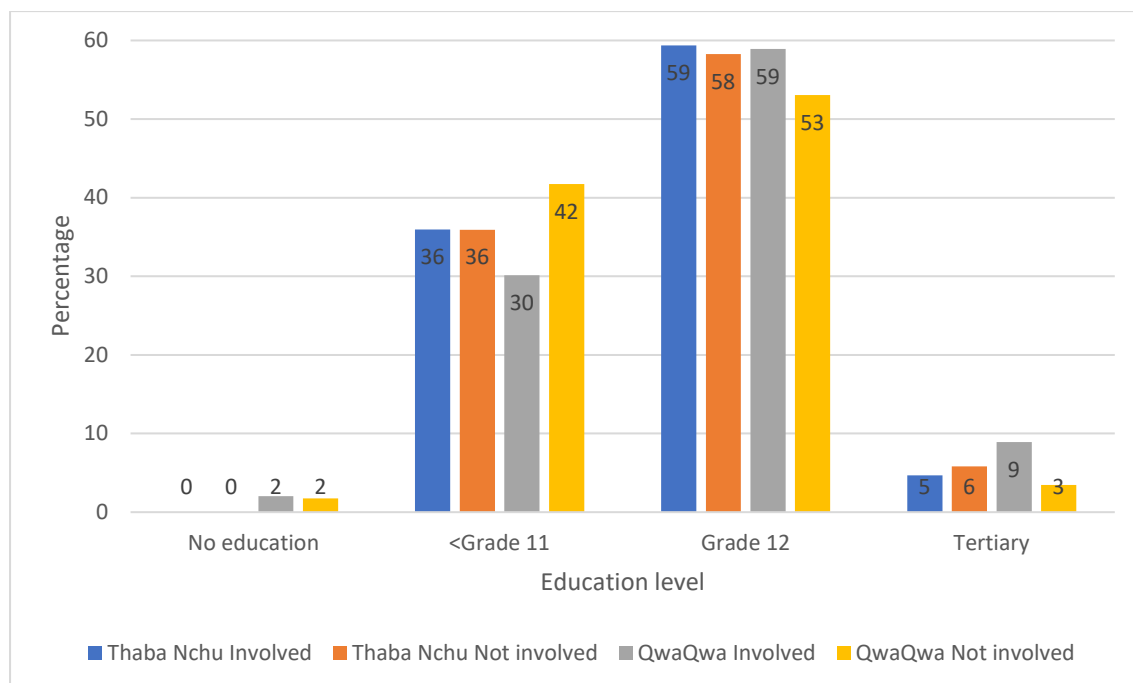


**Figure 4.1: Education level of youth respondents**

**Source:** Research Survey

Few of the respondents (6%) have, however, furthered their education to obtain a tertiary education. This may be attributable to a lack of opportunities for advancing their education to obtain a degree, certificate, or diploma. This is interesting and perhaps an indication of underlying issues hampering education, as there are tertiary educational institutions in Bloemfontein near Thaba Nchu and QwaQwa.

When the education of the respondents currently involved in agriculture was considered, as compared with those not involved, it can be seen in Figure 4.2 that there is a slight difference between the numbers of respondents with grade 11 or less, with Thaba Nchu at 36% and QwaQwa at 32%. The observation shows very little difference in the education levels of the youth who have indicated that they are already involved in the sector and those who are not involved in the industry. This suggests that the level of education might not be the main contributor in determining participation in the agricultural sector within the research areas.



**Figure 4.2: Education levels of youth involved, and not involved, in the agricultural sector**

Source: Research survey

The research shows that, although 59% of the respondents in Thaba Nchu and 56% of the respondents in QwaQwa finished matric, only 5% and 6.5% continued and obtained tertiary education, respectively. Figure 4.2 shows that a slight difference was observed between the youth involved, compared with those not involved, concerning tertiary education. In Thaba

Nchu, more youth who are not involved in the sector have a tertiary education, while in QwaQwa, more youth involved have a tertiary education. As the research is aimed at agricultural participation, it is also interesting to determine whether any youth have furthered their education in agricultural-related areas. The expectation is that very few of the youth would have any further tertiary qualification related to the agricultural sector, which is confirmed when the specific tertiary agricultural qualifications of the respondents are considered. Of those who have gone further in tertiary education, it is seen in Table 4.7 that only 3.5% of the youth obtained tertiary education related to the agricultural sector. Only 4.3% of youth in Thaba Nchu and 2.7% of youth in QwaQwa have tertiary qualifications in the agricultural industry.

**Table 4.7: Agriculture-related tertiary education of youth respondents**

Agriculture related education	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq	Percent	Freq	Percent
No	221	95.7	254	97.3	475	96.5
Yes	10	4.3	7	2.7	17	3.5
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research survey

In previous research, Hadebe (2016) has stated that individuals with tertiary qualifications migrate from rural to urban areas. This would ultimately lead to lower participation of youth in rural areas as they become better educated. Similarly, Ogunmodede et al. (2020) found that better-educated individuals are less inclined to be involved in the agricultural sector. In South Africa, and specifically the Free State province, results from Henning et al. (2022a) and Henning et al. (2022b)<sup>7</sup> indicated that youth with tertiary education were less likely to be involved in the agricultural sector. Henning et al. (2022a) found that better-educated youth from the research areas in the Free State province were less likely to be involved in cooperatives or family businesses. Education and level of education need to be considered when determining strategies to include youth in the agricultural sector.

The accumulation of experience can influence participation in the agricultural sector. Henning et al. (2022a) found that agricultural experience is vital in youth involvement in the agricultural industry. Their results found that an increase in the number of years of experience in the agricultural sector would result in youth being more likely to participate in the Free State agricultural sector. The finding by Henning et al. (2022a) is similar to the findings by Piazza-Georgi (2000), Ogunmodede et al. (2020), Fasakin et al. (2022) and Henning et al. (2022b).

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<sup>7</sup> Henning et al. (2022b), article published under project (K5/2789//4).

They have all made findings related to experience and agricultural participation. However, experience levels in the agricultural sector are very low in the Free State regions. It was found that 54% and 49% of the respondents in Thaba Nchu and in QwaQwa, respectively, have no experience in the sector. The average number of years of experience for the respondents who indicated involvement in the sector was 6 years in each area. These findings show that the respondents have limited experience in the agricultural sector, which could hinder their future progress in developing agricultural businesses.

- *Indigenous knowledge*

Zimu-Biyela (2016) explains that indigenous knowledge (IK) describes various aspects, with debates continuing on what qualifies as being IK. New techniques and technology are not always the preferred method used in production, especially as these may require substantial capital investments. Typical innovation discussions related to commercial and industrial applications may not necessarily apply to traditional smallholder farmers, as mentioned by Juma and Spielman (2014). Although this may be true, there are also arguments that younger people are willing to accept change. This may lead to the youth being more open to moving away from traditional production methods, which are also associated with indigenous knowledge, than older individuals are. The youth who are involved in the agricultural sector were asked to specify the kinds of indigenous knowledge they have acquired over the years, while they were also asked to state how they agree with several statements (see Table 4.8) regarding IK in the agricultural sector, according to their experience.

In response to the question on how IK was transferred over the years, a variety of answers was provided. However, consistent answers included IK on how to farm, crop and/or undertake livestock production. Other interesting types of IK mentioned included soil fertilisation and meat packaging, producing own feed, reducing environmental pollution, and animal immunisation. One can already see how new technology or new methods have crept into the understanding and applications of traditional IK, but also that traditional methods of production are being transferred over the generations. Wale and Chipfupa (2018) recommend that IK should be embraced in smallholder farming and used in developing businesses in the agricultural sector, as these farmers do not necessarily keep to normal business models of profitability. The survey (Table 4.8) shows that most of the youth still believe that IK impacts on farming practices, with most of the youth involved in the research strongly agreeing with



the impact of indigenous knowledge. This shows that the youth think that implementing IK could increase the profits of their farming businesses.

**Table 4.8: The impact of indigenous knowledge according to the youth (percentages)**

Statement on IK	Thaba Nchu (n = 109)					QwaQwa (n = 116)				
	1	2	3	4	5	1	2	3	4	5
Indigenous practices improve soil fertility and soil structures	6	3	11	47	33	3	10	12	55	42
Indigenous practices reduce all forms of environmental pollution	10	8	30	32	19	5	16	24	37	41
Indigenous practices are more efficient in reducing pests and diseases infestation	9	6	26	39	20	6	11	26	50	30
Indigenous practices reduce input costs of production	10	6	24	34	26	6	10	9	48	49
Indigenous practices increase value addition for agricultural produce	9	5	17	37	33	6	8	18	44	47
Indigenous practices increase farmers' income with low cost	9	12	24	29	26	7	8	15	54	40
Indigenous practices are transitionally difficult to sustain	6	21	29	26	17	15	22	31	31	25
Indigenous practices increase crop/vegetable production and productivity	7	6	18	41	28	6	11	16	48	42
Agricultural professionals lack adequate knowledge on indigenous knowledge	11	16	31	28	15	16	15	35	30	28
Agricultural extension workers fail to appreciate the importance of indigenous knowledge	15	12	33	28	13	10	17	28	36	31
Agricultural extension workers lack adequate understanding of indigenous knowledge	10	15	31	26	18	9	17	39	28	30

Notes: Scale 1 = Strongly agree; 2 = Agree; 3 = Neutral; 4= Disagree; 5 = Strongly disagree

Source: Research survey

What might be of some concern from the indications are that the youth feels that agricultural professionals and extension officers may not be able to ensure the future of farming that uses IK. It was also found that IK might be difficult to transfer from one generation to the next, which might also mean that some essential practices and knowledge may be lost for future generations. Attempts must therefore be made to increase the ability of agricultural professionals and extension officers to appreciate the impact of IK and to include IK in training and programmes provided, and especially those provided to youth farmers. This would assist in preventing the IK from being lost, and thus ensure that the practices can continue to be implemented.

The indications show that IK could potentially have an important role in youth farming businesses. IK cannot be neglected in rural areas, as the knowledge is still carried over between generations, and in some cases, most of the farming expertise is based on IK. These indications are comparable with the results and suggestions made by Wale and Chipfupa (2018). They argued that IK needs to be considered when the entrepreneurial abilities of the rural population, specifically the smallholder or emerging farmers, are considered. Other factors that need to be considered are that some youth would enter or participate in the sector for different reasons, driven by surviving and by enhancing their livelihoods. For this reason, their primary objective may not be profit-driven, but rather to ensure there is enough food for the household every day.

- *Access to agriculture-related skills training*

Apart from using formal education and IK, individuals might also receive additional training or support to improve their knowledge by receiving, or participating, in training. Participation in training sessions not only enhances their knowledge but also provides a method through which continuous knowledge and expertise can be exchanged. It would also assist in ensuring that individuals are kept up to date with current trends, technology, and events in the sector. The literature also indicates that there has been a significant drive from the private and public sectors to initiate and provide agricultural training and support in rural areas. Despite these efforts, the number of youths who have received training in farming or other agriculture business-related issues is very low, as 85% of the participants indicated receiving no short-term training, as shown in Table 4.9.

**Table 4.9: Short-term training in farming or other agriculture-related business**

Received training	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq	Percent	Freq	Percent
No	192	83.1	228	87.4	420	85.4
Yes	39	16.9	33	12.6	72	14.6
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

Source: Research Survey

In some instances, it could be argued that the youth already involved in the agricultural sector would be at an advantage in gaining access to training, when compared with those not currently involved. However, this has been shown not to be the case, as few (15%) of the youth currently involved in farming or agricultural businesses have received or attended any short-term training. This is an essential factor to consider in youth development through agricultural participation. Research has shown that agricultural support initiatives enhance the probability of agricultural involvement of youth (Henning et al., 2022b). Further research has found that youth with access to government support programmes are more likely to be involved in the sector as individuals or family businesses. As the data indicate that there is limited participation or access to training in the respective research areas, the next question would be as to who among the youth have had access to or participated in training opportunities. Youths who are not involved in the sector have received even less agricultural training. The most common training that the respondents have received is related to their crop or animal production systems, as shown in Table 4.10. The amount of training received is meagre in the Free State research areas.

**Table 4.10: Training session attended by youth included in the research**

Training received	Thaba Nchu		QwaQwa	
	Involved	Not Involved	Involved	Not Involved
Crop production	20	9	36	1
Water management/Climate change	7	4	29	0
Proposal/business writing	8	2	4	1
Financial management	0	0	9	1
Agricultural Commodity Markets	2	0	9	0
Value addition	0	0	1	1
Farm Management	5	0	2	0
Equipment	0	0	1	0
Animal production	9	3	4	0
Entrepreneurship	2	0	1	0

Source: Research survey

Possible explanations must be explored as to why training levels are low, whether this is attributable to the youth not being willing to attend training sessions, or perhaps because limited training opportunities are available in their regions.

#### 4.2.2 Social Capital assets

Social capital refers to the social resources that individuals can draw upon in pursuit of their livelihood objectives. Social resources can be developed or enhanced with interactions, memberships in formalised groups, and relationships of trust (Kuipers, 2014). Furthermore, Luthans et al. (2004) explain that social capital can be simply defined by “who you know” and refers to resources such as trust, relationships and contact networks. The following sub-sections focus on the social assets that the youth can rely on and make use of.

- *Agricultural-related cooperatives*

Given the small scale of operations typically associated with smallholder farming, collective action is necessary to achieve benefits from economies of scale. It is essential to note the recommendation from the NPC (2012) in terms of developing strategies to provide the “poor producers greater collective market power in value chains and improved access to information”. Collective action can contribute to overcoming some of the transaction cost constraints of smallholder farmers. There is increasing evidence that farmer organisations such as cooperatives offer a key platform for smallholder farmers to effectively participate in the markets (Markelova et al., 2009). Collective action in the form of cooperatives is not a very popular structure for the youth in the research area, as seen in Table 4.11.

**Table 4.11: Current participation of respondents in agricultural cooperatives (fulltime)**

Involved in cooperative	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq	Percent	Freq	Percent
No	191	83	224	86	415	84.35
Yes	40	17	37	14	77	15.65
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research survey

Fewer than 20% of the respondents are involved full-time in agricultural cooperatives. Low membership in cooperatives was not only evident among the non-farming respondents, but also among those involved in farming or agricultural activities. The overall indication is that

agricultural cooperatives are not a very popular business function in the research areas, and this raises questions as to why the youth are not participating or involved in agricultural cooperatives, despite the numerous advantages that agricultural cooperatives provide. The reasons were also explored to gain an understanding of the mind-set of the youth towards agricultural cooperatives. One of the reasons provided was that, according to their current knowledge, no cooperatives exist in their region, or they are not aware of any agricultural cooperatives in their region. This provides indications of the youth being uninformed, as there were indications of participation in agricultural cooperatives in the same regions. The further reasons provided can be explained by a lack of access to opportunities to become involved and the lack of access to or ownership of resources, such as some cooperatives not allowing youth without land or operating businesses to become members of cooperatives.

Contrary to the advantages linked to participation in agricultural cooperatives, some youths indicated that limited gain was available to them from cooperatives because of a lack of knowledge and enthusiasm by participants in cooperatives who are hindering or preventing them from participation. This might not be attributable to issues with the business structure, but rather with the participants and their level and enthusiasm of involvement, as indications of lack of trust and discontent with the governance and management of cooperatives were highlighted as a concern.

Despite the issues highlighted by the youth who are not involved in agricultural cooperatives in relation to governance, the youth currently involved in cooperatives indicated that they are mostly satisfied with the governance and management structures, and have trust in their leadership. There might be a misperception among the youth who are not involved in cooperatives concerning the governance and leadership in the available cooperatives. The limited participation of respondents in cooperatives is particularly of concern, as cooperatives have a substantial role to play in the success of agricultural entrepreneurs. This role includes aspects such as reduced transaction costs and facilitating knowledge sharing on production methods, marketing channels, credit constraints, technology and market prices, which can all assist in the establishment and maintaining of a small, rural farming business. Markelova et al. (2009) emphasise the point that collective action is especially imperative for individuals participating in farming or agricultural-related activities on a small scale to avoid being squeezed out of the market as the paradigm shift within the agricultural economy to minimise costs continues.

A few of the youth respondents indicated that they sell their produce as a group. This also relates to the few youths included in agricultural cooperatives. In addition to limited participation in cooperatives, the lack of entrepreneurial initiatives to participate in agricultural activities to earn an income also results in most youth disregarding the benefits of selling products as a group. Among many other reasons, some respondents in Thaba Nchu indicated they are only willing to produce on a small scale, with no commitments from others, and therefore rather sell their products by themselves. It is essential to introduce and educate the youth on the advantages of collective actions such as cooperatives. Above all, the youth should be educated and trained on the management and governance within agricultural cooperatives to ensure that all benefits are obtained. This would ensure that they are aware of the disadvantages and the roles of the members and participants in the structures of the cooperatives or other collective action arrangements.

- *Youth groups*

The question regarding youth membership in groups showed that most respondents are not members of any youth groups. As indicated in Table 4.12, around 90% of the youth stated that they are not part of any youth group.

**Table 4.12: Number of respondents who are members of clubs or groups**

Member of club or group	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq	Percent	Freq	Percent
No	206	89	236	90	442	89.8
Yes	25	11	25	10	50	10.2
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research survey

The results from the research show that there is very little collaboration between youth concerning their business activities, such as purchasing inputs or selling their products. Such a trend might be attributed to their lack of knowledge of the positive impacts that social platforms can have on an individual participating in agricultural activities or farming on a small scale. The above findings concur with observations and discussions with extension officers during the fieldwork phases to the effect that few youth cooperatives or groups were functional. Despite the potential for social platforms to work as a knowledge-builder, the flow of information is nevertheless limited for both farming and non-farming youths.

- *Accessing extension services*

Wale and Chipfupa (2018) mention that a lack of awareness and preparation among smallholder agribusiness entrepreneurs is one of the critical issues hindering their success in South Africa. Contact with extension services is thus vital for gaining access to the relevant information and simplifies knowledge acquisition. The research shows that more than half of the participants who are not involved in the agricultural sector have never been in contact with extension services, as shown in Table 4.13. When the youth participants involved in the sector are considered, the situation improves. Those involved did indicate having more contact with extension services, with around 55% indicating some level of connection. The limited contact with extension services experienced by the youth not involved could be because they are not a focus for the service providers and are thus not targeted. However, given the position and the aims of attracting youth towards the agricultural sector, one would expect those not involved to be targeted with specialised or more focused information.

**Table 4.13: Frequency of contacts with extension officers or other industry role players**

Contact with extension officers	Thaba Nchu				QwaQwa			
	Involved		Not involved		Involved		Not involved	
	Freq	%	Freq	%	Freq	%	Freq	%
No indication	0	0	0	0	15	10.3	24	20.9
Never	60	46.9	75	72.8	66	45.2	83	72.2
Rarely	13	10.2	6	5.8	16	11.0	2	1.7
Sometimes	41	32.0	12	11.7	26	17.8	5	4.3
Often	11	8.6	4	3.9	12	8.2	0	0.0
Always	3	2.3	6	5.8	11	7.5	1	0.9
<b>Total</b>	<b>128</b>	<b>100</b>	<b>103</b>	<b>100</b>	<b>146</b>	<b>100</b>	<b>115</b>	<b>100</b>

**Source:** Research Survey

The focus on information and services provided to those not already involved is to provide the necessary information and assistance to attract the youth towards the agricultural sector, which is not the primary approach towards the ones already involved. For those already involved, the focus could include information on expansion and diversification within the sector, for example.



This might indicate that most of the participants were not involved in any agricultural activities. Contact with extension officers mostly ranged from ‘often’ to ‘always’ for those engaged in agricultural activities. Extension officers are considered a primary source of information, especially for smallholder farmers. Thus, substantial effort is needed to engage youths that are not yet participating in agriculture. Access to information is vital for driving positive entrepreneurial attitudes, and facilitates the transfer of such attitudes and spirit into practice. In discussion with extension officers in Thaba Nchu, it was ascertained that a lack of capacity and keenness to utilise all the information accessed from extension contacts is also an ongoing constraint to the participation of youth in agriculture and agricultural-related activities of farming (FSDARD, 2018).

### **4.3 Evaluation of Natural, Physical and Financial Capital**

#### **4.3.1 Natural Capital**

Natural resources, such as land, water, forest, air and coastal, erosion, and storm protection are all aspects that fall within the natural capital factor (DFID, 1999; Kuipers, 2014). Natural resources are essential for individuals who depend on resource activities for their livelihoods (DFID, 1999). Farmers primarily rely on these aspects, as the land they work on is one of the essential factors in their farming business. Land is a scarce resource, and with an increase in world population, land may become even more scarce in the future. Not only is land a vital resource, but it is also a very scarce and limited resource, worldwide. In South Africa, the majority (87%) of land is in possession of white farmers (National Treasury, 2014).

An important aspect in the study of asset or resource endowment within the sustainable livelihoods framework relates to the issue of property rights and missing or incomplete markets for some factors. For instance, in the absence of financial markets, individuals or households tend to diversify their sources of income to self-insure themselves and provide working capital (Barrett et al., 2001). For various reasons, rural dwellers who do not own agricultural land find themselves pushed out of agriculture to other economic sectors (Bezu and Holden, 2014). However, farmers who have access to agricultural land, but are frequently exposed to natural shocks (e.g. drought), may be compelled to diversify into the non-farm sector as ex-ante risk management or an ex-post risk-coping mechanism (Reardon et al., 1998). Swarts and Aliber (2013) refer to productive assets, specifically land, as a factor that renders the agricultural

sector unattractive to the youth. As seen in Table 4.14, youth participants in Thaba Nchu (61%) have the highest number of youths who do not have access to or own land, followed by QwaQwa (27%). Indications from the data relate to the remarks by White (2012), who referred to the problems that youth in rural areas experience in gaining access to land.

**Table 4.14: Access and land size, in hectares, by respondents in the research areas**

Access to land	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq.	Percent	Freq.	Percent
No	113	48.9	99	37.9	212	43.09
Yes	118	51.1	162	62.1	280	56.91
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>
Mean	4.42		4.49		4.45	
Std. Error of Mean	2.74		2.54		1.86	
Median	.010		0.18		0.05	
Mode	0.000		0.000		0.000	
Std. Deviation	41.66		41.03		41.29	
Variance	1735.8		1683.93		1704.82	
Minimum	0		0		0	
Maximum	600.00		657		657	

**Source:** Research Survey

Access to land is a critical factor for youth who wish to participate in the agricultural sector, and this is also the case in the Free State (Henning et al., 2022a; Henning et al., 2022b). This is not only the case for youth in the Free State but also for general participation in agriculture, as reported in findings by Groenewald (1993), Cousins (2007), Wale et al. (2021) and Fasakin et al. (2022). As mentioned earlier, most South African agricultural land is in possession of white and mostly commercial farmers. To correct this skewness of land ownership in South Africa, the government, through the DRDLR, introduced several programmes to enhance land access and reduce food inadequacy. The land reform programme aims to assist smallholder farmers with “... *infrastructure, marketing, finance and extension services*” (National Treasury, 2014). However, the land reform programme has not been that successful since its introduction (National Treasury, 2014), since set targets have not been achieved in terms of the amount of land re-allocated, and with more failures than successes since 1994 (Mbatha, 2017). The details about the access to and land size of ownership are shown in Table 4.14 above. Most of the youth have zero to very small areas (<1 ha) of land at their disposal, with 87% of the youth respondents in Thaba Nchu and 82% from QwaQwa.

The effectiveness of land reform and other similar programmes and the issue of who benefits, in general, have been questioned. White (2012) also touches on the aspect of land reforms and land dispossession, and mentions that while some people (local elders and local or national elites) are getting richer through these processes, one needs to consider what the influence of these land deals will be for future generations to come in the rural areas. An important factor to keep in mind is the fact that smallholder farmers in South Africa typically do not have secure land tenure and water use rights, and thus do not have a frame of reference for making decisions under secure land tenure and water use rights. This is also evident in the number of respondents who have access to land from and further emphasised by the means of ownership in Table 4.15 below.

**Table 4.15: Means of land ownership in each of the regions**

Means of land ownership	Thaba Nchu		QwaQwa	
	Freq	Percent	Freq.	Percent
Owned (hold PTO)	113	95.8	190	117.3
Owned (Hold private right)	57	48.3	93	57.4
Leased or rented	0	0.0	4	2.5
Borrowed	4	3.4	6	3.7
Received from chief (temporary)	7	5.9	4	2.5
Other	2	1.7	0	0.0

**Source:** Research Survey

Of the respondents who do have access to land, the majority have permission to occupy (PTO) rights, followed by private ownership rights. Some of the youth respondents have more than one piece or plot of land, which are held under different forms of ownership. Some respondents indicated that they hold permissions to occupy land for several plots or pieces of land, as opposed to one single piece of land. Thamaga-Chitja and Morojele (2014) state that, in rural areas of South Africa, most of the land is communal and owned by a Traditional Authority (TA), and that this has a negative impact on the commercial value of that land. Only 5.9 % of the land in Thaba Nchu and 4 % of the land in QwaQwa were received from the TA. Land tenure security is a very important factor when the involvement and development in primary agriculture are considered (Wale et al., 2021). Endeavours by the government and the programmes they have implemented might need some reforms to ensure they have the intended outcomes envisioned. From the indications of Wale et al. (2021), not only access to land, but

also secure land tenure, comprise a very important factor in the decision-making of the youth when considering their participation and development in especially primary agriculture.

Rain-fed farming systems are essential to South Africa’s agricultural sector (Hardy et al., 2011). Rainfall patterns are, therefore, significant in rain-fed production areas, and with erratic patterns, farmers may struggle to ensure sufficient production. Moeletsi and Walker (2012) mention that during spring, farmers wait for the first rain to fall, so they can then start preparing their land for the growing season. Variable rainfall patterns influence these facets of farming, as later rainfall implies that substantial growth and other plant stages occur when the rainfall might be lower. At the same time, early rain leads to earlier land preparations and lower evaporative demands (Moeletsi, Mellaart and Mpandeli, 2011). This is also a factor that could force youth to instead consider other industries for employment. The rainfall patterns for each of the three regions, as observed by the respondents, are provided in Table 4.16 below, while the rainfall trends are provided in Table 4.17 below.

**Table 4.16: Rainfall Patterns as observed by the respondents in the preceding five years**

Rainfall patterns	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum. %	Freq	%	Cum. %	Freq	%	Cum. %
No indication	2	0.09	0.09	2	0.8	0.8	4	0.81	0.81
Unreliable	153	66.2	67.1	162	62.1	62.8	315	64.02	64.84
Somewhat reliable	48	20.8	87.9	78	29.9	92.7	126	25.61	90.45
Reliable	28	12.1	100	19	7.3	100	47	9.55	100.00
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

**Source:** Research survey

Both Tables 4.16 and 4.17 provide information related to the rainfall in the five years preceding the interviews. As drought was prevailing before and during the first years of the research project, the youth indicated that the rainfall patterns were unreliable and rain volumes were decreasing in the research areas. Consequently, there were indications of a reduction in crop production and loss of animals because of the lack of rainfall and water resources. Apart from the lack of sufficient water, youth also indicated that they found it difficult to make decisions concerning their farming businesses as there was no rainfall consistency, and they did not know what to expect in terms of rainfall in the rainy season. As expected, because of the prevailing weather conditions in South Africa over the last few years, the respondents also indicated that

they had experienced unreliable (Table 4.16) and decreasing (Table 4.17) rainfall in the previous five years.

**Table 4.17: Rainfall trends as observed by the respondents in the preceding five years**

Rainfall trends	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum. %	Freq	%	Cum. %	Freq	%	Cum. %
Unsure	8	3.5	3.5	6	2.3	2.3	14	2.85	2.85
Decreasing	154	66.7	70.1	173	66.3	68.6	327	66.46	69.31
Increasing	26	11.3	81.4	31	11.9	80.5	57	11.59	80.89
Consistent	43	18.6	100	51	19.5	100	94	19.11	100.00
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

**Source:** Research Survey

From the indications of rainfall patterns and trends, the study regions have experienced unreliable rainfall patterns, and a decrease in the amount of rain received was observed. This is problematic for the regions that depend on rainfall for their production, which is different from farmers who produce under irrigation schemes. The study regions had been hit by extreme drought conditions for several years until 2021, and this could have had an influence on the respondents considering the agricultural sector as a means of employment. The unpredictability of the weather has also been identified by the DAFF as a challenge that could influence the production efficiency of crops (DAFF, 2015c). Crops that are poorly adapted to changing weather conditions need to be adaptable to these extreme weather conditions (DAFF, 2015c), and individuals would also need to consider the environmental impact. As limited rainfall has been reported and because of the dependence of production systems on water, it is of utmost importance for respondents to consider alternative ways to access water resources. Some respondents have indicated that they had already acted to improve their access to water by drilling boreholes or installing water tanks to capture water. Rainwater harvesting and conservation techniques have also been suggested by Viljoen et al. (2012) for implementation in regions with limited amounts of rainfall. However, it seems that few members of the community, and specifically the youth, are employing these techniques, and in some cases, would use municipal supplies water, which are already constrained. These methods are not only usable for large land areas, but also for homestead gardens (Viljoen et al. 2012). This means that this rainwater harvesting and conservation system could provide valuable water resources to youth for establishing small agricultural enterprises in, for example, homestead

gardens. All they would need is access to a small number of physical resources such as gutters, pipes and water tank/s. These gardens could then provide a basis for expansion and development into valuable agricultural businesses, which were initiated by the implementation of a rainwater harvesting system.

#### **4.3.2 Physical capital**

Physical capital is explained by the DFID (1999) as comprising the basic infrastructure and producer goods that are needed by individuals for supporting their livelihoods. Infrastructure can be explained as encompassing the changes made to the physical environment to meet the needs of the people and for them to become more productive while producing goods. It also includes the tools and equipment used to become more productive (DFID, 1999). Kuipers (2014) explains that other factors, such as communication and transportation, are also considered as physical assets. Infrastructure or access to infrastructure has a very important role in the development of the agricultural sector (Makhura and Wasike, 2003). Díaz-Pichardo, Cantú-González and López-Hernández (2011) mention that the availability of physical resources on agricultural land, such as irrigation infrastructure machinery and equipment, do have an impact on the performance of a farming business.

Physical assets have been named as comprising resources that have a potential impact on the participation of smallholder and/or emerging farmers in markets (for instance, Viljoen et al., 2012; Henning et al., 2022a). The agricultural sectors of developing countries are unfortunately characterised by small-scale farmers with limited access to physical infrastructure and information in terms of market and extension services. In some cases where there is access, the services or structures provided may be of poor quality (Business Enterprises, 2015). This reinforces the point made by Senyolo (2007), that the lack of infrastructure (such as electricity, dams, and roads) increases the production costs of emerging farmers. While the lack of physical resources may be a constraint for respondents when considering the rural sector for employment, improvements in physical assets such as roads and sources of information might also contribute to youth from rural areas seeking employment in more urban situations (Bezu and Holden, 2014). This indicates that improvements in physical resources in rural areas would not only reduce transaction costs for farming resources, which could attract the youth, but

might also expose youth to opportunities in perhaps urban areas, owing to them gaining access to information caused by improved physical resources.

- *Household and productive assets*

The research areas visited had access to telecommunication signals, although varying at times in signal strength, which includes those for cell phone, radio and television reception, as has also been reported by Viljoen et al. (2012). These forms of telecommunication reception have become an important resource to have access to, as youth are more active on these platforms, and they constitute a source where youth obtain their information, by using cell phones, smartphones, tablets, computers or even smart televisions, to mention a few, as discussed below in Subsection 4.3.2.4. The access to these assets and other assets used in the production processes of the farming business is shown in Table 4.18 below, together with an indication of the average value in each of the two research areas. It must be noted that situations exist where respondents have indicated that they have no idea what the current values of some of their assets are.

**Table 4.18: Physical assets owned or accessed to by respondents in the research areas**

Physical assets	Asset ownership	(Percentage)	Estimated Mean Current value (ZAR) Standard deviation in brackets	
	Thaba Nchu	QwaQwa	Thaba Nchu	QwaQwa
<b>Household assets</b>				
Cell phone (non-smart)	57.14	47.89	290.28 (466.41)	235.09 (483.55)
Smart phone/iPad (Tablet)	61.47	67.05	910.77 (1811.29)	906.51 (1557.36)
Radio	74.89	79.31	1153.96 (2344.07)	889.98 (1654.34)
Television	74.46	81.61	1754.32 (2449.13)	2050.12 (2521.46)
Computer/Laptop	27.27	32.18	863.63 (1702.44)	1266.28 (2526.02)
<b>Agricultural productive assets</b>				
Trailer/cart	3.46	5.75	359.74 (3429.23)	1197.82 (8865.85)
Water tank	13.42	20.31	234.42 (838.53)	908.89 (3311.34)
Motor vehicle in running order	12.99	13.03	9495.67 (9223.37)	15551.72 (9223.37)
Plough (igeja)	5.63	6.51	1678.55 (9223.37)	1589.44 (9223.37)
Planter, harrow or cultivator	2.3	4.21	1645.45 (9223.37)	983.52 (7461.91)
Tractor	1.3	2.3	489.18 (7239.30)	4003.83 (9223.37)

**Source:** Research survey

Table 4.18 indicates that most of the respondents have access to general household assets such as a cell phone (either non-smart, smart or both), a radio and a television. Computers or laptops are owned to a lesser extent, which could be explained by the fact that youth are also inclined to use smartphones and tablets for similar purposes as computers. This was also indicated by some of the respondents, who stated that they use their smartphones to access information and websites rather than using a computer.

The lack of implements has already been identified as one of the reasons why land has not been cultivated in Thaba Nchu in previous research by Viljoen et al. (2012). When ownership of agricultural or farming assets is considered, it seems that the problem is persisting, with youth owning or having access to minimal farming assets. The results from the survey do indicate that access to physical assets used in agricultural production might be an obstacle experienced



by youth in establishing their businesses or in expanding their current operations. Not only is there limited ownership of these assets, but access through groups does not provide any signs of improved access.

- *Livestock*

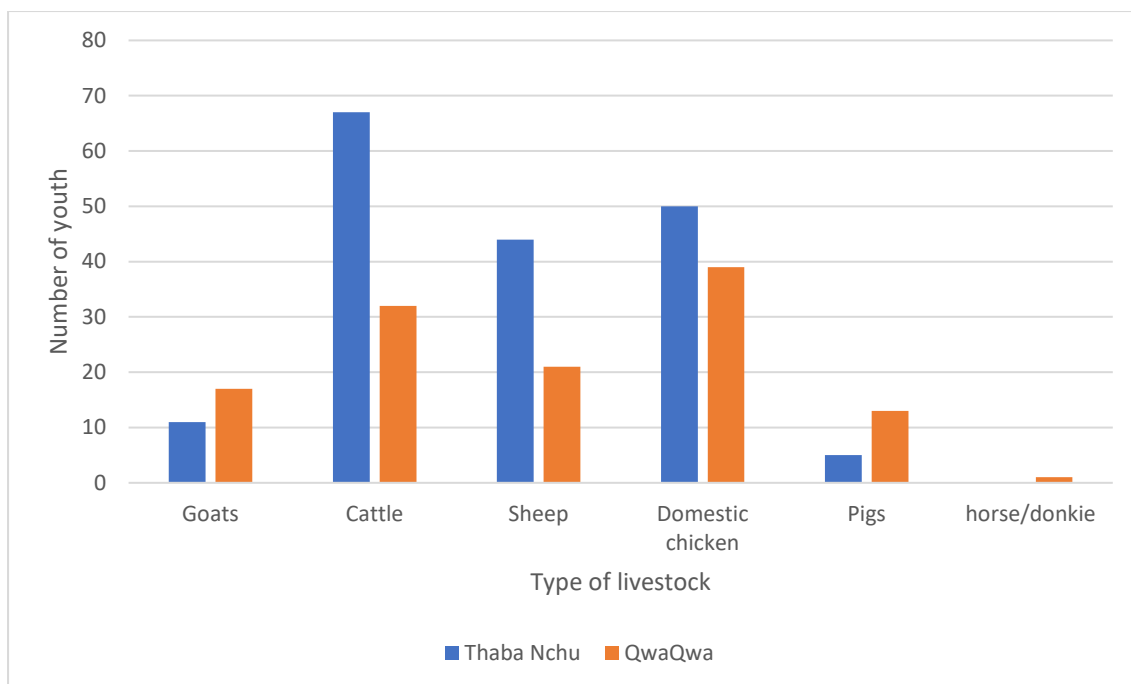
Not only are production assets such as machinery and equipment important for agricultural participation and consequently livelihoods, but livestock has also been found to contribute towards the livelihoods of rural people in South Africa, providing food and income potential (Myeki & Bahta, 2021). Livestock is important in rural areas, where it is used for livelihood and cultural purposes. Subsistence smallholder farmers are involved in agricultural activities through owning or farming with small herds of cattle (Baloyi, 2010). This research found that 42% of the youth in Thaba Nchu and 26% in QwaQwa indicated that they have ownership of livestock, as shown in Table 4.19. Given the indication of different commodities mentioned earlier in Chapter 3 (Table 3.1), the results show that more of the youth in Thaba Nchu owned livestock than those in QwaQwa do.

**Table 4.19: Owning or access to livestock by youth respondents**

Livestock ownership or access	Thaba Nchu		QwaQwa		Combined	
	No	Yes	No	Yes	No	Yes
No	134	58.0	192	73.6	326	66.26
Yes	97	42.0	69	26.4	166	33.74
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research survey

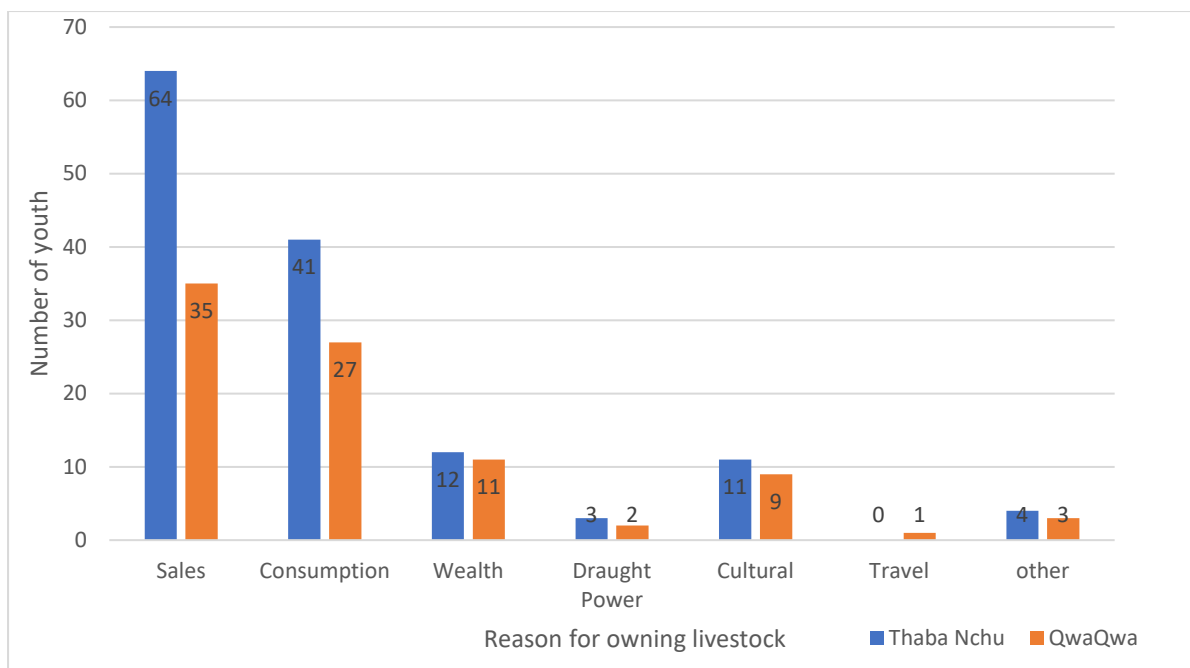
Red meat was indicated in Table 3.1 above as being a commodity that was being produced, especially in the MMM district, which was confirmed by the results shown in Figure 4.3 above. Cattle, sheep and domestic chickens are the dominant types of livestock owned and controlled by youth in the research areas. Although fewer youth in QwaQwa indicated having ownership of animals, the same types of livestock enterprises were identified as the dominant types in both research areas.



**Figure 4.3: Livestock ownership of youth in the research areas**

**Source:** Research survey

The importance of livestock cannot be underestimated, as cattle not only provide household food, but are also sometimes sold as a survival strategy, when families encounter financial strains. No matter what the reasons for owning livestock are, the individuals who own livestock are involved in agriculture, enabling them to engage in agricultural markets (Bienabe et al., 2004). Livestock production in rural areas utilises minimal production systems (Landman, 2013), where subsistence farmers possess multiple livestock herds, often for cultural, wealth and survival reasons. This minimal use of production systems ultimately leads to degraded landscapes (Milton et al., 2003), consequently impacting on other resources such as natural capital. This indicates that, in these areas, people possess livestock as a mere indication of wealth and not necessarily as a business resource. Youth respondents indicated that they own livestock for business purposes, with most indicating that they sell their livestock, as shown in Figure 4.4 below. This is different from previous indications, showing that youth do not necessarily own their livestock for cultural reasons, but for household usage, including providing food and a source of income.



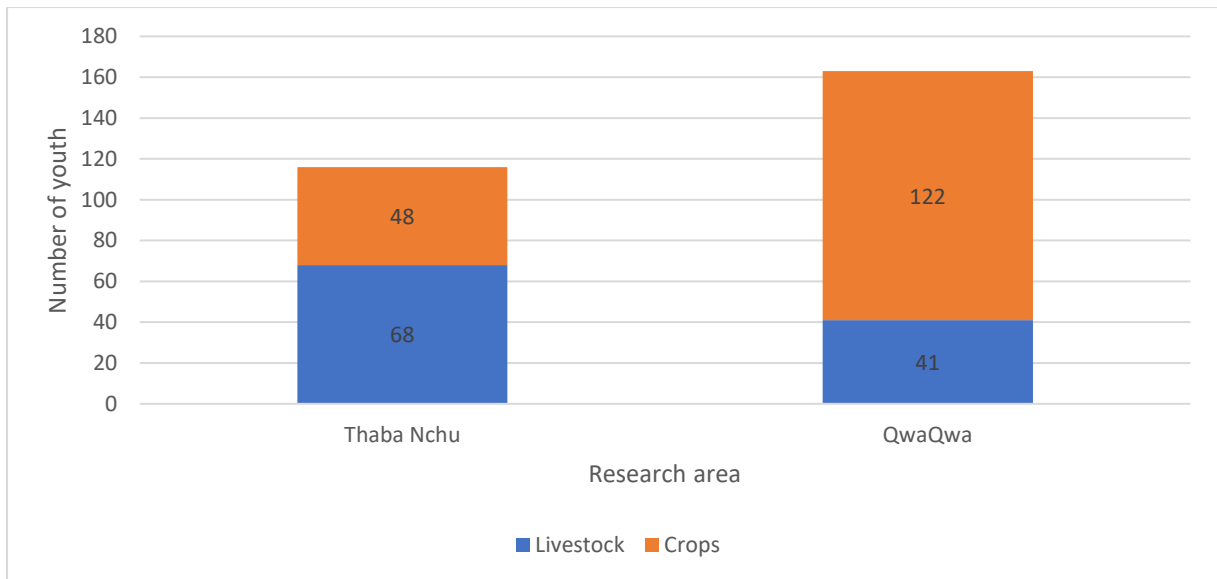
**Figure 4.4: Reason for owning livestock**

**Source:** Research survey

Livestock access has been indicated to play a significant role in youth participation in the Free State agricultural sector (Henning et al., 2022a). Livestock not only enhances involvement in the agricultural industry, but research has shown that it also provides individuals access to markets (Bienabe et al., 2004). According to Clarke and Jenkins (1993), once livestock is used in trading, owners can be defined as entrepreneurs and participate in mainstream markets.

- *Market access*

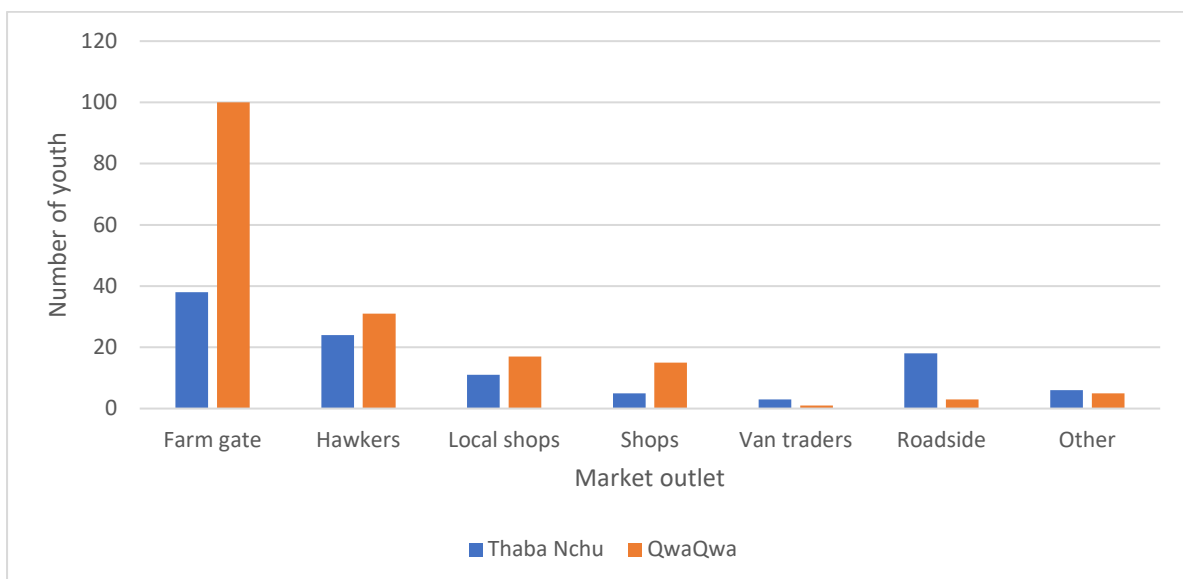
Limited market access is also understood to be a challenge faced by the youth in South Africa and beyond. Limited market access will hinder youth engagement in viable and sustainable agricultural ventures (Zeller et al., 1998). The international influence of supermarkets and the high standards of their value chains are also making gaining access to market for young rural farmers more difficult to achieve (FAO, 2014a). Training and providing market information to farmers in remote areas could remedy this challenge, and assist young farmers in identifying niche markets. The challenge of market access is widely reported in South African agricultural literature, and the expectation is that youth would also be faced with limitations in accessing markets in the research areas.



**Figure 4.5: Market access to either input or output markets for livestock and crops in the research areas**

**Source:** Research survey

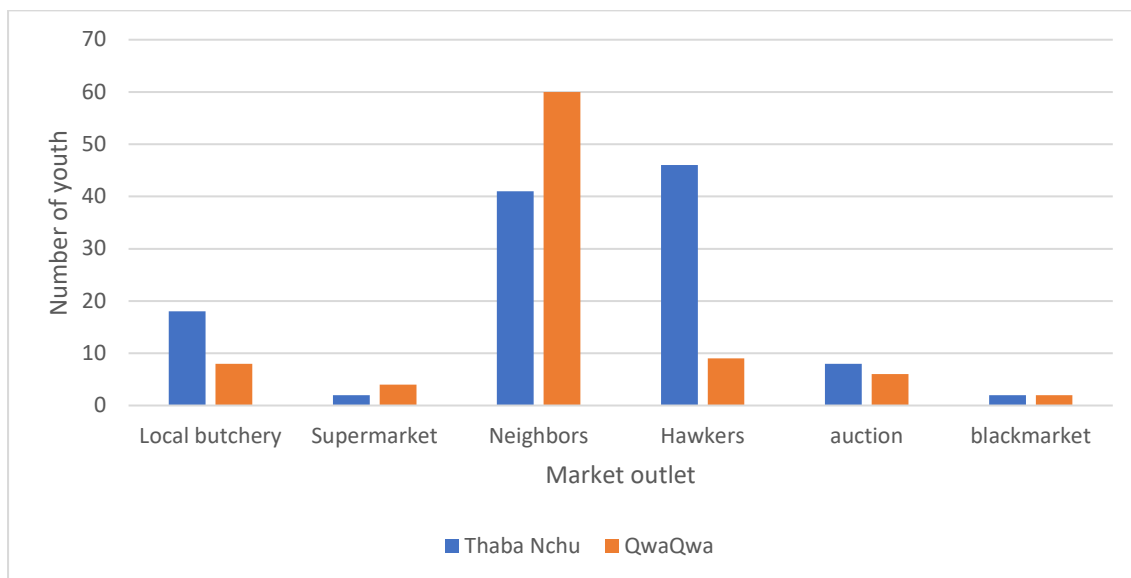
One reason why their preferred point of sale might be closer to their own locations is that the respondents do, in some cases, sell produce to their neighbours or other household and community projects in their villages. These situations were captured as farm gate sales, as shown in Figure 4.6 below for crops, and Figure 4.7 below for livestock. Youth could use similar or different markets for both livestock and crops when involved in the production of both, and could then also sell or purchase their products at multiple markets.



**Figure 4.6: Market outlets used as point of sale by respondents in their regions for their crops**

**Source:** Research Survey

Youth mostly made use of informal markets, such as hawkers, roadside vendors, and shops, when selling their products. The respondents indicated that the most popular market outlet that they make of is selling from their farm or farm gate. Respondents were especially active in selling in their communities by making up small bags or bundles of the product, and then selling those to consumers.



**Figure 4.7: Market outlets used as point of sale by respondents in their regions for Livestock**

**Source:** Research Survey

In terms of access to different markets, especially inputs and outputs markets, the results show that the youth agree that they are currently faced with constraints in gaining access to input markets, with a majority indicating that access to inputs is a major constraint in farming. The respondents feel that they are not only faced with constraints for their inputs, but also for other resources that may be used in the production process. It was indicated that access to affordable labour is also a problem, indicating that high labour costs are a problem. Jordaan, Grové and Backeberg (2014) refer to several stumbling blocks experienced by smallholder farmers that hinder them from participating in commercial value chains, including include a lack of market information and long distances to travel to markets. The respondents felt that they have already difficulties in accessing inputs, and this is then combined with their indication that there is also a lack of accessible market information.

- *Access to and usage of ICT by youth*

In recent years, information and communication technologies (ICT) have been among the potential key platforms for facilitating economic development in many global industries. Torero and Von Braun (2006) have highlighted the potential of ICT to increase agricultural productivity, promote awareness and the adoption of innovations, and accelerate growth, to mention only a few, by allowing interactive communication, unhindered by distance, volume, medium and time. Besides physical involvement in youth clubs, where meetings and gatherings are organised, youth can also use ICT to establish networks and social connections. Exploring digital technology that promotes the inclusion of various individuals is essential for fostering participation in agricultural activities and ensuring the sustainability of such initiatives. Furthermore, Malecki (2003) has highlighted the resulting social well-being and happiness that is enhanced by new modes of information and communication as an important benefit of digital technology that can positively influence entrepreneurial spirits. To have this effect, the youth must access the information through the various resources available. It was found that most of the youth respondents at the least own a cell phone (non-smart or smart); see Table 4.18 above. In some instances, youth have access to more than one smartphone, tablet, or computer, mostly to gain access to social media through their devices. The research shows that the numbers of hours spent on social media vary among the respondents, as indicated in Table 4.20 below. The indications from the youth are that half of them spent around 3 hours or less a day on social media, while 25% did not spend any time on social media or have no social media device.

**Table 4.20: Time spent on social media platforms as indicated by the respondents**

	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum%	Freq	%	Cum%	Freq	%	Cum%
0	57	24.7	24.7	60	23.0	23.0	117	23.8	23.8
<hour	12	5.2	29.9	21	8.0	31.0	33	6.7	30.5
1.1-2h	25	10.8	40.7	28	10.7	41.8	53	10.8	41.3
2.1-3h	26	11.3	51.9	25	9.6	51.3	51	10.4	51.6
3.1-4h	25	10.8	62.8	28	10.7	62.1	53	10.8	62.4
4.1-5h	30	13.0	75.8	27	10.3	72.4	57	11.6	74.0
5.1-6h	10	4.3	80.1	13	5.0	77.4	23	4.7	78.7
6.1-7h	7	3.0	83.1	16	6.1	83.5	23	4.7	83.3
7.1-8h	12	5.2	88.3	13	5.0	88.5	25	5.1	88.4
8-9h	1	0.4	88.7	4	1.5	90.0	5	1.0	89.4
9-10h	11	4.8	93.5	17	6.5	96.6	28	5.7	95.1
>10h	15	6.5	100.0	9	3.4	100.0	24	4.9	100.0
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

**Source:** Research survey

The variation noted may be attributed to several aspects, including employment status, available infrastructure, and access to financial resources. Almost 50% of the respondents in QwaQwa who are involved in farming activities spent none of their time on social media. In comparison, about 80% of the non-farming respondents in Thaba Nchu spent up to 5 hours daily on social media. Given the time spent on social media, it can be expected that, in some cases, a significant amount of money would be spent on airtime and data when resource-poor households are considered. Most youth respondents indicated that they spend around R100 a month on airtime and data, as shown in Table 4.21 below.

**Table 4.21: Spending on airtime or data in South African Rand**

	Thaba Nchu			QwaQwa			Combined		
	Freq	%	Cum. %	Freq	%	Cum. %	Freq	%	Cum. %
0	29	12.6	12.6	35	13.4	13.4	64	13.0	13.0
<R100	131	56.7	69.3	147	56.3	69.7	278	56.5	69.5
R 101 - R 200	52	22.5	91.8	55	21.1	90.8	107	21.7	91.3
R 201 - R 300	14	6.1	97.8	9	3.4	94.3	23	4.7	95.9
R 301 - R 400	1	0.4	98.3	3	1.1	95.4	4	0.8	96.7
R 401 - R 500	2	0.9	99.1	4	1.5	96.9	6	1.2	98.0
R 501>	2	0.9	100.0	8	3.1	100.0	10	2.0	100.0
<b>Total</b>	<b>231</b>	<b>100</b>		<b>261</b>	<b>100</b>		<b>492</b>	<b>100</b>	

**Source:** Research survey

Because of their limited activity on social media and social media groups, and their low incomes, the respondents involved in farming activities, spent little on airtime and data, with almost 25% of them spending no money on airtime or data. Most non-farming respondents, primarily students or unemployed, spent R50 or less per month. This clearly indicates that the amount spent on airtime and data generally depends on an individual's income.

In general, most of the respondents indicated that they utilise their phones to access information and to communicate. Improved access to ICT could play a vital role in supporting the youth already participating in agricultural activities, as well as those interested in participating. To strengthen their interest and eventual participation in the agricultural sector, it is essential that information is made available and obtained through ICT networks.

Social media facilitates the flow of information by providing awareness, knowledge and a communication platform. Social media not only enhances the access to and distribution of information, but frequent exposure to social media might also positively influence one's entrepreneurial attitudes. Levie, Hart and Karim (2010) have highlighted how mass media could positively influence entrepreneurial awareness, attitudes, intentions and aspirations, resulting in individuals possibly considering entrepreneurship as a viable career option or reinforcing their desire to continue pursuing their entrepreneurial activities. Thus, access to social media has a substantial role in moulding entrepreneurial characteristics, especially among youths, to shift entrepreneurial intentions into action. Access to social media by the respondents is presented in Table 4.22.



**Table 4.22: Types of information accessed through ICT services by youth**

	Thaba Nchu		QwaQwa	
	Freq	%	Freq	%
Access to social media	170	73.59	199	76.25
Member of social media group	137	59	137	52
<b>Information accessed through social media</b>				
Updates on friends/celebrities	91	53.5	99	49.7
Social events	65	38.2	70	35.2
Education/life skills	95	55.9	105	52.8
Religion	27	15.9	26	13.1
Business/entrepreneurial opportunities	67	39.4	61	30.7
General news	70	41.2	71	35.7
Farming (techniques and technology)	36	21.2	47	23.6
Output markets and product prices	8	4.7	19	9.5
Other	6	3.5	3	1.5

Source: Research survey

This research illustrates that most of the youth (75%) have access to social media. This indicates that social media (Table 4.22) was among the three most common sources of information that the youths utilise. Among many other reasons, respondents indicated that social media platforms provide platforms for the flow of essential information, where one can become motivated and inspired, learn from other people's experiences, and gain exposure. Furthermore, positive responses were noted on the role of social media platforms in supporting youth in agricultural or farming-related businesses. More than half of the youth respondents with access to social media are part of social media groups (Table 4.22 above). The high participation of youth in social media platforms presents an opportunity to unlock agricultural or farming-related entrepreneurship, specifically for youths. However, it remains imperative to facilitate the engagement of the youth already involved in farming activities, as collective action is crucial for the sustainability of small-scale businesses. In addition, the impact of networking social capital, such as social media, is based on trust and reciprocity. This, when achieved, could present a viable platform to confront socio-economic challenges, such as unemployment, by taking advantage of new opportunities (Adger, 2003). Social media participation would also enhance technology awareness and adoption, thereby positively influencing entrepreneurial success in agriculture.

High data costs, poor network, unaffordable smartphones, and the unknown reliability of information were indicated as being constraints that limit access to social media. A limited number of respondents indicated their distinct view of participation in social media to be of no value, as most youths end up wasting time, posting irrelevant information. Indeed, not all information on social media will be conducive to everyone, as interpretations can differ due to differences in backgrounds and experiences. Considering this, being involved in a specific social media group becomes imperative, in that one can decide on the nature of the information that they are willing to access. It was, however, interesting to note that more than 50% of the respondents involved in farming or agricultural-related activities were not members of any social media group. This could be because the farming respondents are mainly occupied with active farming activities, in contrast to the unemployed, stay-at-home participants.

In general, it was found that the youth use similar social networks. As generally expected, WhatsApp and Facebook were observed as being the leading social media platforms. The research also highlights the point that updates on social media, social events, and general news were among the type of information accessed through social media, resulting in the limited to no participation in other social networks other than the above-mentioned.

Many of the participants indicated that cell phones were expensive and unaffordable. More than 50% of farming and non-farming participants shared the same sentiments regarding high data costs and poor network connectivity that constrain access to the internet or social media and the use of cell phones. It was also interesting to note that most of the youth suggested that lack of knowledge influences the productive use of cell phones, which provides further evidence of the need for training and education of youth, and suggestions for future training programmes.

The attitude of youth respondents towards ICT indicates that most youths depend on their cell phones for communication and information sourcing. Respondents indicate that they become anxious when they do not have their cell phones or when the internet is unavailable. A contrast exists in the responses, with about 80% of the youth not involved indicating that they get anxious, while only 35% of the farming participants shared the same sentiments. Youths referred to the fact that technology can provide solutions to many problems; hence, they consider it to be crucial to stay relevant in this technologically driven society. Overall, it was evident that the respondents valued ICT and possibly rely on ICT to communicate and source

information. Fully exploring the role of ICT in influencing and triggering agricultural-related entrepreneurial activities, especially for youths, is thus vital.

Without access to information and markets, individuals are pushed away from the agricultural sector (Mulema et al., 2021), meaning that access to markets is a necessity for ensuring the participation of youth in agriculture or related economic activities, as confirmed by the findings of Henning et al. (2022b). Without markets, there are no incentives to maximise production, where the excess production can be sold for profit and thus contribute to the income of households (Machethe, 2004; Khapayi and Celliers, 2015).

### **4.3.3 Financial capital**

Financial capital refers to the financial resources that people use to achieve their livelihood outcomes (DFID, 1999; Kuipers, 2014). DFID (1999) argues that, of all the livelihood assets, financial capital is the one that is least available to the poor. More specifically, the evaluation of financial capital is concerned, amongst other things, with the availability of formal and informal financial service organisations, the services they provide and the conditions under which they operate, and the level of access to the services.

- *Sources of income*

Different sources of financial capital are available and consist of, for example, wages, savings, allowances, and pensions (Kuipers, 2014). Most rural households in South Africa receive their financial capital from a mixture of sources, such as salaries, wages, social grants, income from businesses, and pension remittances (Stats SA, 2012, as cited by Thamaga-Chitja and Morojele, 2014). The main various sources of income for the households of respondents are shown in Table 4.23 below.

Farmers, emerging farmers and smallholders mainly receive their financial capital from employment opportunities (labour market), self-employment, and social grants. Sinyolo et al. (2017a) state that most smallholder households in South Africa receive income from social grants. This shows the importance of social grants as a source of financial capital for smallholder farmers. Social grants are generally an important source of income in South Africa,

and there may be concerns that the grants might be a source that disincentives recipients from participating in economic activities (Sinyolo, Mudhara and Wale, 2016).

**Table 4.23: Sources of income for households involving respondents in the research areas**

Sources of income	Thaba Nchu		QwaQwa	
	Percentage of household	Estimated average total income*	Percentage of household	Estimated average total income*
Remittances	24.68	2 958.57 (9071.27)	22.22	2 393.10 (8 514.91)
Arts and craft	3.03	112.38 (820.52)	9.58	474.56 (3 494.83)
Permanent employment	9.09	3 879.94 (17 674.75)	13.41	6 234.48 (28 142.81)
Temporary employment	27.71	4 177.79 (14891.37)	29.50	2 990.50 (7 846.21)
Social grants	51.08	6 222.86 (9 063.31)	59.77	6 395.82 (8 241.15)
Crop income	19.05	1 603.17 (7 153.33)	26.82	3 036.25 (19 575.06)
Livestock	20.35	4 853.16 (22 086.52)	15.33	2 145.13 (9 144.28)

\*Standard deviations in brackets

**Source:** Research Survey

Previous research has considered the impacts of social grants in the non-agricultural sector (e.g. van den Berg et al., 2010; Ardington et al., 2016; Ranchhod, 2017). The results from this research are, however, inconclusive, with mixed results on the impact of social grants on participation in economic activities (Sinyolo et al., 2016). Some research has also been conducted on the impact of social grants in the rural and agricultural sectors (e.g. Neves et al., 2009; Sinyolo et al., 2016). This is also confirmed when the different sources of income shown in Table 4.23 above are considered, with social grants being indicated as the most prevalent source of income for the households.

Farming also plays an integral part in household income, with livestock (20.35%) and crops (19%) in Thaba Nchu. Livestock was found to be a less popular source of income in QwaQwa, with only 15.33% of households receiving income from the enterprise. Crop farming, on the other hand, is more popular, with 26.82% of households farming crops. From these results, it is seen that agriculture does have an important role to play in the income structures of

households. These results only show the income advantage of selling goods; they do not consider the benefit of agricultural production on household food availability and the opportunity costs of not needing to buy some food.

Another source of financial capital is off-farm income. Bezu and Holden (2014) refer to several researchers who note that additional income is sourced from non-farm activities. In cases where the farmers do not possess any land, it serves as their only source of income. Other popular sources of income from the survey in the Free State include remittances, and permanent and temporary employment. Miscellaneous jobs – piece or part-time jobs (one-day temporary jobs) – were indicated in the QwaQwa study area as a rather important source for around 29.5% of the households.

- *Savings*

The income that is received from the various sources by the households should also be sufficient to ensure that savings can be accumulated, which could then be used in challenging times (Mumuni and Oladele, 2016). This is to ensure that there are funds available to the household to fall back on when they have no means of income or limited income that is not sufficient to provide for the household. Respondents were asked in the survey as to whether they had any form of savings, and the results shown in Table 4.24 indicate that less than half of the respondents had any form of savings at the time of the interviews.

**Table 4.24: Savings including Formal, informal or a combination**

Current savings	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq.	Percent	Freq.	Percent
No	183	79.2	161	61.7	344	70
Yes	48	20.8	100	38.3	148	30
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

**Source:** Research Survey

A rather bleak picture is formed with close to 80% and more than 60% of respondents in Thaba Nchu and QwaQwa, respectively, indicate that they do not have any savings. This clearly shows that around two out of three youths have no savings, which could have rather significant implications for their aspirations of improving their livelihoods. When the income received

may not be sufficient for day-to-day living, households would rely on available savings. This also indicates that the capacity of the surveyed households to save money for unexpected events in the future is somewhat limited. A lack of access to financial capital is a significant constrained experienced by emerging and smallholder farmers in South Africa (Jordaan, 2012). Access to capital is also a problem experienced by most farmers. Ndlela (2015) also supports the view that small-scale farmers have less money and that their access to credit is more limited than for large-scale farmers. Emerging or smallholder farmers also have trouble accessing financial institutions (Senyolo, 2007) and, in effect, credit capital.

- *Credit*

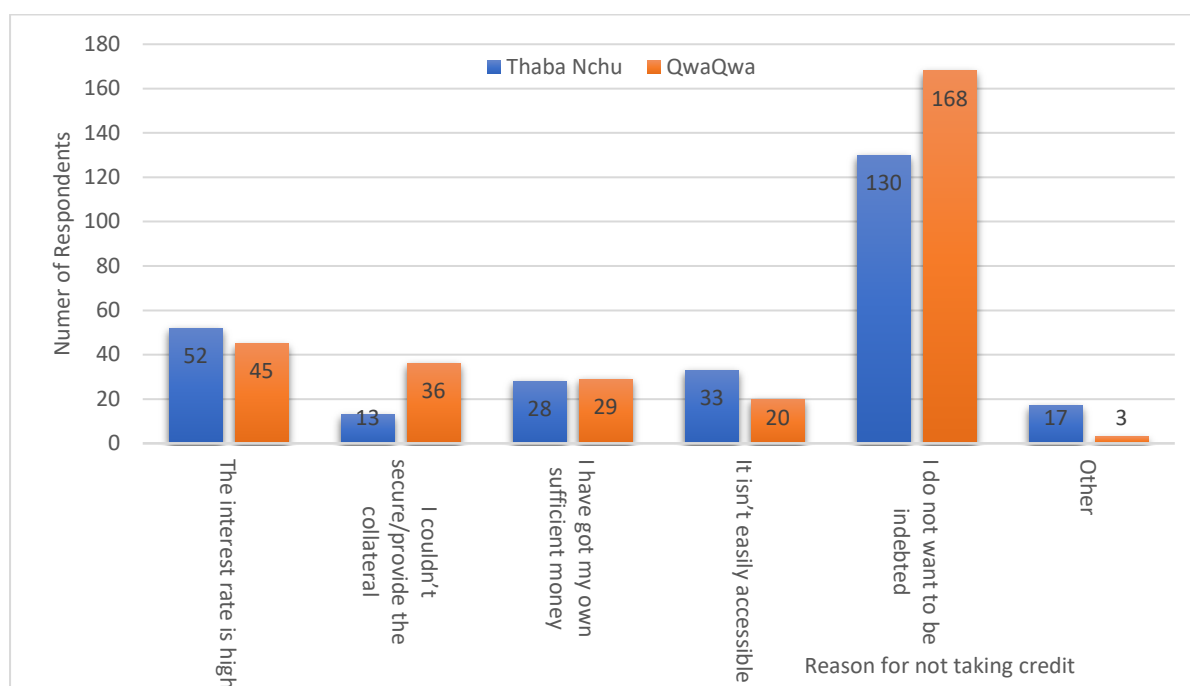
With limited savings, credit is a source often used to supplement farming income (Das, Senapati and John, 2009) or to supplement other sources of income to increase the overall income pool of the household. For smallholder/emerging farmers, not only is access to financial institutions limited, the process of credit applications also has a significant influence on their access to credit capital (Aliber and Hall, 2012; Chauke et al., 2013). Factors or problems associated with the credit application process that make it difficult for these farmers include complicated procedures, collateral requirements, long waiting periods, and payment waiting times (Senyolo, 2007; Manganhele, 2010; Kiplimo et al., 2015). Farmers require money before or immediately after they have harvested their crops to ensure that they can purchase inputs for their next production cycle. When there is insufficient income or savings, they rely on credit to make these purchases (Saqib, Kuwornu, Panezia and Ali, 2018). Credit is one source of financial capital used by commercial and smallholder farmers in the agricultural sector to finance their operations. With the respondents thus far indicating that they have limited sources of formal income and savings, the expectation was that their access to credit would be limited. This expectation was confirmed, with less than 10% of the respondents indicating that they had applied for and received access to credit during the last 12 months before their respective interviews, as shown in Table 4.25.

**Table 4.25: Respondents who have applied for credit in the last 12 months**

Credit	Thaba Nchu		QwaQwa		Combined	
	Freq	Percent	Freq.	Percent	Freq.	Percent
No	213	92.2	250	95.8	463	94
Yes	18	7.8	11	4.2	29	6
<b>Total</b>	<b>231</b>	<b>100</b>	<b>261</b>	<b>100</b>	<b>492</b>	<b>100</b>

Source: Research Survey

Further details reveal that the respondents who indicated that they had not applied for credit in the last 12 months did not want to become indebted, as this can be seen in Figure 4.8 below. The data reveal that most respondents indicated this as a reason for not considering or taking on debt. Other reasons include the point that credit is not easily accessible and that they are not able to provide sufficient collateral. These are all aspects identified and mentioned in literature as being problems experienced by smallholder farmers in accessing credit. The lack of access to financial resources, especially affordable financial resources, is a constraint faced by the respondents in the research areas.



**Figure 4.8: Reason for not accessing credit or applying for credit**

Source: Research Survey

For youth to adopt the rural agricultural sector as a place of economic endeavour, it is essential to consider credit, savings, prices, market constraints and plot characteristics as factors that

could influence the behaviour of the youth in their adoption decisions (Pattanayak et al., 2003). The first few factors mentioned have been included in the discussion so far, and it was shown that some of the youth do have access to land, but that rainfall (availability of water) is a concern because of fluctuating weather conditions experienced in South Africa. Regarding financial resources, the households of which the respondents form part depend on social grants as a source of income. At the same time, permanent and temporary employment are also somewhat popular sources of income in these households. Access to credit or the uptake of credit is very low, and the main reason the youth provided was that they did not want to become indebted.

#### **4.4 Summary**

The focus of Chapter 4 was to evaluate the capital endowment of youth in relation to Human, Social, Natural, Physical and Financial assets. The findings show that there were slightly more respondents who are not currently involved in the agricultural sector. The respondents who are involved in the sector mostly participate through or as part of a family activities, followed by full-time involvement as members of cooperatives, and lastly, full-time involvement as an individual. There are thus very few of the respondents who are involved full-time in the agricultural sector, and even those who are involved part-time in the sector do not see it as a full-time occupation. The majority of the respondents have obtained their matric, and have thus finished school, with a few furthering their education at tertiary level. Participation in formal and informal training, and receiving assistance from support programmes, is lacking in the research areas. Very few of the youth access any training or are participants in programmes developed to enhance their role in agriculture. Indigenous knowledge was shown to have a role for some of the youth, but mostly to complement new methods. The indication is that youth have adapted or are starting to adapt new methods in the agricultural sector, while incorporating indigenous knowledge where and when required. Most of the respondents indicated that they were unemployed, which has an impact on their household income. The income they do receive is consequently from temporary employment, which is not consistent, rendering the majority of the household dependant on grants. The main source of their income is not from agricultural enterprises, but mostly from non-farming sources. Social grants were indicated as being an essential source of income for the rural households of the respondents.



Participation by youth in agricultural-related initiatives, such as training and support programmes, is limited. More than 50% of the youth respondents have indicated that they do have access to or own land in the respective regions. However, the access is predominantly through PTO rights, with very few having secured land rights. Land tenure and security is thus an aspect that requires attention for attracting youth towards participating in the agricultural sector. Access to water, specifically rain, was found to be variable and inconsistent, as reported by the respondents. This means that they tend to use physical infrastructure, municipal water infrastructure, to complement their water needs for production purposes, as needed. Respondents mostly own general household assets such as cell phones (smart and non-smart), radios and televisions. Computers and tablets are also owned, although to a lesser extent. Ownership and access to agricultural production assets are very restricted; most of the respondents did not have access to the productive assets needed to enhance their ability to produce agricultural products.

The chapter shows that the respondents are poorly endowed with resources needed to enhance their participation in the agricultural sector, whether primary agriculture or value-adding activities along value chains are considered. Interventions are required to assist the youth to become attracted and involved in the sector by making use of the resources that they already have access to.

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**Overview**

Chapter 4 provided an indication of the resource endowment of youth and their households in relation to Human, Social, Natural, Physical and Financial assets. Chapter 5 extends the asset endowment of youth by considering what are referred to as endogenous factors. The chapter provides an overview of the psychological capital and entrepreneurial spirit of the youth by using behavioural economics. The chapter begins with measuring the psychological capital of the youth, followed by their entrepreneurial characteristics. The chapters start with a short introduction, followed by youth endowment with psychological capital. The psychological capital is followed by indications of youth endowment regarding entrepreneurial traits, and finally, a summary of the findings on, and implications for, determining development paths for youth towards their participation in the agricultural sector.

**5.1 Introduction**

Two youths working in the same village, having a similar resource endowment (according to the five forms of capital from the SLF) and faced with similar institutional and infrastructural constraints, might adopt different strategies, calling for various different interventions, and would achieve different livelihood outcomes. While some take advantage of opportunities when they arise, others do not. While some wait and expect the government to do everything for them (triggered by dependency syndrome, among others), others make their own effort and decide on their destiny (internal locus of control), acting and mobilising the available resources. While some are confident in farming as a means of supporting household livelihoods, others are not. While some give up easily when faced with challenges, others do not. One often encounters such differences among small-scale farm producers in rural areas with similar resource endowments. These differences are referred to as endogenous attributes of individuals, and have not received equal attention in research, when compared with exogenous factors (Iwara et al. 2021), although research has shown that these endogenous factors do indeed

contribute towards decision making and performance of businesses (see for example Dossou et al., 2021; Oseifuah, 2010; Chindoga and Fatoki, 2011; Lebusa 2011).

The performance of a business is not only connected to the abilities of individuals – the individual's goals, self-efficacy, passion, and vision are also important factors that need to be considered (Luthans et al. 2004). Positive psychological capital (Psycap) consists of four measurable states. The advantage is that these states can be further developed and managed in the workplace to ensure better performance (Luthans et al., 2004). The four states of Psycap comprise Confidence (Self-efficacy), Hope, Optimism, and lastly, Resilience. When these four states are combined, the term used to describe them is *psychological capital* or *Psycap* (Luthans et al., 2004; Luthans et al., 2007a). Investing in or gaining a better understanding of these states provides an opportunity to improve these states. The hope is that, by enhancing the Psycap states, the business would ultimately be more effective.

Hadebe (2016) mentions that psychological capital is essential for smallholder farmers to possess, as it would assist them during the entrepreneurial process. With higher levels of psychological capital, youth are expected to have increased potential and determination to see the entrepreneurial process through and to build a successful farming business (Hadebe, 2016). This greater determination could contribute to the youth being successful or more successful farmer entrepreneurs, who manage their farming business through the various phases of the entrepreneurial process (Hadebe, 2016, referring to McElwee, 2005). Despite the indications that Psycap and entrepreneurial characteristics are important, Mmbengwa, Qin and Nkobi (2021) state that youth entrepreneurship has received limited attention in relation to smallholder agriculture, while Iwara et al. (2021) indicate that the support provided to small enterprises in South Africa is focused on exogenous factors, but does not consider the endogenous factors. This suggests that there is a need to understand the Psycap and entrepreneurial characteristics of youth in rural areas so that guidance can be provided for inclusion in strategies and policies so that youth can be included in rural economies.

## 5.2 Measuring the Psychological Capital of Youth

### 5.2.1 Youth endowment with psychological capital

To gain a better understanding of the current levels of Psycap, the questionnaire included several scenarios in each of the four dimensions to get an indication of the behaviour of the youth when faced with the respective scenarios. The youth indicated their behaviour by using a Likert scale between “1” (“strongly disagree; very unlikely”) and “5” (“strongly agree; very likely”). The responses of the youth are divided between those involved in farming or other agricultural activities and those not currently involved in any farming or agricultural-related activities, to provide an overview of whether any differences exist between the two groupings.

- *Self-confidence (Self-efficacy)*

Self-confidence is an important aspect, as it influences a person’s internal drive to ensure enough effort is made in succeeding with specific challenges (Luthans et al., 2004). It can be expected that, if a person possesses lower levels of self-confidence, the drive to continue with certain challenges would be derailed (Wale and Chipfupa, 2018). Table 5.1 below shows the indicated behaviours of youth to the scenarios of self-confidence. The respondents were presented with two scenarios:

Self-confidence (SE) 1 – *Suppose the government approaches you with a deal of a farm with inputs provided and you’re required to form and lead a cooperative, consisting of youth, who will be funded under this support.*

Self-confidence (SE) 2 – *Suppose you are a member of a youth cooperative in your area, and you attend monthly meetings. In these meetings, you do not always agree with some of the decisions taken by the leadership, to what extent are you most likely to choose.*

The results for the first scenario show that both groups of youth show greater self-confidence and belief in their abilities to form and lead a cooperative, if required. Almost all the respondents indicated that they would have accepted the deal, which shows a great level of belief in their abilities.

When the second scenario is considered, it shows that the youth are more divided in their confidence in opposing leaders in their community. Most of the youth who are not currently

involved in the sector gave more substantial indications that their behaviour would be to oppose the views of the leader (Thaba Nchu – 74%; QwaQwa – 62%), whereas the behaviour of the youth involved in the sector gave indications that their behaviour would oppose the leader (Thaba Nchu – 52%; QwaQwa – 56%). Given the indications that youth would oppose the leader's view, as it is against their beliefs, shows a strong indication of their self-belief. This can be seen in the large number of youths who stated that they disagree with the statement, which indicated that the views of a leader are accepted to avoid conflict and out of respect. The data again show that both groupings have very similar reactions to the scenario provided as regards their self-confidence.

**Table 5.1: Distribution of respondents agreeing to statements determining their state of self-confidence**

Self-efficacy statements	Involved in farming or agricultural activities					Not currently engaged in agricultural activities				
	1	2	3	4	5	1	2	3	4	5
<b>Thaba Nchu</b>										
SE 1 - Accept the deal?	9.38	6.25	4.69	36.72	42.97	12.62	2.91	1.94	33.01	49.51
SE 1 - Ask them to find someone else?	32.81	35.16	9.38	15.63	7.03	42.72	33.98	3.88	9.71	9.71
SE 1- Ask them to wait because you still want to think about it?	29.69	29.69	16.41	14.84	9.38	30.10	33.01	9.71	9.71	17.48
SE 2 - Oppose the leader’s opinions that are not aligned with your beliefs?	15.63	14.84	17.19	29.69	22.66	12.62	5.83	7.77	41.75	32.04
SE 2 - Agree with the leaders to avoid conflict?	27.34	26.56	18.75	21.88	5.47	40.78	27.18	8.74	18.45	4.85
SE 2 - Agree with the leader to show respect for their position?	27.34	20.31	19.53	20.31	12.50	34.95	23.30	12.62	21.36	7.77
<b>QwaQwa</b>										
SE 1 - Accept the deal?	6.16	4.79	3.42	37.67	47.95	2.61	6.96	3.48	42.61	44.35
SE 1 - Ask them to find someone else?	42.47	30.82	5.48	11.64	9.59	46.09	31.30	7.83	11.30	3.48
SE 1- Ask them to wait because you still want to think about it.	39.73	25.34	8.22	20.55	6.16	39.13	25.22	13.04	17.39	5.22
SE 2 - Oppose the leader’s opinions that are not aligned with your beliefs?	15.07	18.49	10.27	32.19	23.97	9.57	17.39	11.30	31.30	30.43
SE 2 - Agree with the leaders to avoid conflict?	33.56	27.40	10.96	19.86	8.22	37.39	25.22	12.17	22.61	2.61
SE 2 - Agree with the leader to show respect for their position?	34.25	23.29	10.96	21.92	9.59	36.52	21.74	15.65	19.13	6.96

Scale 1 = Strongly disagree; 2 = disagree; 3 = Neutral; 4= Agree; 5 = Strongly agree

**Source:** Research survey

- *Hope*

As with self-confidence, hope also plays an important part in succeeding with business opportunities. Hope exerts the influence to ensure desirable work attitudes (Luthans et al., 2007b), which means that where hope exists, people may be willing to work harder. Land has a very important role to play in agriculture, and without access to land, the youth will not be able to establish a farming business to any great extent. Without hope, individuals might lose the willingness to explore for and seek opportunities to enhance their own livelihoods. Access to land is therefore a very important aspect to consider in the establishment of farming-related businesses. When land is not accessible, aspirant youth farmers may lose hope and withdraw from the agricultural sector and seek opportunities in other sectors, or withdraw totally from being economically active.

To determine the level of hope among youth, a question related to access to land was used to determine their behaviour. The respondents were asked how they would overcome the current problem of youth accessing land in South Africa under the ‘Hope 1’ and ‘Hope 2’ scenarios, which relate to how the youth believe they would be able to overcome current constraints such as lack of access to credit and overcoming poverty. The different options for each situation are shown in Table 5.2 below.

*Hope 1 – Youth in South Africa face challenges in trying to access land. Let’s say you are one such youth who is interested in farming but facing challenges in trying to access the land. To solve the problem, to what extent are you most likely to do the following:*

*Hope 2 – Young people/youth often face challenges with unemployment, lack access to capital, lack of access to information and poverty, among others. Given the possibility of any of these constraints existing, to what extent do you believe that:*

The data in Table 5.2 below show that the respondents in Thaba Nchu and QwaQwa are willing to explore alternative options to gain access to lands. These alternatives include engaging with family and traditional leaders. Interestingly, it is not only respondents currently involved in the sector, but also those not involved in farming or other agricultural-related activities, who are active in their hope to access land.

**Table 5.2: Distribution of respondents agreeing to statements determining their state of Hope**

Hope statements	Involved in farming or agricultural activities					Not currently engaged in agricultural activities				
	1	2	3	4	5	1	2	3	4	5
<b>Thaba Nchu</b>										
Hope 1 - Engage your family so that they parcel out to you a piece of land	6.25	9.38	8.59	43.75	32.03	7.77	8.74	15.53	38.83	29.13
Hope 1 - Talk to traditional leaders to check for the possibility of renting land	15.63	10.94	17.19	37.50	18.75	7.77	14.56	17.48	35.92	24.27
Hope 1 - Do nothing and hope that there will be available land soon	45.31	23.44	10.16	13.28	7.81	34.95	31.07	14.56	9.71	9.71
Hope 2 - There is no possibility of resolving these constraints.	28.91	26.56	19.53	16.41	8.59	32.04	21.36	10.68	21.36	14.56
Hope 2 - You still have the potential to work through the challenges and turn things around.	7.03	3.91	7.81	44.53	36.72	6.80	9.71	6.80	39.81	36.89
Hope 2 - The government or a relative can address the issues.	7.81	3.91	23.44	35.94	28.91	7.77	13.59	20.39	33.01	25.24
<b>QwaQwa</b>										
Hope 1 - Engage your family so that they parcel out to you a piece of land	8.22	11.64	4.79	46.58	28.77	5.22	9.57	7.83	45.22	32.17
Hope 1 - Talk to traditional leaders to check for the possibility of renting land	8.90	12.33	6.85	41.78	30.14	11.30	13.04	11.30	46.09	18.26
Hope 1 - Do nothing and hope that there will be available land soon	47.95	28.08	5.48	8.90	9.59	40.00	34.78	8.70	9.57	6.96
Hope 2 - There is no possibility of resolving these constraints.	31.51	22.60	8.22	23.97	13.70	25.22	24.35	13.91	26.09	10.43
Hope 2 - You still have the potential to work through the challenges and turn things around.	8.90	6.16	2.74	50.68	31.51	6.96	8.70	6.96	45.22	32.17
Hope 2 - The government or a relative can address the issues.	8.22	7.53	15.75	36.30	32.19	10.43	9.57	17.39	38.26	24.35

Scale 1 = Strongly disagree; 2 = disagree; 3 = Neutral; 4= Agree; 5 = Strongly agree

**Source:** Research survey



Both groupings indicated that they are unlikely to just sit back and hope that land will become available. This shows that the youth have the ambition to succeed in their struggle to gain access to land and overcome other constraints, which is part of the foundations of hope, as discussed in Luthans et al. (2007b). The youths' potential behaviour indicates a higher level of hope, in that they believe there is a solution to problems and they are willing to work towards these solutions.

- *Optimism*

Individuals with higher levels of optimism may see unfavourable situations as temporary, and continue to work towards achieving their goals. In comparison, individuals with lower levels of optimism may see the setbacks as permanent and throw in the towel (Luthans et al., 2007b). Optimism is essential to consider for ensuring the following through of establishing or maintaining farming or any other business. As businesses go through cycles, and there may be times when the business is going through unprofitable times, a positive person would see this as a temporary setback and work towards solutions for the situation. Negative individuals, or those with lower levels of optimism, would perhaps see this as a permanent situation and quit their businesses. This was the scenario presented to the youth as Optimism 1, while the second scenario (Optimism 2) considered whether earning money by selling their business in difficult times would be more attractive than being optimistic that they could turn their business around and continue.

*Optimism 1 – Let's say you have been running your business for some time and you are familiar with the daily responsibilities of your business. Lately, however, you have been making no profit. To what extent are you most likely to:*

*Optimism 2 – Suppose that you own a farming/agriculture related business that has been struggling and someone approaches you attempting to buy the business for a considerable amount of money. Given this scenario or situation, what will you most likely do?*

The data are shown in Table 5.3 below and show that the respondent youths are confident in their ability to improve their current situations and continue with their businesses during difficult times. Therefore, the youth in the study region show relatively high levels of optimism, and not only those already involved in various ways in the agricultural sector, but also the youth not currently involved in the sector. It is not only essential for the youth to be optimistic about their abilities to push through difficult situations, they must also have the resilience to work through them.

**Table 5.3: Distribution of respondents agreeing to statements determining their state of optimism**

Optimism statements	Involved in farming or agricultural activities					Not currently engaged in agricultural activities				
	1	2	3	4	5	1	2	3	4	5
<b>Thaba Nchu</b>										
OPTIMISM 1- Continue with the business and see these failures and setbacks as temporary	11.72	14.06	10.16	39.06	25.00	13.59	9.71	8.74	28.16	39.81
OPTIMISM 1- Invest less of your time on your business and seek other opportunities	23.44	30.47	11.72	22.66	11.72	33.01	27.18	15.53	16.50	7.77
OPTIMISM 1- Quit the business and find something else to do	44.53	29.69	10.94	8.59	6.25	39.81	35.92	5.83	7.77	10.68
OPTIMISM 2- Sell the business	42.19	28.13	11.72	8.59	9.38	35.92	29.13	10.68	5.83	18.45
OPTIMISM 2- Sell a part of the business	28.91	20.31	17.97	24.22	8.59	29.13	21.36	14.56	24.27	10.68
OPTIMISM 2- Refuse to sell and continue with the business.	16.41	13.28	17.19	27.34	25.78	9.71	16.50	13.59	23.30	36.89
<b>QwaQwa</b>										
OPTIMISM 1- Continue with the business and see these failures and setbacks as temporary	5.48	4.79	3.42	50.68	35.62	5.22	10.43	4.35	47.83	32.17
OPTIMISM 1- Invest less of your time on your business and seek other opportunities	34.25	32.19	12.33	15.07	6.16	33.04	29.57	6.96	22.61	7.83
OPTIMISM 1- quit the business and find something else to do	52.05	33.56	3.42	6.16	4.79	42.61	30.43	9.57	11.30	6.09
OPTIMISM 2- Sell the business	53.42	29.45	4.11	4.11	8.90	37.39	30.43	6.96	15.65	9.57
OPTIMISM 2- Sell a part of the business	40.41	21.23	8.22	21.92	8.22	24.35	13.91	11.30	40.00	10.43
OPTIMISM 2- Refuse to sell and continue with the business.	13.01	9.59	8.90	33.56	34.93	12.17	21.74	11.30	29.57	25.22

Scale 1 = Strongly disagree; 2 = disagree; 3 = Neutral; 4= Agree; 5 = Strongly agree

**Source:** Research Survey

- *Resilience*

The ability to bounce back from difficult situations is a very important ability that any business owner, manager, or individual should possess in ever-changing business environments (Luthans et al., 2004). It will not always go your way in the business environment; it is important to have the knowledge and willpower to overcome those setbacks by seeing them as temporary, come up with plans, and continue to improve and work through the situation.

*Suppose your application for financial support from a bank or funding agency has been rejected multiple times? To what extent are you most likely to:*

*Making profit is one of the reasons why people start businesses. Suppose you're running a business and you have been making losses for the past three years? To what extent are you most likely to:*

The results show in Table 5.4 below that the youth will not just accept defeat, as they are not willing to give up. They are willing to persist in their quest to achieve their aims by exploring different options that are available.

**Table 5.4: Distribution of respondents agreeing to statements determining their state of resilience**

Resilience statements	Involved in farming or agricultural activities					Not currently engaged in agricultural activities				
	1	2	3	4	5	1	2	3	4	5
<b>Thaba Nchu</b>										
Resilience 1 - Give up and forget about the business?	53.91	29.69	7.03	4.69	4.69	49.51	36.89	4.85	6.80	1.94
Resilience 1 - Consult your peers already in business to find out how they managed to obtain funding	3.91	5.47	10.94	41.41	38.28	12.62	2.91	6.80	36.89	40.78
Resilience 1 - Send your application to a different financial institution?	6.25	5.47	7.81	35.16	45.31	4.85	4.85	8.74	38.83	42.72
Resilience 2 - Give up and forget about the business?	53.91	30.47	3.13	5.47	7.03	42.72	32.04	10.68	9.71	4.85
Resilience 2 - Continue with the business and consult a business advisor/peer	7.81	4.69	6.25	38.28	42.97	13.59	4.85	5.83	39.81	35.92
Resilience 2 - Continue with the business and change the way you run your daily business activities?	8.59	5.47	10.16	32.81	42.97	8.74	3.88	8.74	33.98	44.66
<b>QwaQwa</b>										
Resilience 1 - Give up and forget about the business?	50.68	34.93	4.79	6.16	3.42	46.09	34.78	6.96	6.96	5.22
Resilience 1 - Consult your peers already in business to find out how they managed to obtain funding	6.16	6.85	6.16	47.95	32.88	6.96	10.43	4.35	45.22	33.04
Resilience 1 - Send your application to a different financial institution?	13.01	8.90	6.16	38.36	33.56	6.09	4.35	4.35	47.83	37.39
Resilience 2 - Give up and forget about the business?	54.79	30.82	3.42	5.48	5.48	46.09	40.87	2.61	6.09	4.35
Resilience 2 - Continue with the business and consult a business advisor/peer	9.59	5.48	1.37	45.21	38.36	6.96	9.57	2.61	48.70	32.17
Resilience 2 - Continue with the business and change the way you run your daily business activities?	6.85	2.74	3.42	41.10	45.89	9.57	2.61	4.35	53.91	29.57

Scale 1 = Strongly disagree; 2 = disagree; 3 = Neutral; 4= Agree; 5 = Strongly agree

**Source:** Research survey

It was also evident from conversations and other feedback that the youth are willing to explore alternative options to improve their current situations, and this might be a contributor to their willingness to persist. The indicated behaviour is a good indicator of their resilience, and it can be seen in Table 5.4 above that the states of resilience of both the respondents involved and not involved are high. This result provides a good indication that they are willing to put in the time and effort needed to succeed in what they have set out to achieve. Entrepreneurs are often seen as people who are willing to put in the time and effort needed, and persist towards achieving their goals, while seeing failures as temporary setbacks that can be overcome.

### **5.3 Youth entrepreneurial characteristics**

It has generally been noted that one of the main aims in business is the realisation of maximum profits, and that the decisions in business are therefore made with this aim in mind. However, the decision-making of smallholders and emerging farmers is not necessarily aimed towards maximising profits, as stated by Wale and Chipfupa (2018). This means that entrepreneurship concerning smallholder farming should consider the point that these farmers primarily produce for their household requirements and not for profits. Entrepreneurship is thus defined by the authors (p222), relating to smallholder farming, “as the willingness and ability of an individual or group of farmers to take advantage of available opportunities and resources (including indigenous knowledge), given the prevailing constraints”. The definition used provides the flexibility to consider the youth and their entrepreneurial ability, specific to their given environment, which may not necessarily mean profit maximisation because of certain constraints, such as needing to first provide enough food for their household – yet, they can still be deemed as entrepreneurial, given the broader definitions and characteristics discussed in Chapter 2.

#### **5.3.1 Entrepreneurial Characteristics**

To better understand the entrepreneurial characteristics of the youth, they were presented with specific scenarios and requested to indicate their potential behaviour. The scenarios were structured to identify possible behaviours about risk-taking, efficiency and profitability, embracing change, opportunity-taking, determination, pro-activeness, independence, innovation and creativity, locus of control, and goal orientation.

- *Risk-taking, embracing change and opportunities*

Wale and Chipfupa (2018) mention that smallholder farmers are risk averse, meaning they are more likely to remain in their current situations than to make certain adjustments. The youth were presented with two scenarios that endeavoured to capture their risk preferences. The first was an investment opportunity, where they had an equal chance of doubling their money or losing their investment. At the same time, the second involved an investment with a guarantee of return on the given investment. Respondents were asked to indicate on a five-point scale how likely they would be to choose each option, where 1 was ‘very unlikely’, and 5 was ‘very likely’. Data from the survey show that respondents currently involved in agricultural activities are divided. There is almost an equal percentage of youth in Thaba Nchu who are unlikely to consider the riskier option (38%) than those who are likely to accept the investment (35%). When the youth in Thaba Nchu not involved are considered, it is evident that they are unlikely (65%) to accept this riskier option, with only 26% being likely to accept this investment, as shown in Table 5.5 below. Youth in QwaQwa were more hesitant to accept the riskier investment option, with 53% (involved and not currently involved) indicating that they were unlikely to invest.

**Table 5.5: Distribution of respondents representing their behaviours about riskier investments (percentages)**

Risk-taking	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Financial constraint is one of the major challenges facing young entrepreneurs. Suppose there is an investment introduced to you with two options. To what extent are you likely to:										
<b>Thaba Nchu</b>										
Choose an investment with 50% chance of losing everything and 50% chance that your money will be doubled?	19	19	26	6	29	39	26	9	26	0
Choose an investment with 100% guarantee that your money will generate a 15% return on investment?	13	6	13	23	45	4	9	0	43	43
<b>QwaQwa</b>										
Choose an investment with 50% chance of losing everything and 50% chance that your money will be doubled?	31	22	13	16	19	41	12	18	18	12
Choose an investment with 100% guarantee that your money will generate a 15% return on investment?	22	3	3	9	63	29	18	6	0	47

**Source:** Research survey

When the less risky option is considered, it becomes apparent that the respondents are much more likely to accept this deal, which guarantees their investment. These findings correspond with those of Wale and Chipfupa (2018), who stated that smallholder farmers are risk-averse and are hesitant to take on risky options. It is demonstrated that the youth do not have an appetite for risky investments and would prefer options where the outcomes are better known or predictable.

This behaviour is the opposite of the expectation for entrepreneurs, who are willing to take on more risks (Raşcă and Deaconu, 2018). When policies and strategies are considered for attracting youth to the agricultural sector, regarded should be given to developing programmes that initially provide little risk. Youth should then be taught how to manage and adapt to risk through courses and programmes that would make them more comfortable towards risk.

Among the many different risks that an entrepreneur may be faced with is adapting to growth and change (Raşcă and Deaconu, 2018, citing Stevenson and Jarillo, 1990). As the agricultural environment in which the youth operate or would operate is uncertain, they must be open and accept that change, and adaptations are required over time to ensure the success of their endeavours. Youth indicated that they would embrace the new technology, regardless of whether they were involved or not involved in farming or other agricultural economic activities (Table 5.6).

**Table 5.6: Distribution of respondents representing their behaviour about embracing change by switching their traditional methods to new technology (percentages)**

Embracing change/growth	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Farmers are introduced to new modern methods of operating their businesses that are different from their traditional methods. For example, they are introduced to modern inputs like genetically improved seeds, artificial insemination, new packaging machinery, computers for record keeping, etc. Suppose you are a young farmer who has been using the traditional method, To what extent are you likely to:										
<b>Thaba Nchu</b>										
Switch to modern technology?	13	3	10	19	55	17	0	9	22	52
Continue with the traditional methods?	19	23	26	13	19	35	30	17	4	13
<b>QwaQwa</b>										
Switch to modern technology?	34	6	6	13	41	24	6	12	18	41
Continue with the traditional methods?	31	0	6	16	47	35	0	12	12	41

**Source:** Research Survey

New technology requires a person to adjust and adapt to change, and forces the person to manage certain situations in their business. Introducing new technology can improve the efficiency and profitability of a business, although adopting new technology also means that employment opportunities might decline as a result.

In a second scenario, the youth were presented with a case where they oversee a labour-intensive industry, and a unique opportunity has come to light to increase profits by adopting new technology. In adopting the latest technology, the business must let go of several employees. The respondents had to choose between adopting the new technology and increasing their profit, or staying with the status quo and ensuring the employees of their current employment. It was found that most (49%) of the respondents in Thaba Nchu, who were involved in farming or other agricultural economic activities, would be likely to adopt the new technology and retrench their workers, while 35% of the respondents who are not currently involved would also do so. However, the youth not engaged in Thaba Nchu are more intent on considering their current workforce and forgoing the advantages of adopting the new technology. The results regarding QwaQwa are different, where most of the youth, those involved and uninvolved, indicated that their likely behaviour would be to not adopt the latest technology and would instead continue with their labour-intensive production systems.

The results for improving the efficiency and profitability of the business show that the youth are conscious of the human aspect in their decision-making. During the fieldwork, it became evident that some youth would accept that they could make more money by accepting and adopting the new technology. Still, owing to the high unemployment levels in their region, they chose the labour-intensive option, and the behaviour of the youth thus illustrates their sense of social responsibility in their communities.

One of the popular traits associated with being an entrepreneur is the ability to spot and grab an opportunity. Different views of entrepreneur and entrepreneurship range from introducing something completely new (Schumpeter, 1942) to adjusting existing products by introducing improvements to accommodate market demands and forecasts (Von Hayek, 1937). Kirzner (1973) combines these views when he mentions that the entrepreneur explores previously unexplored opportunities by adjusting current products or introducing a new product. From these discussions, the entrepreneur takes advantage of a chance in different ways.



**Table 5.7: Distribution of respondents representing their behaviours about efficiency and profitability by switching from a labour-intensive operation to modern technology (percentages)**

Efficiency and profitability	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Suppose you are running a labour-intensive business and an opportunity arises for you to make more money through adopting new equipment/technology. However, taking this route means laying off a significant number of your employees. To what extent are you likely to:										
<b>Thaba Nchu</b>										
To adopt the new technology and retrench most of your workers?	23	3	26	26	23	9	26	30	26	9
Continue being labour intensive and forego the potential profits	10	16	26	16	32	9	9	39	22	22
<b>QwaQwa</b>										
To adopt the new technology and retrench most of your workers?	44	13	9	6	28	35	6	12	18	29
Continue being labour intensive and forego the potential profits	13	6	9	34	38	18	6	12	24	41

**Source:** Research survey

Becoming an entrepreneur can be associated with two factors, being ‘push’ and ‘pull’ factors. Push factors are associated with an individual having no alternative options and being forced to become entrepreneurial. This may be attributed to cases such as unemployment or frustration with the current employment. Pull factors of entrepreneurship arise when an individual sees an opportunity and is willing to leave their current position and explore the identified opportunity (Niemann and Nieuwenhuizen, 2009). The respondents were presented with a case that represents pull factors of entrepreneurship: they are in a stable job and identified a business opportunity in their community. To determine whether the respondent would take advantage of the opportunity, reject it or partner with someone and keep the current employment, they were requested to rank these options in terms of how likely they would venture into each one. The majority indicated that they would be less likely to quit their job and pursue new opportunities (shown in Table 5.8). This was similar for both groups. However, instead of missing out on the opportunity, they would partner with someone to ensure they do not miss out on it. The results indicate the importance of networks and relations with other individuals. It would be very important to ensure that someone trustworthy is partnered with, who has the

same work ethic and determination to ensure the optimal advantage of the opportunity. Furthermore, the results also correspond with the earlier indication that youth are risk averse, as they would take steps to retain their current employment. This means that they would keep their current income source to ensure their livelihood, but would attempt to improve by taking some risks to improve their current situation.

The respondent youth believe they would persist towards achieving their objective, rather than throwing in the towel and giving up on their goals. This could also perhaps link with an internal belief in their own abilities, that they would be able to achieve success by continuing, rather than giving up. Locus of control refers to how an individual believes the outcome of an event is influenced. Internal locus of control is when one believes the outcome is within one's control, and external locus of control is when the belief is that other factors outside the power of the individual decide the outcome of the event (Rotter, 1966).

**Table 5.8: Distribution of respondents representing their behaviours about consideration of available opportunities (percentages)**

Taking advantage of an opportunity	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Suppose you have a stable job with great benefits and realize a business opportunity in your community, To what extent are you most likely to:										
<b>Thaba Nchu</b>										
Quit the job and pursue the business opportunity.	29	29	3	6	32	39	17	22	4	17
Continue with your job and ignore the opportunity	39	23	10	13	16	43	26	9	13	9
Partner with people and utilize the opportunity while working	6	10	16	16	52	4	0	4	26	65
<b>QwaQwa</b>										
Quit the job and pursue the business opportunity.	53	16	6	6	19	59	18	6	6	12
Continue with your job and ignore the opportunity	50	19	9	9	13	18	29	24	12	18
Partner with people and utilize the opportunity while working	28	13	13	22	25	18	12	6	29	35

**Source:** Research survey

- *Determination, persistence, locus of control, problem solving and innovativeness*

Entrepreneurs have a particular drive to be successful in terms of the goals that they have set out for themselves (goal-orientated) (Singh, 2013). Persistence is an important aspect related to entrepreneurs' need for achievement, which means doing something better in a shorter time than before (Hansemark, 2003). Wu, Matthews and Dagher (2007) confirm a positive relationship between the need for achievement and persistence. The results show that the youth show higher levels of persistence. Four options were presented, of which three can be associated with persistence to continue the quest to acquire finance (being persistent) and one that involves giving up. All the respondent youth indicated that they would persist and consider the different avenues available to obtain finance, rather than giving up and losing out on the opportunities (Table 5.9). Giving up and doing nothing (do nothing – opt out of the business) did not seem to be an option for the youth and approaching informal credit sources.

**Table 5.9: Distribution of respondents representing their behaviours about determination, persistence and problem solving (percentages)**

Being determined and persistent, problem-solving attitude	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Most youth intending to get into business do not meet the commercial banks' credit requirements to access financial resources. If you face this challenge, to what extent are you most likely to:										
<b>Thaba Nchu</b>										
Source finance from other formal organizations that offer financial support, e.g. microfinance organizations	19	6	10	23	42	26	4	9	39	22
Source finances from informal organisations like community cooperatives, stokvels and loan sharks	48	16	23	6	6	30	30	9	22	9
Source out money from family and friends.	13	13	10	32	32	4	26	30	30	9
Do nothing – opt out of business	63	13	13	3	7	43	30	13	0	13
<b>QwaQwa</b>										
Source finance from other formal organizations that offer financial support, e.g. microfinance organizations	41	0	6	25	28	18	6	24	6	47
Source finances from informal organizations like community cooperatives, stokvels and loan sharks	47	22	9	0	22	35	6	24	18	18
Source out money from family and friends.	28	0	3	38	31	18	6	24	24	29
Do nothing – opt out of business	34	0	53	0	13	53	6	41	0	0

**Source:** Own Survey

It is believed that individuals with an internal locus of control will be more attracted to make a success of an opportunity because of their belief in their abilities, rather than the influence of others (Mueller and Thomas, 2001). Rotter (1966) indicates that individuals with an internal locus of control will more likely venture into an entrepreneurial career owing to the belief that

they control the success of the planned entrepreneurial venture. The discussion shows that confidence in your abilities to succeed in a new business venture is important. The youth might not have as much belief in their abilities to establish a new business without assistance. Most of the youth indicated that they would need help in different forms from mentors to initiate a new business successfully. Table 5.10 below provides some opposing indications, as there is also a significant percentage of the youth who would be likely to successfully start and run a business with limited assistance from mentors.

**Table 5.10: Distribution of respondents representing their behaviours about locus of control, motivation and self-reliance (percentages)**

Internal locus of control, self-reliance and motivation	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
The success of any young entrepreneurs depends on both internal and external factors. Suppose you are given a start-up capital to start a business, To what extent are you most likely to:										
<b>Thaba Nchu</b>										
Successfully initiate and run the business with less assistance/mentorship.	23	19	16	26	16	17	17	9	26	30
Need close assistance and mentorship from government and other stakeholders to successfully run the business	0	0	6	32	61	0	13	4	43	39
<b>QwaQwa</b>										
Successfully initiate and run the business with less assistance/mentorship	16	13	13	13	47	12	24	18	12	35
Need close assistance and mentorship from government and other stakeholders to successfully run the business	9	9	9	25	47	29	12	6	24	29

**Source:** Research survey

It could be argued from the indications that the youth require mentoring and advice, which could provide some valuable insights and experience. The results correspond with previous opinions that strategies and programmes for attracting youth should consider providing training and assistance at the start of their endeavours. Other options would include providing

opportunities for youth working with mentors in their families or community to gain the experience and confidence to transfer to their enterprises.

In some cases, people prefer to work independently for various reasons, while others would rather depend on other people instead of looking after themselves. Most youths are more likely to be independent when placed in a situation where a choice must be made to either work or just ask for money from family and friends. Table 5.11 shows that the youth would instead look for temporary employment options to make money for their immediate needs.

However, there is always the possibility that it is easier to just ask for money than to search for employment, especially where there are already high levels of unemployment and job scarcity. Independence is also a quality that is sometimes used to identify entrepreneurs from other individuals (McElwee, 2006).

**Table 5.11: Distribution of respondents representing their behaviours about being independent (percentages)**

Independence	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Young people often face financial constraints and challenges in their lives. There are times when one needs money to buy toiletries, data / airtime or other personal items. Suppose you find yourself in such a situation, to what extent are you most likely to:										
<b>Thaba Nchu</b>										
Look for piece work / informal work and earn some money for yourself	3	0	3	45	48	4	0	0	52	43
Ask your family to give you money	32	6	23	26	13	17	22	0	35	26
<b>QwaQwa</b>										
Look for piece work / informal work and earn some money for yourself	9	6	9	22	53	12	0	6	24	59
Ask your family to give you money	28	16	13	9	34	24	0	18	18	41

**Source:** Research survey

Displaying higher levels of internal locus of control shows that there is a belief in your success. According to Vesala et al. (2007), this is a psychological requirement related to persistence and working towards a particular aspect as identified. As the agricultural sector is also very

dynamic, it is suggested that farmers who are open to change would identify more of the problems that can be solved in such an environment. Therefore, the farmer (youth) must be able to work with these problems, up to the stage where certain decisions can be made and implemented (Hanf and Müller, 1997, cited by McElwee, 2006). Farmers who believe in themselves, what they are busy with, and their willingness to work hard are valuable characteristics of thriving farms and farmers (Kallio and Kola, 1999, cited by McElwee, 2006).

Working hard can also mean that extra hours need to be spent to ensure that the work is completed as required to take advantage of certain situations. Not all individuals are willing to work extra hours, as this may mean that they will lose time for other activities such as hobbies or family time. When one starts or owns a business, or even part of a family business, the variable working hours are also unattractive, as compared with the fixed working hours of employment (Aldrich and Cliff, 2003). Not only are the working hours a problem in establishing a new business, but in agriculture, the wages and work activities may also negatively influence the attractiveness of the sector for employment.

Respondents were asked, in a situation where they conduct a business and receive more contracts than usual within a week, whether they would be more likely to work longer hours themselves, or get additional assistance in the form of hiring employees, or contract with others to make up the quantity. There was, in general, not a difference in the preferences between the respondents who were involved and those who were not involved, as both indicated that they would instead make additional plans, rather than cancel the contracts to minimise their workload, as seen in Table 5.12 below.

From the above discussion, it can be seen that the youth feel that they are very committed and motivated to see activities through that would benefit them. Being entrepreneurial also means being able to see things differently than others do, and to come up with unique ways of taking advantage. Entrepreneurial individuals are seen as being creative or innovative, and innovativeness is very popular in discussions on entrepreneurial competencies (Rezaei-Zadeh, 2014). Innovativeness is seen as a very important characteristic of an entrepreneur (Tajeddini and Mueller, 2009). Rezaei-Zadeh (2014) explains creativity and innovation as representing novel ideas that can be used in specific situations. This indicates that one must be able to sometimes think out of the box to find new ideas to perhaps find solutions or take advantage of a specific situation. By doing this, one can turn a bad situation around and turn it into a

positive experience by being a creative solution finder. In business, this can be a very important tool to ensure that customers are retained, and new customers are found.

**Table 5.12: Distribution of respondents' behaviours concerning being proactive and having a strong drive to achieve (percentages)**

Proactive, curious, strong drive to achieve	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
At some stage in the business, it is possible to receive many contracts from buyers in the same week. Suppose you have more contracts than usual, need to attend a compulsory meeting and have some family commitments at the same time. To what extent would you:										
<b>Thaba Nchu</b>										
Work longer hours than usual including weekends or hire someone to get the job done?	6	3	6	35	48	9	9	4	26	52
Cancel some contracts to minimise work load?	45	23	10	10	13	43	26	22	9	0
Contract neighbour businesses to make up quantity.	27	10	23	23	17	22	17	17	30	13
<b>QwaQwa</b>										
Work longer hours than usual including weekends or hire someone to get the job done?	0	0	0	25	75	6	6	0	29	59
Cancel some contracts to minimise work load?	72	6	6	3	13	35	24	35	0	6
Contract neighbour businesses to make up quantity.	25	13	0	34	28	35	18	12	12	24

**Source:** Research survey

To determine how likely the respondents would be to consider any innovation-related factors to increase their profits, they were requested to indicate whether they would rebrand their products to give them a new refreshed look (innovation/creative) or flood the market with their products by increasing the production in its current form. The data from the survey, shown in Table 5.13 below, show that there is no clear indication of which of the two options are more likely. The majority of respondents seem to prefer both options in almost equal percentages.



**Table 5.13: Distribution of respondents' behaviours in relation to being innovative/creative to enhance the possibility of increasing their profits (percentages)**

Innovation or creativity	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Suppose you are running your own business and you intend to expand it and increase your profits by attracting more customers. To what extent would you:										
<b>Thaba Nchu</b>										
Increase production and flood the market with your products	6	0	10	39	45	9	4	13	35	39
Rebrand your products, give them a fresh and new look?	0	3	19	13	65	0	4	0	43	52
<b>QwaQwa</b>										
Increase production and flood the market with your products	0	0	6	22	72	12	6	6	29	47
Rebrand your products, give them a fresh and new look?	9	0	3	19	69	6	6	24	12	53

**Source:** Research survey

The data presented in Table 5.13 above could perhaps be explained by the fact that, in both cases, the youth are of the opinion that their profit from the business would increase.

- *Visionary and goal orientation*

Bergevoet et al. (2004) found a significant relationship between behaviour, goals, and intentions of farmers, especially when aspects related to attitudes, social norms and perceived behavioural control were considered among Dutch dairy farmers. In research by Kallio and Kola (1999), it was found that having a goal-orientated operation contributes to having a successful farm and being a successful farmer. Business plans provide a business with a route map of what the objectives are and how they will be achieved over a specific time. Using a business plan has an essential role to play in business, as it provides individuals with an opportunity to think ahead and plan in terms of their business by setting specific goals to achieve and how to work towards them. This research shows that the youth are likely to go into business and make use of business plans to plan and set their goals for the business. It is important to note that the performance of a business is not only influenced by the competence

of the individual, but also by other factors directly associated with the individual's goals, and that self-efficacy, passion, and vision have an important influence on the performance of the individual (Lans et al., 2014). This show that a business plan, and the vision and goals stated in the plan, have an important role in guiding the youth in their business ventures.

**Table 5.14: Distribution of respondents agreeing to statements representing their behaviour about making use of business plans in determining the future of a farming business (percentages)**

Visionary and goal oriented, knowing where the farm is destined	Youth currently involved in farming or other agricultural related economic activities					Youth currently not involved in farming or other agricultural related economic activities				
	1	2	3	4	5	1	2	3	4	5
Planning and setting goals helps young entrepreneurs stay productive and focused. The business plan also lets banks and other investors take you seriously when applying for business funding. To what extent do you:										
<b>Thaba Nchu</b>										
Do business planning for your farming?	3	3	0	19	74	4	4	0	30	61
Do farming without a business plan?	71	19	3	3	3	70	22	0	9	0
<b>QwaQwa</b>										
Do business planning for your farming?	31	16	3	13	38	24	0	6	29	41
Do farming without a business plan?	41	28	13	6	13	41	24	12	0	24

**Source:** Research survey

This was the case with all the youths involved, and those not currently involved, in farming or other agricultural-related economic activities.

## 5.4 Summary

Chapter 5 has explored the behaviour of youth in relation to the four dimensions of Psycap and entrepreneurial characteristics. Research has shown that, to enhance livelihoods, the focus should not only be on tangible or exogenous assets, but also on intangible or endogenous assets,

which include Psycap and entrepreneurial characteristics. These dimensions are key to ensuring success in rural settings by using the available exogenous assets.

The youth who are involved, and those who are not involved, in farming or other agricultural related activities indicate that they have confidence in their own abilities and optimism to accept opportunities and make a success thereof. Being entrepreneurial requires one to be persistent and keep going, even in difficult times, which may also require hard work. This showed that they are confident and can work hard and look for alternative solutions to problems, while being willing to put in the time and effort to work towards solutions.

Respondents did show levels of entrepreneurial spirit, as they are willing to explore alternative options (problem-solving), act and allocate the necessary time and effort (motivated, persistence and determination) to make a success. However, the youth were found to be risk averse and would be less likely to consider risky opportunities. Options to attract the youth towards the sector should thus consider their risk attitude and provide strategies to minimise or transfer risk away from the youth. This could also be achieved by ensuring that youth have the necessary knowledge to construct and make use of business plans that can provide strategic assistance.

In conclusion, the respondents in the survey did show levels of entrepreneurial spirit, which is also shown by the data in relation to their Psycap and entrepreneurial characteristics. The respondents tend to have a mindset and behaviour willing to make necessary adjustments to take on opportunities to improve their current situations. For the youth to thrive in the agricultural sector, improvements need to be made in their livelihood assets, which are the factors that are limiting them in certain cases, such as availability of secure land tenure, education, and effective cooperatives. The data show that the respondents still have some shortcomings in the resources that are available to them to ensure participation in the value chain, and especially to move up in the value chain to value-added production. These shortcomings or obstacles will have to be considered in the development paths in the agricultural sector for youth.

## Exploring youths' aspirations, perceptions and interest towards participation within the agricultural sector

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### Overview

Chapter 6 explores the youths' aspirations, perceptions, willingness to participate and interests towards the agricultural sector. It is important to understand these aspects, as these can inform decisions that need to be made in relation to who should be focused on in initiatives to attract youth towards the sector. Secondly, understanding these aspects also provides information on the expectations and viewpoints of youth towards the sector, which can be used to improve the image of the agricultural sector, as viewed by the youth.

### 6.1 Background

Youth participation in the agricultural sector remains challenging (Man, 2012). The literature has indicated that several factors influence the interest of youth in becoming involved in the agricultural sector. Some of the factors that are mentioned as reasons include the points that the agricultural sector has non-competitive salaries compared with other industries, the physical nature of the work, and lack of information on the various jobs within the industry (Kidido, Bugri and Kasanga, 2017), poor livelihood assets endowment (like land, credit, market access, extension support, and production inputs) and insufficient government support.

White (2012) and Tafere and Woldehanna (2012) observed that youth prefer and aspire to occupations outside agriculture, since non-farming professions are perceived to be more economically rewarding, stable, and not “back-breaking”. Muthee (2010) cited negative perceptions and lack of knowledge and awareness as the causes of disinterest. Cheteni (2016), on the other hand, cited attitudes and negative perceptions. From the mentioned factors, it is not only the physical constraints but also the observational aspects that hinder the interest in, or aspirations towards, the sector. However, limited attention has been paid to other important factors, such as aspirations and perceptions, which are relatively unexplored by researchers and therefore remain poorly understood (Leavy and Smith, 2010; Giuliani et al., 2017; Njeru, 2017).

Youth aspirations have not gone unnoticed in past research; however, the research did not specifically explore youth aspirations towards participation in the agricultural sector. Social science research was mostly been limited to academic aspirations and their influence on young people's career choices (Schaefer and Meece, 2009; Sergio, 2014). Other research about youth involvement in agriculture tends to focus mainly on socio-demographic and economic factors that constrain youth involvement in the sector (such as dependency status, age, size of the household, family income, lack of start-up capital, poor credit facilities, limited to no storage facility, implements, and farmland) (Nnadi and Akwizu, 2008; Adekunle et al., 2009; Ahaibwe et al., 2013; Naamwintome and Bagson, 2013; Kimaro et al., 2015; Akpan et al., 2015; Anania and Kimaro, 2016). Other studies have shifted the focus from socio-demographic and economic factors and asset endowment to perceptions and aspirations (Anyidoho et al., 2012; Kimaro et al., 2015; Zantsi, 2016; Douglas et al., 2017).

Nonetheless, research has indicated a strong relationship between young people's aspirations, access to livelihood assets, and the choices they make concerning agricultural participation (Nataraju, 2015; Kimaro et al., 2015; Douglas et al., 2017; Giuliani et al., 2017; Bahta et al., 2018). For example, the studies of Nataraju (2015), Kimaro et al., (2015); Kising'u (2016); Njeru (2017) show that access to livelihood assets not only influences young people's aspirations, which in turn influences their interest to participate in agriculture, but also directly influences youth participation in agriculture.

To understand the needs and challenges of youth individuals that operate to prevent them from participating in the agricultural sector, there is a need to understand the interests, aspirations, and perceptions of the youth. Aspirations are possible indications of where youth would strive to be in the future. This indicates that aspirations also affect individuals' choices, including their choices towards the agricultural sector (Anyidoho et al., 2012). When considering the involvement of youth in the agricultural industry, one cannot only consider their access to resources, a need also exists to explore their aspirations, perceptions, willingness, and interest to become involved in the sector. During the second phase of the research, aspects related to the respondents' interests, aspirations, willingness and perceptions towards the agricultural industry were explored. During this phase, 233 youth participated in the survey, of whom 135 were already involved in the sector, either as an individual, as part of a cooperative or as part of a family business, while 98 were not currently engaged in the sector.

## **6.2 Aspirations, Perceptions and Interest towards agricultural participation**

Aspiration refers to a person's wish to attain a specific position or objective (MacBrayne, 1987; Bernard and Taffesse, 2012). These aspirations might include a particular level of education, a particular employment position, or participation in the agricultural sector. The abovementioned aspects will indicate the respondents' aspirations, followed by their perceptions and interest in participating in the agricultural sector.

### **6.2.1 Aspirations**

In Chapter 4, it was found that most of the respondents had completed their schooling (Grade 12), with very few continuing their education on to a tertiary level. Most of the youth (94%) indicated that they aspire to further their education, with most suggesting that they would like to attain a tertiary education. Tertiary education aspiration is illustrated through the aspirations towards certificates (11%), diplomas (16%), degrees (40%) and postgraduate degrees (18%). An important indication is that 83% indicated they would aspire towards agricultural-related education. Although this is only an indication and it could change, it shows that there are youth who wish to further their agricultural education, which could lead to their future involvement in the sector. The reasons provided by the those who do not aspire to further their education can mainly be attributed to two aspects. Some youth indicated having no interest in furthering their education and consequently no aspirations. Money or financial resources was also stated as a reason, followed by very few who suggested that there are no 'facilities' for further education in their area. Limited financial resources have been widely noted in South Africa, and the expectation might have been that more of the youth would indicate that as limiting their aspiration towards further education. Concerning tertiary institutions, it must be noted that both research areas are near a tertiary education institution, with Thaba Nchu being close to Bloemfontein with the main Campus of the UFS, and QwaQwa being close to the QwaQwa satellite campus of UFS.

With some of the youth aspiring to further their education, especially considering agricultural education, it is vital to determine the aspirations of youth concerning involvement in the agricultural sector. These aspects include being involved in rain-fed farming, being a successful farmer, becoming a successful commercial farmer, increasing agricultural production,

acquiring agricultural training and education, and lastly, aspiring to secure an occupation beyond primary agriculture, thus being involved in agricultural value chain activities. Youth do wish to become actively involved in the sector, not only by those who are already engaged in the sector, but also those who indicated that they are not currently participating. The indications are optimistic concerning the agricultural sector, both primary agriculture (farming) and the value chain.

This study has established that most of the respondents, both those currently involved and those not involved, aspire to participating in rain-fed agriculture and potentially becoming successful commercial farmers in the future. Of further interest is determining their specific enterprise aspirations within the agricultural sector. The respondents were requested to indicate their aspirations towards enterprises within the agricultural sector, as shown in Table 6.1.

**Table 6.1: Aspirations towards different agricultural enterprises by respondents (n=233)**

Enterprises	Involved (n=135)					Not involved (n=98)				
	VL	L	N	U	VU	VL	L	N	U	VU
Crop production	41	34	7	3	9	24	32	8	3	17
Vegetable production	44	37	4	3	9	37	36	3	1	12
Livestock	39	27	7	8	12	37	20	7	9	13
Dairy	27	23	13	13	13	22	16	9	11	22

\*(VL – Very likely, L – Likely, N – Neutral, U – Unlikely, VU – Very unlikely)

**Source:** Research Survey

The result is also very positive, showing that youth wish to participate in the sector, with indications so far specifically related to primary agricultural production. As the agricultural sector consists of more than primary agriculture or farming, business opportunities do exist among the value chains. The respondents were also asked to indicate how likely they aspire to participating in several value-adding activities in the agricultural sector. The activities listed included transportation, retailing, selling animal produce, operating a butchery, milling and making traditional clothing from animal skin. Apart from the listed options, respondents had the opportunity to add other activities, if necessary. However, there were no other indications from the respondents. As with the results provided in the previous two tables, the respondents indicated how likely they aspire to participating in the mentioned activities, and the responses are shown in Table 6.2 below.

**Table 6.2: Aspirations towards agricultural value-adding activities by respondents (n=233)**

Value adding activities	Involved (n=135)					Not involved (n=98)				
	VL	L	N	U	VU	VL	L	N	U	VU
Transportation of produce	28	24	13	13	5	28	30	7	5	7
Retailing of produce	36	36	8	9	6	35	40	8	2	3
Selling of animal products	33	30	7	13	8	35	29	7	8	6
Butchery	33	25	6	16	7	35	23	9	9	8
Milling	27	23	12	14	9	27	22	7	9	14
Making traditional clothing from animal skin	16	19	13	19	12	17	20	8	12	17

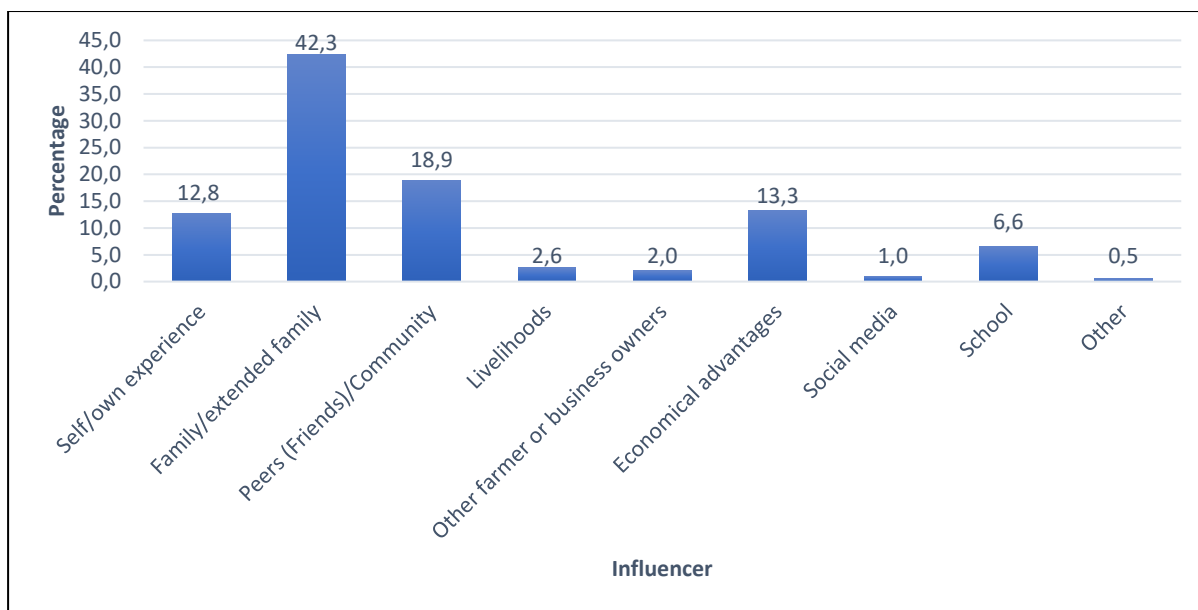
\*(VL – Very likely, L – Likely, N – Neutral, U – Unlikely, VU – Very unlikely)

**Source:** Research survey

The results show that most of the youth, both those involved and uninvolved, indicated that they are most likely to aspire to retailing their own or other products and to selling animal products. This, however, does not come as a surprise, as some of the youth already sell their products to other consumers. There were slight differences between the two involvement groups, but the aspiration indications are generally very similar between the two. The results concerning primary and value-adding activities show no differences in aspiration preferences towards either crop or livestock value-adding activities. This might be very appealing and shows the potential for the agricultural sector. However, it could also be a drawback, as it might indicate desperation or short-term relief for the youth willing to participate and change their aspirations to achieve a better livelihood.

Literature suggests that aspirations are influenced by access, for example, to assets and the surrounding environment, including the social environment. To better understand how the youth formed their aspirations, they were requested to indicate who or what influenced their aspirations, and especially their aspirations towards the agricultural sector. Figure 6.1 above shows that family and extended family members (42%) affect the formation of their aspirations towards the agricultural sector, followed by peers and community members (19%). Interestingly, social media was not found to be a major influencer through the indications given by the respondents.





**Figure 6.1: Influencers of aspirations towards agriculture and related activities (n=196)**

Source: Research survey

The indications regarding influencers are interesting, given that ICT, specifically social media, is not an essential source in forming the aspirations of the respondents. When this is considered concerning the indications noted earlier in Chapter 4, it was shown that around 75% of the youth have access to social media, which is not indicated to be an essential source of agricultural aspirations. However, family and community members, although not always formal groups or clubs, were the most significant influencers concerning agricultural ambitions. Previous indications noted in Table 4.12 show that 10% of the respondents are parts of youth groups or clubs in their communities, thus very few. Consequently, the results show the importance of social networks in communities.

In contrast, social media is mainly used for social purposes (Table 4.22), as opposed to informing aspirations or identifying business opportunities in the agricultural sector. The research shows that most of the respondents aspire to become involved in the agricultural sector, with aspirations towards the dominant enterprises in the research areas. The aspirations are influenced by their immediate environment, consisting of family and community members.

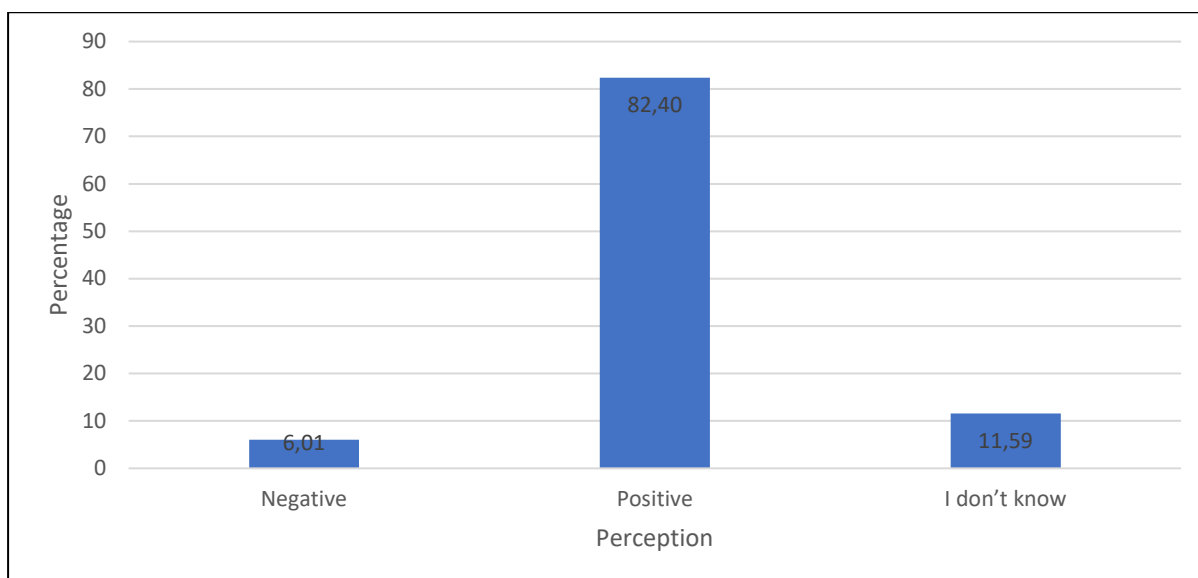
## 6.2.2 Perceptions towards the agricultural sector

Although agriculture is seen as the answer to youth unemployment and providing the capacity to overcome economic issues, it seems that young people have negative attitudes towards

agriculture (Jeffrey et al., 2010). According to Abdullah et al. (2012), the youth do not demonstrate an interest in joining agriculture because of the oppositional view (perception) they have of agriculture. In South Africa, the commonly shared perception is that young people, primarily young black people, do not consider farming as a viable occupation or even as a primary source of revenue (Mathivha, 2012). The narrative on youth participation in the sector remains essentially that of disinterest on the part of the youth (Kidido et al., 2017). Muthee (2010) argues that the reason for there being little or no engagement by young people in farming and related projects stems from the fact that agriculture as a career option is burdened with misperceptions, lack of knowledge and awareness. The research confirms that young people's limited participation in the agricultural sector is perpetuated by perceptions of meagre financial income, the apparent challenges of the availability of the factors of production, and the poor access to resources (such as land, capital, and other inputs).

Kusis et al. (2014) found that Lithuanian and Latvian youth based their perceptions of agriculture on reinforced stereotypes of "old" ways of farming, including back-breaking hours in the field, low skills requirement, and low wages. In a study conducted in Tanzania on youth aspirations, expectations and life choices, Leavy and Smith (2010) ascertained that the youth regarded agriculture as a dull job with poor amenities, while another study in South Africa by Kritzinger (2002) found that most girls are particularly critical of the following aspects of farm life: the nature of farm work, low wages associated with farm work, and the low status ascribed to farm children when compared with children living in towns and villages, as well as alcohol abuse by farm workers, gossip among farm workers, workers' jealousy of one another, lack of privacy, boredom, social isolation, and limited opportunities for leisure (Kritzinger, 2002). Mathivha (2012) found that urban-based youth perceive agriculture as isolating them from a trendy, youthful lifestyle; they see it as unattractive and of poorer class, giving minimal chances for generating economic returns and being only suitable for old and destitute people residing in rural areas.

Given the indication from the literature that the youth have negative perceptions towards the agricultural sector, it was expected to reach similar conclusions from this research. However, the responses from the youth have shown the exact opposite. At the time of the interviews, the respondent youth were requested to indicate their perceptions towards the agricultural sector at that specific point in time, and 82% of the respondents indicated that they had a positive perception towards the industry, as shown in Figure 6.2 below.



**Figure 6.2: General perception of youth towards the agricultural sector (n=233)**

**Source:** Research survey

Very few of the youth respondents indicated having a negative perception (6%) towards the agricultural sector, with somewhat more of the respondents indicating that they were unsure (12%) of their current perception towards the sector at the time of the interview. The results go on to show that most of the youth currently involved in the sector and most of those not involved have very similar positive views towards the sector, at 86% and 78%, respectively. The difference between the groups is attributable to a significant number of youth (17%) who stated that they were unsure about their perceptions of the sector at that time. Given that this result is contrary to indications in the literature, it is essential to understand what is different in this case, compared with previous research. The respondents were provided with statements indicating some of the issues identified in previous research and were asked to indicate their perceptions of agriculture and technology used in the agricultural sector.

The youths' responses provide a positive view towards the agricultural sector and confirm the earlier indications set out in Figure 6.2. As was the case previously, there is very little difference between the indications of youth who are involved, compared with those who are not involved. There was one instance where the youth not involved in the sector provided evidence that they might be attracted towards an office job over an outside or field job related to primary agriculture. Regarding preference for an office job, the youth involved also seem to be divided, with no clear indication of a preference and an almost exact split between those agreeing (41%) to those disagreeing (42%) for the youth involved. Half of the youth not

involved in the agricultural sector indicated that they prefer an office job to an outside or field job.

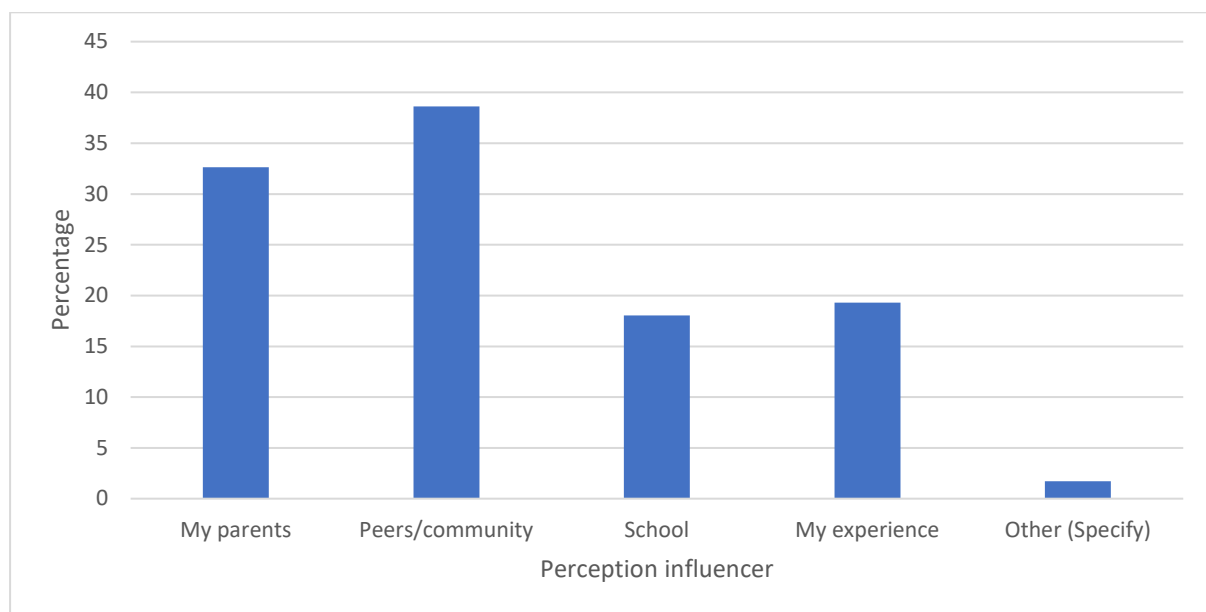
**Table 6.3: Perception indications of youth towards agriculture**

Statement	Involved (n=135)			Not involved (n=98)		
	A	N	D	A	N	D
Primary rain-fed agriculture can offer better livelihood support and is the best way to alleviate poverty	71	10	19	68	13	18
Primary rain-fed agriculture is unattractive, dirty and backbreaking	27	21	52	34	17	49
Primary rain-fed agriculture is an option for under-achieving Students and adults	33	18	50	34	17	49
Primary rain-fed agriculture is reserved for old uneducated people	25	16	59	16	8	76
I find that primary rain-fed agriculture is attractive to me as a young person	68	13	19	68	12	19
Primary rain-fed agriculture would be the last choice if other non-farm options are available	36	19	45	48	12	40
I have seen elders improving their life through primary rain-fed smallholder agriculture	70	16	15	74	11	14
I prefer irrigated smallholder agriculture to rain-fed smallholder farming	56	19	24	57	17	26
Value adding agricultural activities are physically demanding	46	25	29	47	22	31
I prefer an office job than an outside / field job	41	17	42	50	11	39
I can be wealthy / rich through engagement in agricultural value chain economic activities	77	12	11	80	5	15
The youth can engage in agricultural value chain activities related businesses	81	9	10	78	9	13
Smallholder agriculture is not a profitable venture	24	21	54	31	12	57
Participation in agricultural economic activities will lead to economic empowerment of young people	73	13	14	81	9	10
Most people known to me love agriculture and agriculture related businesses	65	21	14	59	17	23
I believe most people known to me will support me if I choose to initiate agricultural business	83	10	7	76	9	15
Agriculture creates employment for the majority of the rural poor	81	9	10	89	6	5

Note: Likert scale data 1 Strongly agree and 5 Strongly disagree.

Source: Research survey

From Figure 6.1, it was established that family and community members (peers) have an essential role in forming aspirations towards the agricultural sector. The same role players have also been identified as being critical role players in the perceptions of youth towards the agricultural sector, as shown in Figure 6.3.



**Figure 6.3: Influencers of youth perceptions towards agriculture (n=233)**

**Source:** Research survey

Personal experiences in the sector have also triggered interest in the agricultural sector. The aspects of ‘myself, as an influencer’ or ‘my experience in the sector’, were found to comprise the third highest influencer in forming a perception towards the agricultural sector. This finding provides an important focus area on which positive perceptions can be developed to advance interest towards the sector.

A significant deduction from the results is that the youth perceive the agricultural sector as a livelihood option through which they could enhance their livelihoods and provide a living for their families. This is not only applicable to primary agriculture, but also includes value-adding activities along agricultural value chains. The findings also differ from some literature indications of negative perceptions towards the sector. The indications of positive perceptions and aspirations provide valuable opportunities for involving the youth in the sector, as they have already indicated they have opportunities to enhance their livelihoods.

### 6.2.3 Interest towards participating in the agricultural sector

As is well known, one needs access to several resources to be involved in the agricultural sector. These resources include land and physical assets, such as buildings, equipment and implements. Humans cannot control access to some of the resources required, such as rain to provide water for rain-fed agriculture. The reasons for being interested in the agricultural sector do not differ between those currently involved and those not involved. The respondents see that the agricultural sector provides opportunities to enhance their livelihoods and those of their families. Although the sector is identified as providing opportunities in rural areas, half of the respondents in the survey indicated that they are not involved in the sector. This poses the question of why they are not interested in or participating in the agricultural sector. This subsection will now explore the reasons for the lack of interest expressed by respondents who are not involved in the sector.

The respondent youth were asked to indicate whether they would be interested in participating in any agricultural endeavour or agricultural and related activities. It was found that 51% of the youth stated they were not interested in participating in the sector. This indicates that there are currently some youths involved in the sector, not because of their own interest, but for other reasons. As can be seen in Table 6.4 below, the indications are confirmed, where it is shown that 73% of the youth, who indicated current participation in the sector, are in fact not interested in being involved. The result should be considered in implementing policies and development programmes to ensure that resources are allocated to youth who are both prepared and interested in being involved in the sector, and that resources not wasted on youth who are not interested in being involved. Admittedly, their interest might change over time. For example, as youth become successful in their business undertakings in the sector, their interest in being further involved could increase, making spending time and resources on these youth worthwhile.

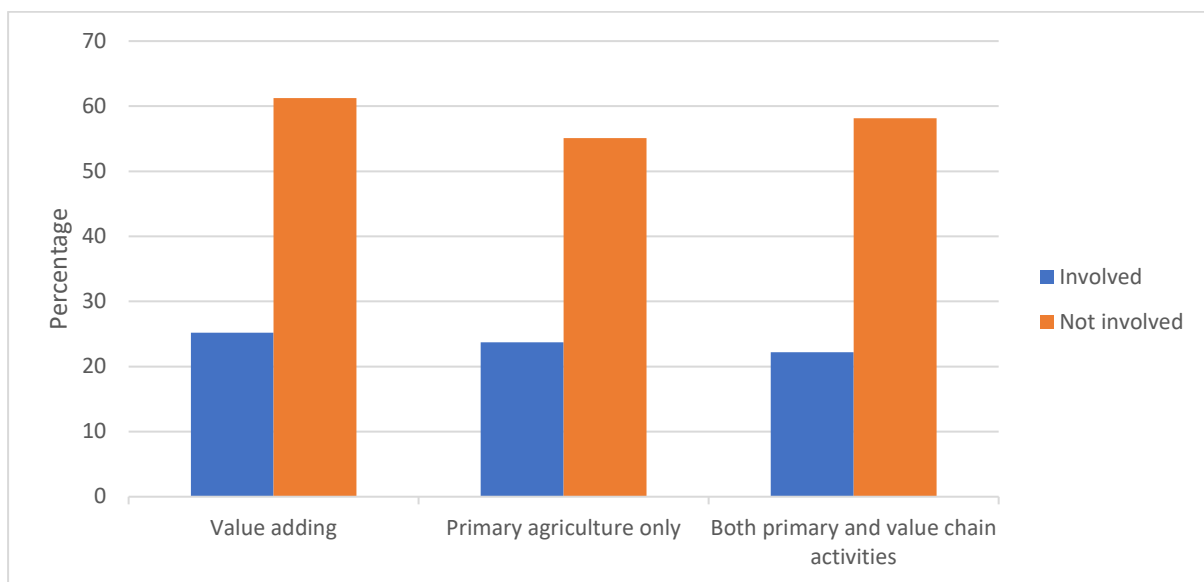
**Table 6.4: Interest of all respondents to participate in the agricultural sector (n=233)**

Interest to participate	Youth already involved		Youth not involved		Combined	
	Freq	%	Freq	%	Freq	%
No	98	72.59	21	21.43	119	51.1
Yes	37	27.41	77	78.57	114	48.9
<b>Total</b>	<b>135</b>	<b>100</b>	<b>98</b>	<b>100</b>	<b>233</b>	<b>100</b>

Source: Research survey

Some of the respondent youth who are not currently involved in the sector indicated that they are interested in participating in the agricultural sector. These respondents are interested, or show interest, in participating in the agricultural sector. The appeal of the youth not involved in the sector provides an opportunity to enhance their participation and thus increase their and their families' livelihoods.

The respondents' interests in participating in different sector levels were also explored. As the agricultural sector consists of various options for participation, from production of commodities to varying levels of value adding, it was further explored where the respondents' interests might lie. Indications of the interests of the youth respondents between value-adding economic activities in the agricultural sector and primary agriculture are shown in Figure 6.4 below.



**Figure 6.4: Interest in agriculture and related activities**

**Source:** Research Survey

It is important to note that respondents could indicate interest in both options in the agricultural sector. The limited interest towards the agricultural sector is visible, with few (<30% of the youth currently active) indicating any interest towards specific activities within primary or value adding in the agricultural sector.

Lastly, some of the constraints and the expectations of the youth for enhancing their participation in the agricultural sector will be discussed. The reasons for being involved in the

agricultural sector were explored by asking the respondents as to what drives their interest in the sector. Literature and governmental policy documents have indicated that the agricultural sector is vital in creating employment opportunities. However, for the sector to be used as a vehicle for youth employment and enhancing livelihoods in rural areas, the youth must have some interest and drive for being involved in the agricultural sector.

It has been established that the largest percentage (Table 6.4) of youth already involved in the sector are, however, not interested in being involved in the sector. In contrast, those not involved do indicate interest in becoming involved in the sector. The reasons for interest in the agricultural sector were explored by using a word cloud, representing the frequencies of words used in the explanations provided, thereby identifying the more prominent words, as shown in Figure 6.5 before. The main terms used in the phrases and sentences supplied by respondents include ‘opportunities’, ‘money’, ‘agriculture’, ‘love’, ‘want’ and ‘farming’. These words could be broadly divided into five categories: employment opportunities, knowledge enhancement, business, moneymaking ability and, lastly, love for the sector.



**Figure 6.5:** Word cloud explaining the interests towards agriculture and related activities of respondents currently involved

**Source:** Research Survey

The responses as to why the youth respondents are interested in the agricultural sector echo statements in the literature that the sector provides employment opportunities. The importance of knowledge transfer is also reflected in the responses by the respondents, which might indicate that they are interested towards the agricultural sector, could also be explained by them



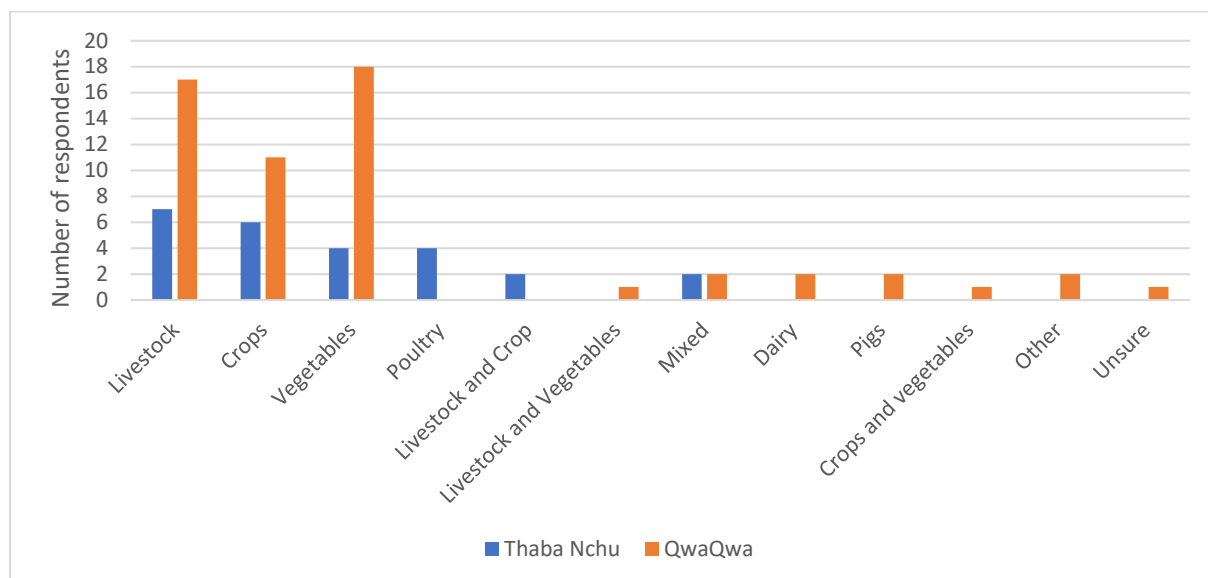
being involved as part of a family or any other kind of business in the agricultural sector, where knowledge is transferred from one generation to the next. Additional indications related to job opportunities were reflected in responses that mentioned the business-side opportunities that the agricultural sector offers.

Several respondents indicated that the sector provides the opportunity to generate money or create a business from farming. This clearly shows that the respondents see the income-generating potential of the agricultural sector. It was also noted that the sector is seen as an income generator and a source of livelihood in terms of food production. The business opportunities offered by the agricultural sector were also indicated as being a reason for the respondents' interest towards the agricultural sector. The business side of the sector relates primarily to two aspects in the responses. Firstly, the sector provides food that can be consumed, and the second is the moneymaking or economic advantages that the sector (farming) provides. Responses that highlight these aspects include *getting plants to eat or sell if you want, you can make your own money, make food and money; I can get money, easier way of making money, It makes money* and also *the economic opportunities in the sector*.

The respondents' interests in being involved in the agricultural sector include an interest that arises from the fact that some of the youth are already involved in the agricultural sector or farming, either as an individual or as part of a family. Responses, such as love of the sector or love for growing plants or raising animals, indicate that some of the youth are interested because of their close relationship with the agricultural sector. As shown in the literature, the household family can therefore play a critical role in enhancing the interest of the youth to participate in the agricultural sector. The respondents indicated that they are interested from seeing the involvement of other farmers or participants in the sector. It can be seen from these responses, that observations by the youth of current participants in the sector prompt their further interest towards the sector. This correlates with previous indications in the literature. However, as some reports in the literature have indicated, the observation of other individuals in their daily activities could push some youth away from the sector (Tafere and Woldehanna, 2012). These responses also suggest that positive observations could attract youth to become interested in or aspire towards participating in the agricultural sector. Other indications of interest towards the agricultural sector are possessing or having access to natural or physical assets such as land and the *love* shown towards the agricultural sector. This can be seen in responses, such as 'I want my own farm' and '*love vegetables and taking care of land*'.

In summary, it can be seen that various factors trigger the respondents' interest towards the agricultural sector. These factors mainly relate to the respondent being involved or observing others. From these responses, it is essential to notice that, to get youth involved in the agricultural sector, specific programmes should be developed where youth can get involved. Involving youth in this way could lead to higher levels of interest and, ultimately, the development of their farming or value-adding businesses in the agricultural sector. Observations of activities within the agricultural sector are therefore very important to form certain opinions about the sector, potentially influencing the ability to attract new youth to the sector. As mentioned in the literature, attracting new youth to the sector could be challenging when it is considered to be hard work, with low income. However, it could also potentially be an excellent vehicle to attract new entrants, especially when success stories are evident, showing that the sector rewards hard work.

The respondents' interests in specific sectors within primary agriculture were also explored. Youth indicated the enterprises they are interested in within the primary agricultural sector. Enterprise options provided included livestock (cattle, sheep, and pigs), dairy, poultry, crops and vegetables. Some indicated that they are not sure of which enterprises they might be interested in. The results are shown in Figure 6.6 below, indicating that youth are interested in more than one enterprise. Running a piggery was included under livestock, but was only mentioned by two respondents during the survey.



**Figure 6.6: Interests towards different primary agricultural sectors**

Source: Research Survey

Three enterprises are predominantly preferred by the respondents, which are livestock, vegetables, and crop farming. Unsurprisingly, livestock enterprises were shown to attract the highest levels of interest among the respondents. Nevertheless, many respondents indicated their interest in participating in crop enterprises in both research areas. The youth in QwaQwa also showed interest in vegetable farming or gardening, whereas fewer youth in Thaba Nchu showed interest in agriculture.

The drivers of the interests of the youth currently engaged in agriculture seem to be replicated in those not involved in agriculture. As noted in the previous sub-section, in order to understand the reasons for the interest in the agricultural sector by those not involved in the sector, the phrases provided by the respondents in their answers were explored by means of a word cloud shown in Figure 6.7 below. Drivers of interest already mentioned by those respondents involved in the sector also appear to be the main drivers of interest for the respondents who have indicated that they are not currently engaged in the sector.

The main words that had the highest frequencies of mentions, as shown in Figure 6.7, include agriculture, money/returns, love/passion, opportunities, and business. These words are more specifically associated with aspects such as job opportunities, love/passion for the sector, gaining knowledge and providing a livelihood for oneself and family members. As aforementioned, the youth not involved in the sector also recognise the prospects in the agricultural sector (*The new job opportunities created in agriculture*) to provide job opportunities (*creates more jobs*), which would provide them with food (*have own food production and planting*) and money to enhance their livelihoods (*to see my life improve through agriculture*).



**Figure 6.7: Word cloud explaining the interests towards agriculture and related activities of respondents currently not involved**

Source: Research Survey

Youth also identified the point that farming or being involved in the agricultural sector provides a vehicle by which they can support their families (*I want to support family*) by providing a source of income, food and job opportunities to family members and other members of communities. Providing job opportunities to community members (*Community assistance*) would also impact positively on the local economy by providing sources of income and reducing the local unemployment rate (*Reduction of unemployment*). However, they also recognised the limitations they have in their predominantly rain-fed agriculture areas. In view of the limited rainfall, the respondents replied that, although they are interested, the little or unpredictable rainfall influences their interest in the sector. This has been highlighted in a response (*sometimes we don't get rain, sometimes we get it, so we are not sure about the rain*), which shows that the rain fall is unpredictable and impacts on the interest to participate.

Agriculture has a pivotal role to play in family businesses. With family businesses being transferred from one generation to the next, knowledge is also transferred, where the younger generation learns from the previous generation. Obtaining knowledge and information (*Eager to learn, want to learn about farming*) has also been identified as an essential aspect that influences interest in the agricultural sector. However, while the transfer of knowledge is of benefit, farming also relies on new technology. The use of technology has been identified as a possible reason for being interested in the agricultural sector. This conforms to indications from

previous literature, which indicated that farming is a “dirty activity” and that inadequate infrastructure and poor communication systems render the rural areas, in effect farming, unattractive (Juma, 2017). Khue et al. (2016) mention that youth are only willing to consider modernised, technology-based agriculture, rather than subsistence-based agriculture, which is seen as “*heavy, dirty, back broken*”.

#### **6.2.4 Exploring the rural youth disinterest and constraints experienced in rain-fed agricultural activities**

When the literature is consulted, several reasons are listed as either constraints or limitations that prompt youth to not to become involved in the agricultural sector. To better understand this, the respondents were requested to provide their own reasons for being disinterested in the agricultural sector, or as to **why they were not participating** in agriculture and related activities. The respondents were able to provide their reasons in their own words, with their phrases later being analysed using a word cloud, as shown in Figure 6.8 below. All the various words illustrated in the word cloud thus represent reasons for being disinterested and not participating in the sector. The words that stand out as reasons for disinterest include words indicating personal lack of interest, not having opportunities, lack of information, no love towards the agricultural sector, lack of money, and not having enough information or knowledge.

Not all the reasons provided for the disinterest in agriculture are attributable to a lack of resources. Some of the youth respondents are simply not interested (*I am interested in the different career route, I have no interest in any agricultural activities, no interest, agricultural sector is not for me, no interest and skill*) in participating in the agricultural sector, and they have ambitions or aspirations to be involved in other economic sectors. Other respondents also indicated that they have no passion for being involved in the sector (*never had passion for it, passion isn't there to be involved*). In contrast, others prefer being in another sector of the economy (*not interested to work outside, I've never seen myself in farming, don't like farming*).

This issue relates to indications from the literature that have indicated that some youth see the agricultural sector as backbreaking, which the respondents also mentioned (*workload, hard work, it's boring, I don't have time*). These indications confirm previous observations by Khue

et al. (2016), from a quote provided by a 22-year-old respondent, indicating that the observation of their parents' youth influenced their decision to return to the rural sector. The respondent mentions, *“I saw my parent trying to toil and moil all of their lives. I don't want to work in the muddy field which makes me itchy and under the sun which burning my skin. I want to have an office job with air-conditioner and have chance to wear nice clothes ....”* (Khue et al., 2016).



**Figure 6.8: Word cloud explaining reasons of respondents, currently not involved, for not being involved in agriculture and related activities**

Source: Research Survey

The lack of resources, such as land, capital and access to water, have been mentioned as reasons for the disinterest in any agricultural activities in their respective study regions. Since land is one of the essential resources for farming enterprises, access to any type of land is necessary. However, the lack of land or access to land was an aspect mentioned by respondents as being a hindrance to participating and being interested. The issue of access to land is also supplemented by other statements related to land, such as difficulty in working the land and having no access to inputs that are required to grow crops and other products in farming (*the soil is compacted, no access to seed and other inputs, not getting what I expected like getting no rain which lead to drought, lack of water and poor rainfall*).

Access to land can also be associated with other resources in terms of financial capital. Many respondents mentioned the lack of money as a factor or reason leading to their disinterest and hindering their ability to participate in the sector. Money or financial resources play a crucial

role, not only in the purchasing of assets, inputs and other farming equipment, but also in buying food and other household requirements (*no funds, I want to make money to feed my family, I don't have money because there is no money, financial problems*). It was also mentioned that the lack of financial resources hinders their ability to improve their educational level, as there would not be enough money to pay school fees (*no money to go to school*). Education has also been mentioned as a reason for the non-participation by responding youth in the sector. Some respondents indicated that they are currently busy with educational activities (*only focused on studies, I am a school learner*) and therefore cannot participate in the sector. Schooling and university are not the only ways by which knowledge can be obtained. Training and other resources are also available within the agricultural sector through which knowledge can be obtained. It has been seen that very few of the youth have had access to or have attended short-term training or are participants in any support programmes. Many of these programmes and other information sessions, such demonstration and information days, provide valuable training and learning opportunities, where individuals in the industry provide information on specific topics that can impact positively in interest.

Having access to support programmes, or rather the lack of access, has been identified by the youth as contributing to their disinterest or hindering their participation in the agricultural sector. This contributes to another aspect, which was highlighted in responses as a lack of knowledge and experience (*don't have knowledge on agriculture, lack of information about agriculture, don't know what to produce, and opportunities in the sector, I never get the idea that agriculture can be a lovely thing*). Although several programmes are made available by the government and organised agriculture, the youth indicated that they do not have access to, or are not aware of, these programmes (*there's no programs for us as youth to get training, lack of incentives, we have no places where we can learn more about agriculture, a lack of information like when its farmers day and never heard of training, didn't get a chance to participate*).

### **6.3 Summary**

The aim of this chapter was to explore the aspirations, perceptions and interest of the youth respondents towards the agricultural sector. It was observed that the majority of the youth respondents indicated having aspirations towards the agricultural sector. The indications were

not limited to only primary agriculture activities, but also to value-adding activities. Similar observations are also seen in terms of the respondents' willingness to be involved in the sector, where the indications showed that the youth are willing to be involved in the sector. Although less than the ones indicating that they have aspiration towards the sector. Involvement in primary agriculture was mostly focused towards livestock, crop and vegetable farming. The transportation of products and being involved in the retailing of value-added products were indicated to be the preferred value-adding activities.

The exploration of access to resources by means of the SLF revealed that the respondents are diverse in the circumstances of their access to resources (Chapters 4 and 5). Access to resources plays a valuable role in attracting participants towards the agricultural sector, and with limited access to resources, it could be expected that the youth would be hesitant or pushed away from the sector. The possible reasons why some of the youth respondents are not interested in or do not aspire towards the agricultural sector include lack of access to and participation in government support programmes, lack of access to and contact with extension officers, and, to some extent, not being involved in cooperative farming and youth clubs. The data from the survey show that there is very limited interaction regarding the above-mentioned aspects, and the importance of these aspects was further highlighted in the reasons and constraints provided by the respondents as to why they are not interested in the agricultural sector.

This chapter has shown that some of the respondents do aspire to becoming involved in the agricultural sector. However, there are fewer respondents who indicated that they are willing to actively become involved in the sector. When the interests of the youth to participate in the sector are considered, it was found to be lower than the number who indicated that they are willing to participate actively. A trend emerges when their willingness and, ultimately, their interest to become involved in the sector is considered, as there are fewer youth interested than those willing to participate. This shows that not all youth who have aspirations or are willing to be involved in the sector have an interest to be actively involved in the sector. This might be attributable to them seeking any opportunity to enhance their livelihoods, even if it might be a temporary solution. In order to potentially improve the interests and abilities of youth to participate in the sector, consideration should be given to developing programmes where youth who show interest towards the sector are enabled to produce evidence of their commitment to become involved in the sector. This might be achieved through their current activity/ies in the agricultural sector, or through launching smaller agricultural projects with the assistance from



governmental extension officers. By thus making sure that these youth are able to prove their active interest and participation, this could potentially motivate others to also start similar agricultural projects, which would qualify for assistance programmes. It would also assist in showing that youth need to take their own development upon themselves, and not simply wait for others to intervene and provide them with resources. Minor projects like these could also be built around youth clubs, where one youth member could possibly gain access to certain resources, and responsibilities would be shared among the various members to ensure the success of the project/s.

The research has shown that youth are limited in their resource endowment, especially when considering key resources for agricultural participation such as land (Natural Capital), productive assets (Physical Capital) and capital, especially credit (Financial resources). Furthermore, it was found in Chapter 5 that there are youth who perceive that they do have behavioural traits related to positive psychological capital and entrepreneurship. Not all the youth who participated in the research actually have an interest in participating in the agricultural sector, meaning that they should not be the primary focus of development and other initiatives aimed at involving youth in the sector. The information obtained can now inform the process of determining the youth development pathways for attracting or enhancing youth participation in the sector.

## Determining youth typologies to account for their heterogeneity and inform development pathways

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### **Overview**

The results from the research have shown that youth are a heterogeneous group with regard to their access to assets. This heterogeneity makes it difficult to provide focused support to youth to attract them to and involve them in the agricultural sector. Consequently, training and support programmes and other support initiatives are required that consider the heterogeneity among youth. The aim of Chapter 7 is to consider the heterogeneity of youth and develop youth typologies. The typologies are created by considering the key exogenous and endogenous assets identified in Chapters 4 and 5, and then grouping youth with similar endowments into groups, which will provide a basis for the development of support strategies that are more focused on each specific youth group.

### **7.1 Introduction**

Although the age range presents a common characteristic youth share, they are not a homogeneous group (FAO, 2014b; Rietveld, van der Burg and Groot, 2020). Instead, the youth represent a heterogeneous social group with markedly diverse social and economic needs that require tailor-made interventions and support to improve their livelihoods. The FAO (2014b) refers to internal and external factors, such as access to livelihood assets, gender, age, aspirations, concerns and needs of youth, as being critical indicators of heterogeneity among youth. Moreover, the opportunity spaces of youth differ, as they are shaped by diverse dimensions such as family status, religion, gender and wealth (Rietveld et al., 2020). These factors shape a youth's career and livelihood choices, including agricultural participation. Youth participation in farming and agricultural-related activities is mainly hindered by constrained access to livelihood assets. Treating the youth as a homogenous group is too strong an assumption, which has resulted in simplistic interventions and strategies that are likely to fail to address the real hurdles impeding youth participation in agriculture and related activities (Rietveld et al., 2020). This chapter develops youth typologies to capture the heterogeneity among the youth and to identify the underlying drivers that may shape their decisions to

participate in agricultural activities, including entrepreneurial activities.

The typologies will be created, based on the asset endowment of the youth of selected assets of the extended MSLF, which also includes entrepreneurial characteristics. To achieve the aim of developing youth typologies, firstly, psychological capital and entrepreneurial dimensions are determined, respectively. The indices are included as variables representing the Psycap and entrepreneurial endowment of youth along the assets of the SLF in a two-stage, multivariate analytical approach to identify youth typologies.

## **7.2 Determining Psychological capital and entrepreneurial dimensions**

### **7.2.1 Procedure to determine Psycap and entrepreneurial dimensions**

Principal Component Analysis (PCA) is a multivariate data analysis method that reduces the dimension of several variables into more simplified and manageable dimension (Hair et al., 2010). Chipfupa (2017) explains the point that PCA is a common technique used as a first step in the determination of youth typology. The reduced dimension maintains the original variation of the actual interrelated variables, which is an advantage of the PCA, as the reduced variables retain the ability to explain variability within data. Several studies have applied PCA to reduce the number of variables into uncorrelated dimensions or indexes (e.g. Chipfupa, 2017; Wale and Chipfupa, 2018; Chipfupa and Tagwi, 2021; Henning et al., 2022a) and informed the procedure used in this research. The procedure ensures that none of the original information of the variables is lost while reducing the number of variables. Chipfupa and Tagwi (2021) mention that the procedure works best when the original variables are highly correlated.

Drawing from previous applications of the procedure, several steps were followed in the determination of the dimensions and include: (1) there should be a minimum of three correlated variables 0.5 and greater, and correlation coefficients of variables greater than 0.5 were included for the continuation of the procedure (Hadebe, 2016). (2) The appropriateness of the analysis was determined through using a Kaiser-Maier-Olkin (KMO) of greater than 0.5, and a statistically significant Bartlett's Test of Sphericity at 1% (Köbrich et al., 2003; Field 2009). (3) Communalities represent the proportion of the variance in the original variables accounted for by the factor solution; therefore, variables with communalities of less than 0.5 were excluded from the analysis. (4) Following the KMO rule, all principal components (PCs) with

an eigenvalue greater than one were retained. (5) Factors with loadings greater than 0.4 (absolute value) were considered to have strong factor loading, and were used to interpret each component (Mooi, Sarstedt and Mooi-Reci, 2018). The varimax method was used to rotate the factors and make the solution more interpretable (Chipfupa, 2017).

### 7.2.2 Psychological capital dimensions

A total of 16 statements measuring Psycap, discussed in Chapter 5, were initially included as variables to determine the Psycap dimensions. However, four statements were excluded, as their variables had communalities of less than 0.5. The remaining 12 statements that were included in the PCA yielded five components. The five components explained about 66% of the total variability in the data set, and the factor loadings are presented in Table 7.1 below. The first component (PC<sub>1</sub>) had strong loadings on variables to measure resilience, as discussed in Chapter 5. The statements demonstrate behaviour of not giving up easily in the face of adversity; hence, it was named *resilience*. According to Luthans et al. (2004), setbacks are inevitable within entrepreneurial ventures, and the ability to be resilient and continue, even during setbacks, is a critical success factor in a business. Chipfupa and Tagwi (2021) also found youth to be resilient and to hope for positive outcomes. The component represents youth willing to persist and see alternative options to succeed in business.

The second component (PC<sub>2</sub>) shows high loadings on the statements envisioned to measure respondents' optimism, as discussed in Chapter 5. The statements describe respondents who are discouraged about farming business operations because of being in a difficult position. Consequently, they are not optimistic about turning their business around, and are willing to give up on a business. This component is labelled *pessimistic*. Individuals with higher levels of optimism consider unfavourable situations to be temporary, always looking on the bright side of problems. In contrast, pessimistic individuals consider setbacks to be permanent, and quit easily (Luthans et al., 2007b).

PC<sub>3</sub> presents statements to measure the respondents' self-confidence. The statements associated with PC<sub>3</sub> indicate respondents who do not believe in their abilities. Since the statements in this component illustrate the opposite behaviour of self-confidence, it is named *low self-confidence*. Self-confidence represents the overall value one places on oneself and on own ability to cope and perform a given task (Judge and Bono, 2001). Individuals who show

low conviction in their abilities to mobilise courses of action (decisions) needed to execute a specific task within a given context successfully are considered to have low self-confidence (Stajkovic and Luthans, 1998). The component characterises the youth who do not believe in their abilities to lead, even when resources are available.

**Table 7.1: Psychological capital components**

Variable (Statement)	Component				
	PC1	PC2	PC3	PC4	PC5
Continue with the business and consult a business advisor/peer	<b>0.88</b>	-0.02	-0.11	0.03	0.01
Continue with the business and change the way you run your daily business activities?	<b>0.81</b>	-1.4	-0.6	-0.4	-0.8
Consult your peers already in business to find out how they managed to obtain funding	<b>0.66</b>	0.1	-0.06	0.33	-0.05
Refuse to sell and continue with the business.	0.05	<b>-0.8</b>	0.03	0.15	0.1
Sell the business	-0.13	<b>0.78</b>	0.06	0.03	-0.05
Sell a part of the business	0.13	<b>0.66</b>	0.01	0.07	0.31
Ask them to wait because you still want to think about it?	-0.11	0	<b>0.87</b>	0.01	-0.08
Ask them to find someone else?	-0.08	0.03	<b>0.82</b>	-0.03	0.18
The government can address the issues.	0.04	-0.03	-0.04	<b>0.81</b>	-0.07
You still have the potential to work through the challenges and turn things around.	0.11	-0.03	0.02	<b>0.77</b>	0.02
Invest less of your time on your business and seek other opportunities	0.1	0.02	0.25	0.02	<b>0.78</b>
Talk to traditional leaders to check for the possibility of acquiring land	0.32	-0.01	0.18	0.11	<b>-0.64</b>
<b>Eigen Values</b>	<b>2.39</b>	<b>1.68</b>	<b>1.52</b>	<b>1.21</b>	<b>1.09</b>
<b>% of Variance explained</b>	<b>19.9</b>	<b>14.03</b>	<b>12.65</b>	<b>10.12</b>	<b>9.06</b>

Notes:  $KMO = 0.61$ ; Bartlett's Test of Sphericity  $< 0.001$ ; Total cumulative variance = 65.73%

Source: Research survey

The final dimension of Psycap is Hope, and PC<sub>4</sub> shows the loadings on statements representing hope. Regardless of the various socio-economic challenges of the youth, the results show through PC<sub>4</sub> that the respondents still have hope to overcome their constraints; hence, it is named *hopeful*. Snyder et al. (1996) describe hopeful individuals as those who have a positive motivational state, oriented on successful outcomes to events, and see many ways to tackle a

challenge. Youth in this component acknowledge the role of government support initiatives to address youth unemployment and poverty. The results from the PCA identified an additional dimension from the statements used to measure Psycap. PC<sub>5</sub> has loaded on the statements associated with Hope and Optimism. The statements describe the behaviour of respondents who are willing to give up because of experiencing difficult times, and seek other opportunities while also being willing to look for alternatives to overcome their challenges. The component is named *ambitious but hopeless*, as it characterises youth who do not see a way of overcoming challenges, such as constrained access to productive resources, that they are currently facing. Lack of hope can inevitably result in individuals losing their willingness to explore alternative ways to succeed, and throwing in the towel.

### 7.2.3 Entrepreneurial Dimensions

For the second PCA, the 16 statements from the scenarios in Chapter 5 were initially included as variables in the PCA. However, three statements were excluded for not meeting the communalities criterion of being greater than 0.5. Table 7.2 below sets out the factor loading of variables for the six retained components, which explained about 64% of the total variation in the data.

The first component (PC<sub>1</sub>) has factors with high factor loadings on statements illustrating a belief in one's ability or internal locus of control. These loadings on the statements indicate low self-reliance or **external locus of control**. This is attributable to the respondents indicating they need external assistance, rather than believing in their abilities. Entrepreneurs have a strong self-belief or internal locus of control, meaning they believe in themselves and their abilities to deliver successfully. Given the high levels of unemployment in the research area, the second component (PC<sub>2</sub>) is unsurprising, as it shows the respondents are independent, hard-working, and driven to achieve. The component represented commitment through being willing to work to enhance their livelihoods (earning an income), even if extra hours or work are required. This component was named **proactive and independent**.

PC<sub>3</sub> had high factor loadings on statements characterising the willingness to adopt new technology. The agricultural sector is also technology-driven, where new technology is constantly being introduced. Although the new technology might be more applicable to commercial farmers, the results show and relate to the indications from the literature that youth

are adaptable and willing to make changes. Given the signs of willingness to switch to modern methods and technology within their environment, the component was named **embrace change**.

**Table 7.2: Entrepreneurial characteristics dimensions**

Statements	Component					
	PC <sub>1</sub>	PC <sub>2</sub>	PC <sub>3</sub>	PC <sub>4</sub>	PC <sub>5</sub>	PC <sub>6</sub>
Need close assistance and mentorship from government and other stakeholders to successfully run the business	<b>0.83</b>	0.02	0	0.04	0.15	0.05
Successfully initiate and run the business with less assistance/mentorship.	<b>-0.83</b>	0.11	-0.07	0.02	0.13	0.02
Look for piece work/ informal work and earn some money for yourself	-0.03	<b>0.71</b>	0.13	-0.11	0.21	-0.06
Work longer hours than usual including weekends or hire someone to get the job done?	-0.1	<b>0.7</b>	0.09	0.22	-0.06	0.18
Adopt the new technology and retrench most of your workers?	0.01	0.04	<b>0.85</b>	0.05	0.03	-0.18
Switch to modern technology?	0.06	0.17	<b>0.72</b>	0.05	0.01	0.29
Ask your family to give you money	0.03	0.06	0.1	<b>0.74</b>	0.06	-0.1
Source out money from family and friends.	0.02	0.04	-0.01	<b>0.71</b>	0.16	0.13
Do business planning for your farming?	0.21	0.32	0.32	<b>-0.39</b>	0.32	0.13
Contract neighbour businesses to make up quantity.	0.02	-0.09	0.03	0.26	<b>0.77</b>	-0.03
Rebrand your products, give them a fresh and new look?	-0.01	0.41	0.02	0.01	<b>0.67</b>	0.05
Source finance from other formal organisations that offer financial support, e.g. microfinance organisations	0.17	0.29	-0.03	0.1	-0.11	<b>0.74</b>
Quit the job and pursue the business opportunity.	-0.26	-0.34	0.15	-0.16	0.26	<b>0.62</b>
<b>Eigen Values</b>	<b>2.12</b>	<b>1.53</b>	<b>1.4</b>	<b>1.08</b>	<b>1.07</b>	<b>1.04</b>
<b>Variance</b>	<b>16.8</b>	<b>11.77</b>	<b>10.73</b>	<b>8.3</b>	<b>8.22</b>	<b>7.99</b>

Notes:  $KMO = 0.62$ ; Bartlett's Test of Sphericity  $< 0.001$ ; Total cumulative variance = 63.79%

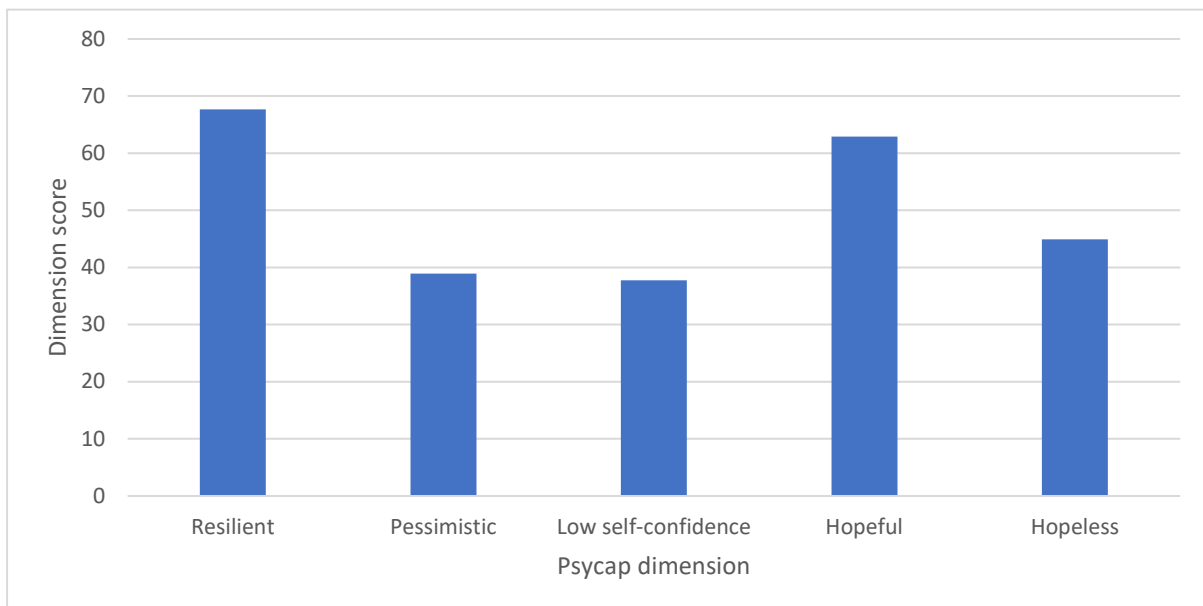
Source: Research survey

Component four (PC<sub>4</sub>) was named **problem-solving lacking vision**, given the loadings on statements representing no hesitation to search for assistance to overcome challenges or constraints, but with little planning. With limited resources available, the result shows a willingness to use all available avenues. This includes asking for assistance from relatives. Given the rural livelihood situation, these individuals might also be experiencing challenges in their access to resources. Being up-to-date and visible in the market is crucial for ensuring that a business remains relevant. This requires that businesses be creative and find ways to stay relevant. The statements associated with the fifth component (PC<sub>5</sub>) loaded on statements indicating the behaviour of creativity and innovativeness. Therefore, PC<sub>5</sub> was named a **drive**

**for achievement and innovation.**

Scenarios exist where individuals in a stable employment position leave that position to take advantage of an opportunity they have identified. Entrepreneurs are constantly looking for new market opportunities and are then pulled towards those opportunities. Being willing to leave a stable job and take advantage of the opportunity indicates determination, given that they do not have a safety net to fall back. The final component (PC<sub>6</sub>) suggests leaving a stable job and taking advantage of an opportunity. For this reason, the component was named **opportunists<sup>8</sup> and determined.**

The results for determining the Psycap and entrepreneurial dimensions indicate the differing endowments of the youths in these dimensions. To visualise the results, the dimension for Psycap and entrepreneurial characteristics has been normalised between 0 and 100, and the average score for each dimension is shown in Figure 7.1 below and Figure 7.2 below. The results illustrate that the respondents intended to be positive in their behaviour because of their higher levels of resilience and hope. The lower levels of pessimism, low self-confidence and hopelessness provide further evidence of Positive psychological capital.



**Figure 7.1: Psychological capital dimensions of respondents**

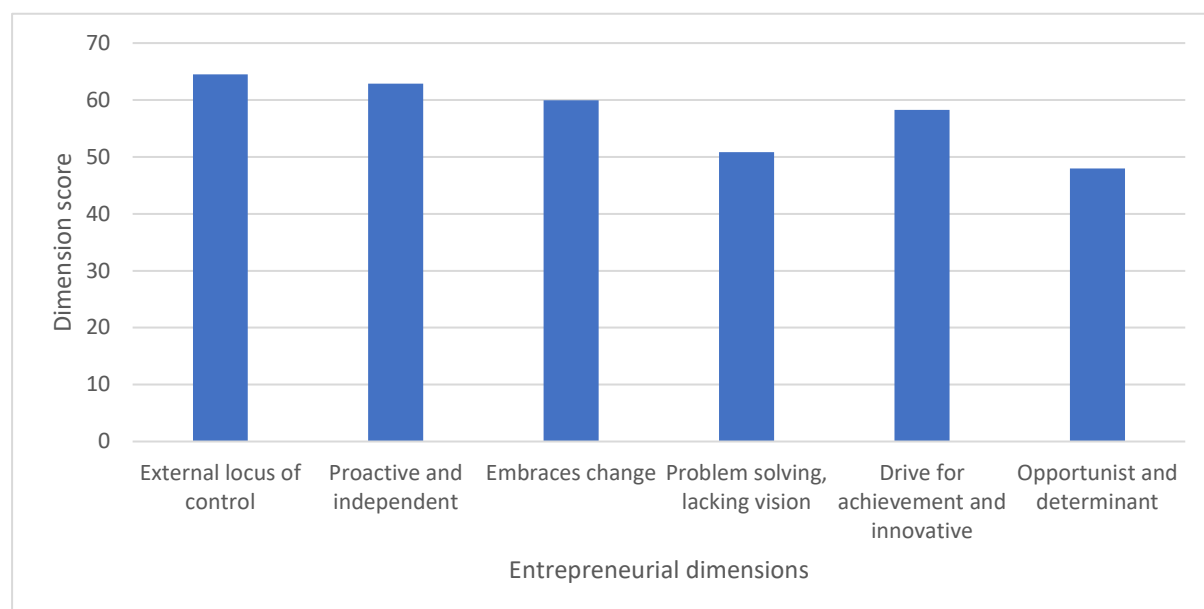
**Source:** Research survey

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<sup>8</sup> ‘Opportunist’ is used in the behavioural economic context to mean being on the lookout and taking advantage of opportunities as they arise.



The entrepreneurial dimensions (Figure 7.2) show that respondents tend to rely on others to assist to successfully follow through with activities as they illustrate higher levels of external locus of control, which contradicts entrepreneurial behaviour. The other dimensions indicate entrepreneurial behaviour, which might be attributed to some of the respondents' current livelihood conditions. When faced with complex conditions, one can either be determined and hard-working to achieve a better livelihood, or give up. Facing such a situation might indirectly prompt individuals towards assuming an entrepreneurial behaviour, except that it is not deployed in establishing businesses but instead improving livelihoods. This can be seen in characteristics such as being proactive and independent, embracing change, problem-solving and being opportunistic.



**Figure 7.2: Entrepreneurial dimensions of youth**

**Source:** Research survey

As the Pyscap and Entrepreneurial dimensions were determined through the Respondents' intended behaviour, it provides an idea of what they would do when facing similar situations or future scenarios. This is important, as it guides how to approach the youth to attract them towards participating in the agricultural sector, given their current livelihoods and behaviour. The dimension determined for Pyscap and entrepreneurship can now be included along with other assets.

### 7.3 Determining youth typologies

Following the procedures of previous research (Chipfupa, 2017; Wale and Chipfupa, 2018), the dimensions of Psycap and entrepreneurship are combined with the assets within the SLF to determine homogenous youth typologies that still represent their heterogeneity.

#### 7.3.1 Modified SLF variable reduction

A total of 32 variables were used to extract youth typologies, as shown in Table 7.3 below. The variables consist of 21 assets from the SLF, five dimensions of Psycap, and six entrepreneurial dimensions. PCA was used to reduce the dimensionality of these variables.

**Table 7.3: Variables selected for establishing youth typologies**

<b>Demographical information</b>
Participation in Agric (% yes)
Age (years)
Household Size (family members)
Gender (% male)
Marital Status (% Single)
<b>Human Assets</b>
Education (At least matriculation completed)
Farming Experience (years)
Farming or agriculture business-related short-term training (% yes)
Support programme beneficiary (% yes)
<b>Social assets</b>
Youth club membership
Cooperative membership
Access to social media
Frequency of access to extension services (How Often)
<b>Natural assets</b>
Access to land (%yes)
<b>Physical Assets</b>
Access or control over any livestock (%yes)
Access or control to production assets (%yes)
<b>Financial Assets</b>
Non-farming Income (Rand)
Crop Income (Rand)
Livestock Income (Rand)
Social Grant (Rand)
Credit (Rand)

The PCA yielded fourteen principal components, shown in Table 7.4 below, explaining 62% of the variation. PC<sub>1</sub> had strong loadings on variables related to participation in agricultural activities, endowed land, and farming experience. The component was named **experienced participants with access to land**.

The second component (PC<sub>2</sub>) has loadings on variables related to youth who are endowed with social assets such as being members of cooperatives and youth clubs. Apart from being members of networking opportunities, they were also found to be beneficiaries of government support programmes. The component was named **support beneficiaries and social network membership**. Component PC<sub>3</sub> is explained by using non-farming income as a primary source of income, while also having access to credit. The component was named **job secure**. Being a beneficiary of training programmes and receiving extension services are important aspects for smallholder farmers, as this is a scenario where they access resources and information. Component 4 (PC<sub>4</sub>) represents farming crop, while also having access to extension services and training. The component was named **training beneficiaries with access to extension**. Component PC<sub>5</sub> represents marital status and age. This component has negative loadings on age, in conjunction with positive loadings on marital status, representing younger but single respondents. The component was consequently named **single youth**.

Component 6 (PC<sub>6</sub>) was named **opportunists and determined livestock farmers**. This component represents livestock farmers, since it is loaded on the variables of livestock income while owning or having control over livestock. Apart from being livestock farmers, the component represents respondents who are on the lookout for opportunities and are determined to see them through successfully. The seventh component (PC<sub>7</sub>) has factors with high loadings on **resilient, proactive and independent youth** variables. The component combines two positive attributes, one from Psycap (resilience) and one from the entrepreneurial dimensions (pro-active and independent), which are important considering enhancing or incorporating into the agricultural sector. The component would thus illustrate individuals who are active in finding solutions to problems and finding ways to follow through with the solutions because of their resilience.

**Table 7.4: Components of variables used in typology formulation**

	Component													
	PC <sub>1</sub>	PC <sub>2</sub>	PC <sub>3</sub>	PC <sub>4</sub>	PC <sub>5</sub>	PC <sub>6</sub>	PC <sub>7</sub>	PC <sub>8</sub>	PC <sub>9</sub>	PC <sub>10</sub>	PC <sub>11</sub>	PC <sub>12</sub>	PC <sub>13</sub>	PC <sub>14</sub>
Access to land	<b>.79</b>	.13	-.05	.08	-.03	.00	-.05	.03	.02	.03	.13	.02	.05	.01
Participation in Agric	<b>.78</b>	.18	.01	.13	-.01	.18	-.03	-.02	-.03	.02	.05	.04	.07	-.03
Farming Experience	<b>.70</b>	-.06	.09	.04	-.11	.05	.12	-.05	.02	-.04	-.14	-.05	-.07	-.09
Low self-reliance	<b>-.33</b>	-.12	-.06	.19	.19	.18	.12	.16	-.06	.02	-.14	-.06	.31	-.11
Youth club membership	.05	<b>.79</b>	.02	-.02	-.03	.08	-.01	.08	-.02	.00	-.17	.08	.04	.01
Cooperative membership	.14	<b>.68</b>	-.07	.27	-.08	.08	.03	.07	-.03	.03	.13	-.14	-.07	.07
Support Programme beneficiary	.18	<b>.48</b>	-.08	.10	.13	-.02	.26	-.09	-.07	.08	.24	-.08	-.03	-.09
Non-farming Income (R)	.02	.02	<b>.84</b>	.02	-.08	-.01	.01	.05	.01	.06	-.05	.02	.01	.02
Credit(R)	.02	-.07	<b>.77</b>	.06	.03	.02	.08	.04	-.04	-.06	.07	-.06	.01	-.01
Crop Income (R)	.02	.09	.12	<b>.78</b>	.06	.06	-.09	.05	.04	.11	-.03	-.04	.01	.00
Short-term training (Farming or agric related)	.20	.16	-.02	<b>.56</b>	-.08	-.01	.29	-.16	.01	-.07	-.08	.08	-.15	-.06
Access to extension services(How Often)	.24	.12	-.05	<b>.43</b>	-.25	.12	.12	.06	-.27	.04	.23	-.17	.14	-.09
Marital Status (Single/otherwise)	.01	-.03	-.08	.07	<b>.79</b>	-.09	.05	.03	-.04	-.10	.00	.00	-.08	-.01
Age	.27	-.02	-.05	.17	<b>-.67</b>	-.02	.14	-.17	-.15	-.05	-.05	.01	-.02	-.12
Livestock Income (R)	.01	.12	-.05	.14	-.15	<b>.75</b>	-.05	.13	.03	-.07	-.02	-.05	.01	.00
Access to livestock	.38	.06	.04	-.15	.10	<b>.64</b>	.11	-.04	-.18	.05	-.05	.00	.03	-.10
seizing opportunities and determined	-.01	-.06	.13	.12	.02	<b>.43</b>	.31	-.19	.13	.36	.10	.04	-.21	.18
Resilient	.05	.01	.02	.14	.00	.12	<b>.72</b>	.12	-.02	-.02	.02	.12	.06	.09
Proactive and independent	-.10	.14	.13	-.14	-.09	-.15	<b>.61</b>	.07	.07	.09	-.06	-.28	-.04	-.19
Access to social media	-.13	.00	.03	-.04	.09	.07	.01	<b>.70</b>	.06	.12	.12	-.11	-.19	-.10
Education	.05	.22	.20	.00	.10	.03	.23	<b>.49</b>	-.02	-.07	-.20	.04	.06	.02
Household Size	.02	-.02	.00	.00	.03	.01	.00	-.04	<b>.84</b>	.03	.01	-.05	.04	.02

Income Social Grant(R)	.06	-.06	-.10	.02	.08	-.08	.08	.25	<b>.47</b>	-.07	-.11	-.08	.51	-.06
Hopeful	-.01	.02	-.05	.04	-.07	-.05	.06	.08	-.04	<b>.82</b>	-.02	.02	.02	.00
Access to production assets	.05	.32	.14	.09	.02	.32	-.17	.04	.15	<b>.41</b>	-.03	.16	-.05	-.15
Low self-confidence	.05	.02	.05	-.03	.04	-.01	-.02	-.02	-.02	-.01	<b>.84</b>	.02	.08	-.01
Gender	.22	.12	.16	-.02	.32	.11	-.05	-.26	-.36	.28	<b>-.39</b>	-.07	.13	-.04
Ambitious but Hopeless	-.01	-.04	-.02	-.07	.02	-.04	-.05	-.06	-.02	.05	.02	<b>.80</b>	-.08	-.06
Strong drive to achieve and innovative	.12	.03	-.10	.19	-.10	-.03	.24	.40	-.20	.08	-.04	<b>.44</b>	.22	.22
Embraces change	-.02	-.01	-.08	.07	.12	.00	.02	.23	-.01	-.02	-.15	.01	<b>-.76</b>	.00
Pessimistic	-.14	.04	.02	-.06	.03	.00	.03	-.11	.03	-.07	.00	.02	-.03	<b>.84</b>
Problem solving attitude but lacks vision	.12	-.08	-.01	-.01	.12	-.13	-.13	.29	-.02	.28	-.05	-.35	.00	<b>.47</b>
<b>Eigen Values</b>	<b>3.45</b>	<b>1.95</b>	<b>1.56</b>	<b>1.53</b>	<b>1.42</b>	<b>1.27</b>	<b>1.23</b>	<b>1.17</b>	<b>1.11</b>	<b>1.07</b>	<b>1.06</b>	<b>1.03</b>	<b>1.02</b>	<b>1</b>
<b>Variance</b>	<b>10.79</b>	<b>6.10</b>	<b>4.87</b>	<b>4.79</b>	<b>4.44</b>	<b>3.98</b>	<b>3.83</b>	<b>3.65</b>	<b>3.47</b>	<b>3.35</b>	<b>3.33</b>	<b>3.23</b>	<b>3.18</b>	<b>3.13</b>

Notes: KMO = 0.68; Bartlett's Test of Sphericity <0.001; Total cumulative variance = 62.13%

**Source:** Research survey

Social media has become an essential source of information and interaction for youth. With improved access to ICT services, including cell phone coverage, information and means of communication have become more accessible. This, thus, provides a new opportunity to ensure the quick and effective distribution of information to a broad audience, with a push of a button. Component 8 (PC<sub>8</sub>) describes educated respondents who are active on social media platforms, and was named **educated with access to social media**.

Social grants as a source of income and the implications thereof have been identified in previous research (e.g. Wale and Chipfupa, 2018; Henning et al., 2022b). Households receiving social grants might be less incentivised to require their youth members to be involved in the agricultural sector, as it is easier to access grant money than hard-earned income from agriculture. Component 9 (PC<sub>9</sub>) represents larger households who rely on social grants as a source of income, and was named **social grant-reliant households**.

Component 10 (PC<sub>10</sub>) indicates that having access to productive assets also provides some hope. PC<sub>10</sub> shows loadings on variables representing hopeful youth with access to productive assets that allow them to be involved in the agricultural sector. Access to productive assets is a requirement for being involved in the sector, since these assets allow one to work the land. Without access to productive assets, it would be challenging to work the land or complete the necessary processes required to produce products, which could lead to losing hope. Consequently, the component was named **hopeful, with access to physical assets**.

Gender has been identified as an issue in agricultural participation, with males having better access to resources than females do. This is especially true when access to land is considered. Limited access to resources could lead to lower self-confidence levels, as assets are often required to perform many tasks, especially in agriculture, for working the land and producing agricultural commodities. PC<sub>11</sub> has high loadings on variables relating to gender and low self-confidence, and was named **females with self-confidence**. The component is thus a representation of females with low self-confidence. PC<sub>12</sub> has loadings on variables representing negative Psycap and positive entrepreneurial characteristics. This component represents ambitious respondents who might introduce new and innovative ways to do things, but may lack the determination to initiate and complete their tasks. The component characterised hopeless youth with a strong drive to achieve and innovate, and was named **hopeless with an entrepreneurial drive**.

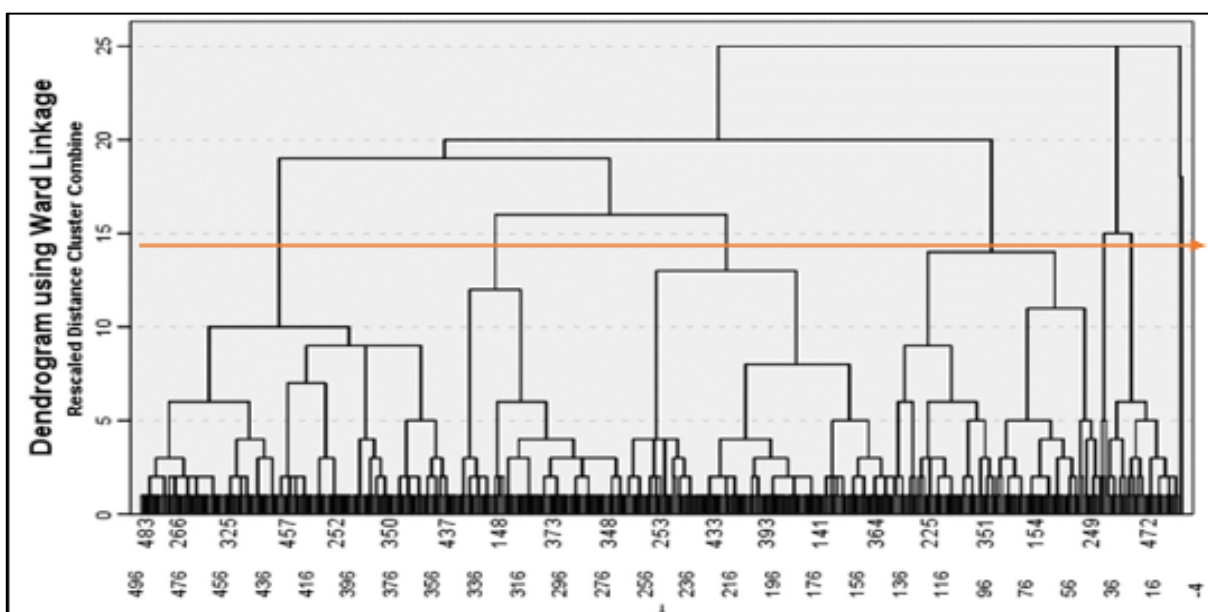
The world we live in today is ever-changing, and so too is the agricultural sector. Introducing new ideas and technology and changing consumer preferences and habits are just a few aspects that influence the agricultural industry. This is the case, despite the numerous unpredictable natural occurrences, such as weather, pests and drought, that impact upon the agricultural sector. The factors with high factor loadings in component 13 (PC<sub>13</sub>) relate to embracing change. The loading is, however, negative, which implies behaviour that is not adaptable or embracing change. The factors with high loadings of the last component (PC<sub>14</sub>) relate to respondents who have a problem-solving attitude, but are pessimistic and lack vision in business ventures, consequently named **problem-solving, pessimistic but lacking vision**. The component illustrates that the respondents are entailed to demonstrate problem-solving behaviour, which is not surprising given the situations that exist in the rural areas, which are hampered by high levels of unemployment, and youth are required to come up with unique ideas to enhance their current situation. However, when these attempts to solve their problems are unsuccessful or only provide temporary relief, they may become pessimistic and stop looking ahead to find alternative solutions.

### 7.3.2 Youth typology identification and characterisation

The fourteen factors retained in the final PCA were subjected to a CA to typify youth. CA is a recognised statistical classification tool designed to classify the dataset into clusters with members that show similar characteristics to one another compared to members of other clusters (Gong and Richman, 1995; Marzban and Sandgathe, 2006). The multivariate analytic approach was applicable following its use in typology development studies in agriculture to characterise farms, farming systems and farmers (Lopez-Ridaura et al., 2018; Chipfupa and Wale, 2018; Musafiri et al., 2020; Chipfupa and Tagwi, 2021; Zantsi, Pienaar and Greyling, 2021). Reducing the number of variables was essential in the cluster analysis to retain stable and non-overlapping clusters, which presents the second step of typology formulation (Chipfupa and Wale, 2018; Upadhaya, Arbuckle and Schulte, 2021). The factors included in the final PCA were subjected to a CA, resulting in clusters representing youth typologies. Following the guidance of Musafiri et al. (2020), Chipfupa and Tagwi (2021), and Upadhaya et al. (2021), the CA followed a two-step clustering procedure, where factors were first subjected to Ward's hierarchical clustering and then K-means clustering to ensure stable clusters. Hierarchical clustering helps to determine the optimal number of clusters, and results

in clusters with a good distribution of several variables per cluster. In contrast, a K-means clustering classifies or groups variables into interpretable clusters. The distance between every pair of clusters is computed by using Ward's clustering (Ward, 1963), and the two closest clusters are then merged into a single cluster at each iteration (Köbrich et al., 2003). The optimal number of clusters (k) retained from Ward's method was used as a starting point for K-means clustering to ascertain the desired number of un-nested clusters. Marzban and Sandgathe (2006) explain that Ward's method performs best among hierarchical methods. An ANOVA variance test was used to ensure the variables between clusters were statistically different from each other, using a threshold of  $p < 0.01$ .

The first step of the CA (hierarchical CA) resulted in seven clusters. The cluster solution was obtained by cutting the cluster tree at a linkage distance of 14, indicating a stable number of clusters on the dendrogram (Figure 7.3 below). The starting point of the second CA step (K-means) was the seven clusters retained from the first step. The resulting clusters, which represent different youth typologies, are presented in Figure 7.3. Final cluster centres represent the mean values of all variables in the cluster. The higher the mean, the higher the contribution of the variable to cluster solution, and the more discriminating that variable is within that cluster. Three of the clusters (1,5 and 7) only had one case (one observation) included in the cluster, and can be considered as outliers (Hair et al., 2010) and be removed for further analysis.



**Figure 7.3: Dendrogram representing the hierarchical cluster analysis solution**

Source: Research survey



An ANOVA variance test was used to ensure that the variables within the clusters differed statistically. The p-values extracted from the ANOVA variance test were calculated using a threshold of 1%. The resulting F-values indicated a good and robust contribution of the specific variable to cluster separation, or for determining the cluster key characteristics for most variables, showing good stability of clusters. The clusters were named according to defining attributes demonstrated by the graph bars representing final cluster centres shown in Figure 7.4 below. Although the final cluster centres provided the defining features within each cluster and its naming, exploring the average values and proportions of variables assisted in discussing each cluster, as detailed below.

- *Training beneficiaries with access to extension*

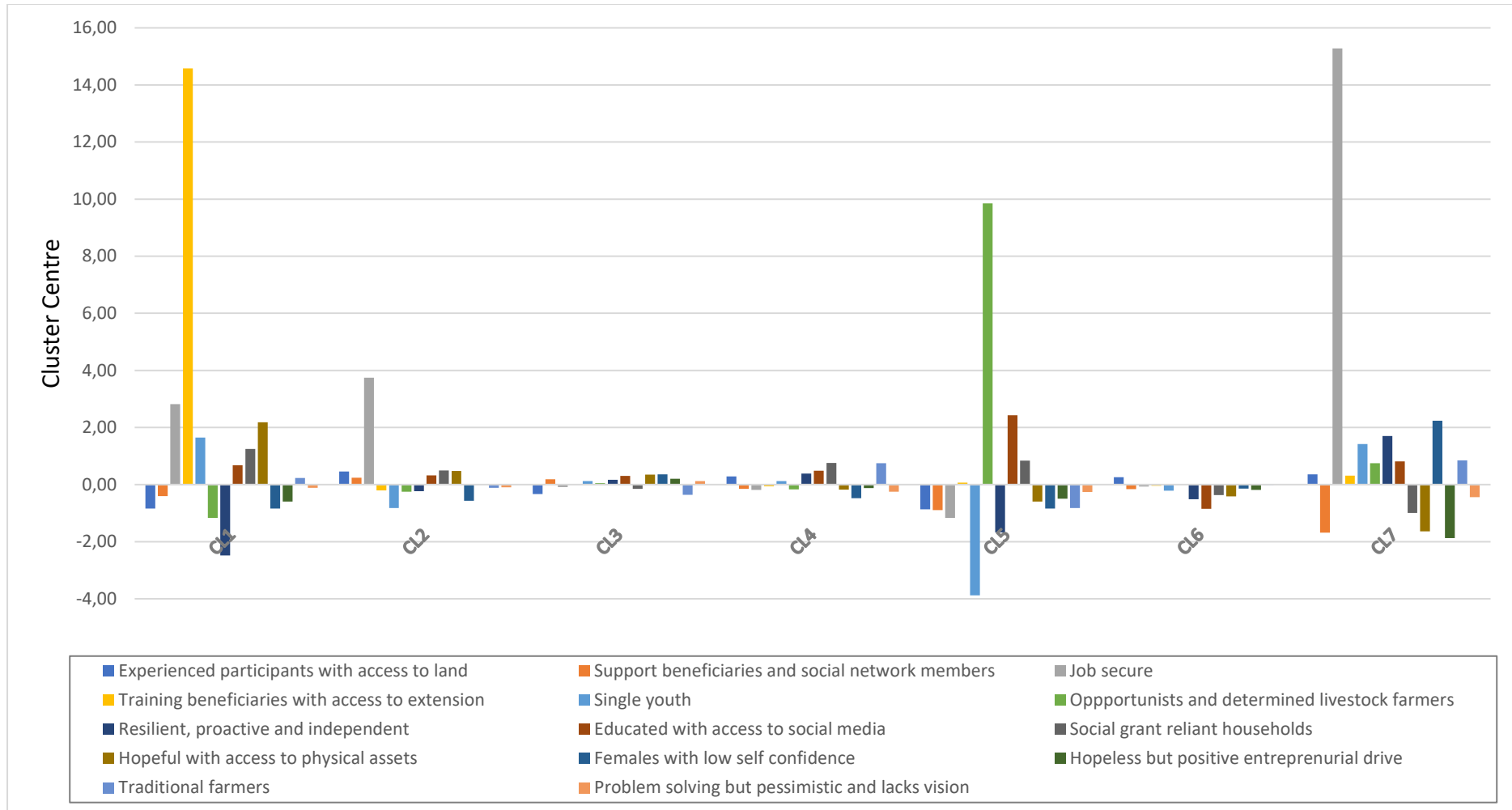
Cluster 1 (CL1) represents one 25-year-old male respondent who is single, but part of a larger household of 6 members. The respondent has obtained a matric qualification and participated in other agricultural-related training. The respondent has access to 50 hectares of land and other physical assets. The access to land is the second highest of all the clusters' averages. Two primary sources of income are associated with the cluster: average crop income (R300 000) and non-farming income. The crop income received by the respondent in this cluster is also the highest, compared with the other clusters. The respondent did not indicate any ownership of Livestock. The respondent in this cluster indicated that he is involved in farming activities, while also being a cooperative member.

Regardless of the respondent being able to source income from permanent employment, the participation in agricultural activities through a cooperative has also resulted in additional revenue that can improve the livelihood of the youth – characterised with positive Psycap, given the lower scores associated with Psycap dimensions of Pessimistic, low self-confidence and hopelessness. In contrast, the dimensions of being resilient and hopeful confirm the Positive Psychological capital for the youth in this cluster. Wale and Chipfupa (2018) used Psycap as a proxy for entrepreneurial spirit, and similar indications are found in this case. Although the respondent illustrated an external locus of control, other entrepreneurial characteristics point towards the potential entrepreneurial ability of the respondent.

- *Income Secure*

Cluster 2 (CL2) consists of nine (2%) respondents. The average age of the respondents in cluster, primarily males, is 27.56 years. The respondents are educated, as all have obtained their matric education. However, very few (22%) have participated in farming or agricultural-related training. Further, 78% of the respondents have more than four years of experience in the agricultural sector.

Access to productive assets such as land and credit encourages youth to participate in agricultural activities (Swarts and Aliber, 2013; Magagula and Tsvakirai, 2020). The respondents in the cluster mostly have access to or own land (78%), with an average size of 3 ha. Despite the large percentage of respondents with access to land, most of their income is derived from non-farming sources, with an average annual income of R150 666.67, followed by crop income. The respondents' participation in farming is mostly through crop farming, explaining the second-highest earnings from crops. The respondents also have access to credit. Given previous indications that access to credit requires evidence of collateral and repayment ability, it is no surprise that the youth in this cluster are better off when credit access is considered, compared with the others. This finding agrees with Twumasi, Jiang and Acheampong (2020), who found that young, income-secure farmers are considered credit-worthy by lenders, and hence considered to be credit unconstrained.



**Figure 7.4: Final cluster centres for the factors included in the cluster analysis<sup>9</sup>**

Source: Research survey

<sup>9</sup> Final cluster centres Figure without CL1, CL5 and CL7 can be seen in Appendix 3,

The dominant Psycap attributes include resilience and hopefulness, which reflect positive Psycap. Positive entrepreneurial characteristics also characterise Cluster 2 (proactive and independent, strong drive to achieve and be innovative, seizing opportunities and determination), indicating that the youth can take advantage of agricultural entrepreneurial activities along the value chain. The characteristics of this cluster may reflect youth who farm as part of diversification strategies, as also found by Rietveld et al. (2020). This group's constraints include limited access to government support and little social network involvement. This may accelerate their potential shift away from agricultural activities, especially when receiving sufficient rewards in other economic sectors.

- *Non-occupational youth endowed with negative Psycap*

Cluster 3 (CL3) constitutes the highest proportion of respondents, with approximately 45% of the total respondents. CL3 primarily represents single females with an average age of 25 years. The cluster also shows the lowest participation in agricultural activities (43%). Given that the cluster mainly includes females, the lower agricultural participation relates to indications from the literature that acknowledges low involvement in agricultural activities by predominantly female youth (Chipfupa and Tagwi, 2021). This cluster highlights the gender gap in agricultural productivity mainly resulting from constrained access to productive resources (Kilic, Palacios-Lopez and Goldstein, 2015; Rola-Rubzen et al., 2020; Zulu, Djenontin and Grabowski, 2021; Abukari, Zakaria and Azumah, 2022). CL3 is characterised by the lowest access to land, although the average land size is not the lowest, when compared with the other clusters. Rietveld et al. (2020) and Zulu et al. (2021) also highlighted female youth's constrained access to land. Concerning education and training, the respondents in the cluster represent the lowest percentage of youth who have obtained education at matric level. Furthermore, they have received very little farming or agricultural-related training provided by formal institutions.

The respondents in this cluster have a relatively higher social capital endowment than others have, as indicated by the highest cooperative and youth club membership and access to social media. Although their social capital endowment is the highest, compared with others, there are still very few of the respondents who are involved in cooperatives (22%) and youth clubs (13.6%). Low access to social capital has been found in previous studies (Schneider and Gugerty, 2011; Djurfeldt et al., 2019). Social networks have the potential to reduce the transactional costs of sharing information, which can be important in female-dominant

typologies.

**Table 7.5: Characteristics of youth typologies**

	CL1	CL2	CL3	CL4	CL5	CL6	CL7
	(n=1)	(n= 9)	(n=221)	(n=110)	(n=1)	(n=149)	(n=1)
<b>Demographical</b>							
Age	25	27.56	24.83	25.92	34	27.81	20
Household Size	6	4.78	4.02	5.64	4	3.71	5
Gender (% male)	100	88.89	47.06	54.55	0	70.47	100
Marital Status (%Single)	100	55.56	88.69	90	0	79.19	100
<b>Human Capital</b>							
Participation (% yes)	100	77.78	42.99	63.64	100	66.44	100
Education (At least matric)	100	100	67.42	80.91	100	34.9	100
Farming experience (years)	4	4.22	1.5	3.52	2	3.91	10
Farming/Agriculture related training (%yes)	100	22.22	15.38	12.73	0	14.09	0
Beneficiary of support programmes	0	0	10.41	3.64	0	2.68	0
<b>Social Capital (% yes)</b>							
Access to extension	100	22.22	33.48	29.09	0	39.6	100
Cooperative membership	100	11.11	22.17	8.18	0	11.41	0
Youth Club membership	0	11.11	13.57	10	0	5.37	0
Access to social media	100	88.89	92.31	83.64	100	41.61	100
<b>Natural Capital</b>							
Access to land (%Yes)	100	77.78	47.96	65.45	100	62.42	0
Land size (ha)	50	3.06	5.19	1.05	600	1.69	0
<b>Physical Capital</b>							
Access to livestock (%yes)	0	33.33	31.22	30	100	39.6	100
Livestock Value (ZAR)	0	2389	9311	2773	7500	6977	0
Access to production assets (%yes)	100	66.67	36.65	25.55	100	19.46	0
Production Assets value (ZAR)	1 450 000	137 511. 11	44 512.9 9	6 390.45	260 000	11 260.88	0
<b>Financial Capital (Rand)</b>							
Non-Farming Income	56000	150667	6258	4442	0	5337	189600
Crop Income	300000	4278	2184	1588	0	1120	0
Livestock Income	0	1556	3326	2645	240000	2596	304000
Social Grant	0	3387	1213	10923	0	1137	0
Credit	11000	9388.89	238.46	44.55	0	19.46	297000
<b>Psychological capital dimensions</b>							
Resilient	88.76	65.46	70.93	74.31	49.80	57.95	91.08
Pessimistic	29.39	32.94	41.40	32.51	11.59	40.60	29.02
Low self-confidence	26.02	34.58	42.95	29.65	14.56	36.40	55.44
Hopeful	85.92	62.08	69.23	60.61	80.70	54.95	68.11
Hopeless	31.78	35.92	48.02	40.85	38.32	44.19	21.45
<b>Entrepreneurial dimension</b>							
External locus of control	80.73	53.27	65.40	69.96	78.67	59.48	82.57
Proactive and independent	74.04	72.11	63.79	68.48	56.75	56.59	96.74
Embraces change	62.33	57.98	65.80	52.48	78.17	56.96	42.21
Problem solving, lacking vision	60.17	51.81	52.31	51.96	45.32	47.76	55.72
Drive for achievement and innovative	79.87	56.77	61.48	61.89	68.26	50.74	47.14
Opportunist and determinant	62.90	58.45	52.76	43.23	91.64	43.27	66.36

**Source:** Own calculations from survey data

Notably, CL3 is characterised by lower levels of Psycap, which is mainly attributable to the higher levels of pessimism, low self-confidence and hopelessness, when compared with the

other clusters. Therefore, the respondents are indicated to be endowed with negative psychological capital. As discussed above, the limited access to livelihood assets may contribute towards the negative Psycap. The deeply rooted sociocultural beliefs and norms on gender roles contribute to the prevalence of negative Psycap (Rietveld and Farnworth, 2018; Djurfeldt et al., 2019). The role of females in agriculture has been increasingly acknowledged as encompassing workers, farm business owners, and managers.

The group shows signs of entrepreneurship with a drive for achievement and innovation, embracing change, and a lower indication of external locus of control. The entrepreneurial characteristics could be explained by the need of the respondents to supplement their diet and make an income, while having flexible schedules to make room for household chores and family time.

- *Social grant-reliant households*

Male respondents (55%), with an average age of 26, are included in Cluster 4 (CL4). Like the previous clusters, 90% of the respondents are single; however, on average, the respondents are part of larger households (6). The youth in this cluster constitute about 22 % of the total respondents. Most respondents have obtained their matric (81%), when the human capital assets are considered. However, as was the case with the previous cluster, they have had limited participation in further training in farming or agricultural-related activities. The limited involvement in training activities is worrisome, since 64% of the respondents in the cluster indicated that they are currently involved in the agricultural sector, with an average of three and a half years of agricultural industry-related experience. The average experience could also suggest that the respondents have not been involved in the agricultural sector for very long. Regarding social capital, the situation is comparable with other clusters, where there is little interaction with other networks or opportunities in the agricultural sector, with only 8% being involved with cooperatives, 29% having some interaction with extension services, and 10% being participants in youth clubs.

The indication of participation in the agricultural sector is similar to that of the average percentage of respondents in the cluster who have access or ownership of land (65%), when considering their natural assets. However, the cluster is characterised by respondents with the smallest average land size (1 ha) compared with the other clusters, where respondents have access to or own land. This indicates that the activities related to farming or other agricultural

activities are currently practised on small pieces of land. Similar to the small average land size, the respondents in CL4 also have the lowest access to livestock, not considering CL1. When considering physical capital assets, it is seen that the cluster has access to the lowest value of physical assets, with the second lowest access to productive assets that can be used to produce their products. Given these indications of limited access to natural and physical assets related to agricultural activities, the cluster indicates that they have minimal resources available. There is a need to identify specific areas within these livelihood assets where assistance can be provided to assist these respondents to either improve their current level of involvement in the sector or start their career in the agricultural industry.

From the discussion, the respondents in CL4 can be described as being involved in the agricultural sector, although this might be limited, given their poor access to key natural and physical capital assets. This potentially reflects a scenario where these respondents participate in agricultural activities as part of a family business where their involvement might be part of their responsibilities. When their financial capital situation is considered, the position is further confirmed, with social grants constituting their primary source of household income, representing the highest average for the cluster compared with all the others.

The cluster shows evidence of positive Psycap, characterised by indications of resilience, self-confidence, optimism, and entrepreneurial capabilities related to being proactive and having a drive for achievement and innovation. However, the cluster is also characterised by having little belief in their abilities to implement strategies without assistance from others (external locus of control). They also have the lowest indication of opportunism and determination, compared with the other clusters. These points illustrate that respondents in this cluster would rely on outside assistance to provide the necessary guidance to progress in their endeavours, whether in agriculture or other industries. These respondents would therefore be best helped by being incorporated in programmes, such as incubators and mentorship, not programmes where only resources are provided, without further assistance being given.

- *Opportunist and determined livestock farmer*

Cluster 5 (CL5) comprises one female respondent who participates full-time in agricultural activities. The participant is involved in a household consisting of four individuals. It can be concluded from the details shown in Table 7.5 above that the respondent is involved in the agricultural sector full-time. One of the main distinguishing characteristics for the participant

from other clusters is the largest land size (600 ha). Livestock income was indicated as the only source of income for the respondent and was ranked as an essential source of income. Fulltime farming as a business was shown as the current occupation for the respondent. Considering the strong entrepreneurial characteristics, such as the ability to seize opportunities, determination, innovativeness and a strong drive for achievement, and access to productive assets and land, the youth represented by this cluster could successfully pursue agricultural businesses. However, support initiatives that could enhance access to credit, training and participation in social networks are key for effective engagement of youth with related characteristics. The respondent indicated experiencing difficulties in making long-term decisions because the rights to the land are currently held only through a PTO. Supporting youth on their rights under PTO land ownership will be essential in these circumstances to enhance active participation.

- *Resource-poor traditional livestock farmers*

This cluster constitutes 30% of the total respondents, who are primarily male and single. Cluster 6 (CL6) has the second-highest average age (28) of respondents and the lowest average household size. Most of the respondents are involved in the agricultural sector (66%), with an average of almost four years of experience. However, contrary to the previous clusters, a few of the respondents in this cluster have completed their grade 12 education, while 14% have received some short-term training related to the agricultural sector.

Notably, CL6 is characterised by poor asset endowment. Compared with other clusters, CL6 has the lowest access to credit (19%), production assets (19%) and social network access, and benefits the least from support programmes (2.68%). Compared with Clusters 2, 3 and 4, Cluster 6 indicated experiencing the most contact with extension services. However, their usage of social media and social groups is lower. The respondents in the cluster thus rely more on physical networks (person-to-person) as opposed to virtual or social networks by making use of technology. Not considering Clusters 1, 5 and 7, which only have one respondent each, Cluster 6 has the highest percentage of respondents with access to livestock, although their average indicated values are lower, when compared to Cluster 3. This suggests that livestock play an essential role in the cluster since the income from livestock is the second highest, after non-farming income.



Furthermore, youth in this cluster are endowed with negative Psycap. The respondents in the cluster have the second lowest indications for resilience (58%) and lowest for hopefulness (55%). The indication for pessimism and hopelessness is the second highest, contributing to the cluster's negative Psycap. Entrepreneurial dimensions associated with the cluster are also average, with most of the dimensions being below average, which illustrates lower entrepreneurial behaviour from the respondents. For the youth associated with the cluster, participation in agriculture might be for self-fulfilment, with little effort taken, rather than a chosen livelihood strategy. When strategies are considered for involving youth in this cluster, care must be taken to ensure sufficient support and assistance are provided over time, given the low indication of resource endowment, Psycap and entrepreneurial behaviour. Specialised support must be considered, where the youth are taken through steps, ensuring they have achieved specific goals before advancing, and ensuring that the necessary skills and development have attained.

- *Non-farming income with access to credit*

This cluster (CL7) is represented by one respondent who is single and already involved in the agricultural sector. Although the respondent is 20 years of age, several years of experience have already been indicated in the agricultural industry, indicating participation from a very early age. Like the previous cluster, the respondent has finished his schooling career and obtained grade 12, but has not received or participated in any other agricultural-related training. The respondent does have access to extension services and social media, but is not involved in any agricultural cooperatives or youth clubs. Indications are that the respondent is involved in agriculture through a family farming business, as he did not indicate any land ownership or land size, but does have access to livestock. However, no access to productive assets was reported.

The financial capital of this cluster is characterised by assets such as income from non-farming income and livestock. Access to credit has also been indicated. However, the credit is used not for agricultural purposes. The respondent is endowed with positive Psycap, exhibiting higher levels in the dimensions of resilience and hope. Further, the respondent demonstrated optimistic behaviour. However, the respondent indicated lower levels of self-confidence and might need some assistance in completing tasks. Concerning entrepreneurial dimensions, the respondent is well placed, overall, towards entrepreneurial behaviour as she is pro-active,

independent, opportunistic, and determinant. Like Psycap, the respondent might have difficulty believing in her abilities to complete tasks successfully and coping in a changing environment such as the agricultural sector.

#### **7.4 Summary**

This chapter has endeavoured to develop distinct youth typologies by considering their heterogeneity in asset endowment related to extrinsic factors (human, social, physical, natural and financial assets) and to intrinsic factors (psychological capital and entrepreneurial characteristics). The results produced seven youth typologies that all have distinct characteristics. Three of the seven typologies have only one participant, while Typology 2 (Income secure) consists of nine participants. The majority of the respondents are therefore captured in three typologies, namely females endowed with negative Psycap (CL3), social-grant reliant household (CL4), and Resource-poor traditional livestock farmers (CL6).

The results highlight the importance of de-homogenising the characteristics of youth, which can then guide policy efforts to direct scarce resources to the most appropriate beneficiaries and avoid over- or under-emphasising priority groups. There are overarching characteristics between the typologies that provide a general basis for support. However, by further exploring and extending the characterisation of the topologies, more details can be obtained to further understand their differences. This understanding will then provide a basis to inform the development of strategies through which the youth can be assisted with tailor-made interventions to either get involved in the sector or enhance the participation of those who are already involved.

## Formulation of development paths for establishing businesses within the agricultural sector

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### Overview

Chapter 8 provides a characterisation of the typologies identified in Chapter 7 and in Focus Group Discussions. The characterisation highlights differences between the typologies to inform the construction of functional development paths for youth participation in the agricultural sector.

### 8.1 Introduction

As found in the previous chapters, the heterogeneous nature of respondents indicates that they would react differently to support and policy initiatives. The response of the youth to farming opportunities and support initiatives, and the success thereof, is thus dependent on how well aligned the opportunities and support will be to their heterogeneous nature. Reflecting this nature of young people in policy initiatives is considered imperative, if policies are to succeed in making agriculture more attractive and a viable means of livelihood for youths (Bennell, 2010; Mathivha, 2012; Zulu et al. 2021). Youth development frameworks and pathways have been identified to effectively guide the structure and design of support programmes (Roth and Brooks-Gunn, 2003). According to Landicho and Dizon (2020: 60), a development pathway is “*a pattern of change in the livelihood strategies in response to stimuli*”. To effectively empower the youth for productivity, enhancing the access to resources through engagement models is considered key (Webster, Ganpat and Chester, 2013). As such, engagement frameworks that take into cognisance the diversity of social, cultural, financial, ethnic, natural, and resource accessibility characteristics of youth are considered to be contextually appropriate, when compared with one-size fit all models and frameworks (Webster et al., 2013).

Development pathways are considered applicable to youth, given their heterogeneous nature. While development pathways have been formulated for establishing sustainable farming businesses, the pathways do not sufficiently engage youth, as they mainly consider expansion of agricultural activities (Denison et al., 2016; Wale and Chipfupa, 2018) and technology adoption (Verkaart et al., 2017; Stringer et al., 2020), with little to no priority being accorded to engaging youth. Development pathways should ideally focus on and provide relevant insights into youth groups that can be invested in or supported. While interventions cannot practically be tailor-made for each youth, typologies serve to group youth into homogeneous sub-groups that can serve as a guide to develop appropriate interventions that appeal to youth and are effective in creating a specific group to engage in agricultural activities and businesses effectively.

Youth typologies were developed in Chapter 7. These typologies can be used to ascertain the diversity of youth and to guide support interventions and initiatives that address the actual needs of the youth, and potentially facilitate youth engagement in agricultural activities and businesses (Chipfupa and Tagwi, 2021). Although these studies have highlighted the fact that youth are indeed heterogeneous and valuable support interventions have been recommended, clear and actionable development pathways that integrate and coordinate support initiatives still need to be improved. Efforts to attract and retain youth in agricultural activities and businesses remain disintegrated, with a need for coordination and coherence among plans, policies, strategies and programmes initiated by development partners (Geza et al., 2022).

Various support initiatives have been implemented to enhance youth participation in agriculture and related activities, but the low engagement of youth in agricultural activities and youth unemployment persists. Introducing support initiatives in isolation has provided little success, as youth engagement in agricultural activities remains constrained, limiting the active engagement of youth in the sector. In acknowledging and understanding the nature of youth as a heterogeneous social group, the integration and coordination of support interventions that capture context-based priorities and needs of youth and enhance youth participation in agriculture is necessary. This chapter endeavours to develop functional, tailor-made development pathways that are based on selected typologies to improve youth participation in agricultural activities.

To establish the pathways, the chapter first provides an expanded view of the resource endowment of youth, considering the SLF capital. The assets used in Chapter 7 to develop the typologies are now discussed, by making use of descriptive statistics on the SLF capitals (Human, Social, Natural, Physical, and Financial capital). The discussion on the various categories of capital is complemented with information about the aspirations, willingness, and interest of respondents towards the agricultural sector for each of the identified typologies. The discussion highlights key differences between the typologies in terms of their asset endowments and whether the youth aspire to, are actually willing, and finally interested in, participating in the agricultural sector. The typologies developed in Chapter 7 were presented to youth and other role players in personal communications and Focus Group Discussions (FGD) to ascertain how youth can relate either fully or partly to any of the typologies. Other role players were also able to provide inputs on the typologies. The two processes, expansion and FGD, allowed the participants to provide their thoughts and inputs, thereby enabling the research team to adjust, validate and enhance the typologies to develop the proposed functional, tailor-made development paths to involve youth in the agricultural sector. The following section provides the expansion of the characteristics of the typologies. The final section of the chapter recommends the functional development pathways to enhance youth participation in the agricultural sector.

## **8.2 Extending characterisation and validation of selected typologies**

In Chapter 7, the assets used to subdivide the heterogeneity of youth were discussed to indicate the similarities and differences between the typologies. Of the seven typologies, three were found to have only one respondent. These are considered outliers, and are not used for further discussion. The remaining typologies, 1) income-secure youth, 2) non-occupational endowed with negative Psycap, 3) social-grant reliant youth, and 4) resource-poor livestock farmers, are discussed in more detail regarding the asset endowment concerning the assets associated with the SLF capital. The psychological capital and entrepreneurial assets exhibited by the respondents in the respective typologies have been discussed in Chapter 7. The discussion of the assets is now complemented in this chapter with information about the aspirations, willingness and interest towards participation in the agricultural sector, which aspects were reported in Chapter 6; however, these will be presented in short for each typology.

### 8.2.1 T1: – Income secure

This typology is mainly characterised by youth with stable non-farming income and access to production assets, savings and credit, as well as individuals who attended agricultural-related training. These characteristics represent some factors considered to be key to participating in agricultural activities. Understanding these characteristics can guide the development of a tailor-made development pathway that the youth in this typology could follow to actively participate in agriculture. During FGDs, youth indicated that they do identify with the *Income-secure* typology characteristics, such as access to non-farming income from a permanent job and involvement in agricultural business activities to diversify revenue.

- Human capital

The respondents in the income-secure typology are predominantly (78%) involved in the agricultural sector, firstly, part-time as part of a family business (44%), followed by full-time as an individual (22%) and lastly full-time as part of cooperatives (11%). From the indications, most of the respondents are involved only part-time in the sector, which is confirmed by the fact that 22% are in full-time jobs and 33% are in self-employment. As such, they have other primary sources of income that are not directly linked to agricultural production. The respondents were also characterised by relatively high average farming experience (approximately four years); however, when only the respondents who are currently involved in the sector full-time are considered, the average experience increases to nine and a half years. The results show that these respondents have been involved in the industry for several years, indicating that they are interested in participating in agricultural activities to diversify their income. Furthermore, it also allowed the respondents more time to gain access to and attend training in the sector, which is confirmed by the fact that this group has the highest participation in training, mostly on water management and animal production.

- Social capital

The respondents in the *income-secure* typology have limited access to, or participation in, extension services (22%), cooperative membership (11%), and youth club membership (11%). Despite this low membership in the physical networks, the respondents in this typology are more involved in social media groups, where 56% have indicated that they are members of groups that use platforms such as WhatsApp and Facebook.

However, being a member of these groups does not necessarily contribute towards participation in the sector. Social media groups, for example, could be used for general discussions, such as updates on family and friends and religion. None of these is primarily for agricultural purposes, whereas agricultural-related extension services, cooperatives and clubs should be primarily aimed at distributing agricultural-related information. Social media provides access to a wide range of information, and it is essential to understand what information the respondents access through social media. The respondents in this typology indicated that they primarily access information related to business or entrepreneurial opportunities through using social media. Other information they accessed related to education, social updates (friends, celebrities, etc.) and social events. Information related to the agricultural sector has been accessed on a limited basis by this typology, which needs further exploration.

Extension and social media are considered to be external motivations that could motivate youth engagement in agricultural activities through improved access to information (Juma, 2017, Henning et al., 2022a). However, it was highlighted during the FGDs that extension services are mainly accessed by default, with no specific targeting for the youth.

- Natural capital

The income-secure typology has the highest access to land (77%) of all the four typologies. Land security was indicated as one of the key challenges that limit sustainable agricultural activities for youth. For young farmers, secure land rights could encourage their commitment and long-term investments and thus enhance their active engagement in agricultural activities. The mechanisms providing land rights to the land that respondents have access to mainly comprised private ownership, followed by permissions to occupy (PTO), and temporary grants of use from the chief, headman or other authority. The fact that more (higher percentage) respondents in this typology are involved full-time in agriculture and more income-secure than the other typologies could explain the higher private ownership of land, as compared with the other typologies.

- Physical

Most of the respondents in the income-secure typology have access to general household physical resources, such as smartphones, computers and vehicles. Resources such as cell phones, tablets, radios and televisions can play a pivotal role in enhancing access to

information, as discussed under social capital above. However, the research finds that, even though the respondents in this typology have relatively better-earning capabilities than the other typologies do, they still lack access to the productive assets that could be used to produce commodities from agricultural activities. Although they have limited ownership of or access to productive assets, this typology has the most access to water tanks, ploughs, planters, harrows or cultivators, and tractors of the four typologies.

Some 33% of the respondents in this typology have access to livestock. The livestock enterprises include cattle, sheep, domestic chickens, and pigs. The reason for keeping livestock is mainly for consumption and sales, while factors associated with cultural reasons, such as wealth indicators and draught power, were indicated, to a lesser extent. Similar to previous assets, the respondents in this typology indicated that their asset endowments were used for income generation or to enhance livelihoods. The markets accessed for livestock sales were formal in the form of local butcheries, and informal, where livestock was sold to neighbours.

- Financial Capital

The sales of livestock were stated as a source of income. For the *income-secure* typology, however, the primary source of income was from non-farming activities, which included permanent and temporary employment, indicating occupation in a sector other than primary agriculture. Other sources of income for this typology include remittances, social grants, and crop income. Financial resources thus derive from a wide range of sources, which illustrates the diversification within this typology.

The stable sources of income could also explain the access to credit and savings experienced by the youth in this typology. More than half (56%) of the respondents included in this typology indicated that they had access to savings. This typology indicated the highest credit and savings access. The types of credit they have access to include consumption, other investments, and agricultural credit. The primary source of credit, however, was provided by relatives or friends and informal moneylenders.

- Aspiration, willingness, and interest towards the agricultural sector

Respondents in this typology indicated having mixed aspirations toward participation in the agricultural sector. There was an equal number (40%) between those who indicated that they aspired to participate in the agricultural sector, and those who were not sure. Only 20%



indicated having no aspiration to becoming involved in the agricultural sector. The same results were found when their willingness to become involved in the sector was explored. Only 40% indicated that they are willing to participate in primary agricultural activities and/or value-adding activities. There thus seems to be rather little drive among some of the respondents towards participation in the agricultural sector. Those who were interested did not have a preference between primary and value-adding activities. An interesting observation was that, although only 40% indicated that they are interested in participating in the agricultural sector, they showed an intention to remain involved in it in the future. The focus of attracting youth towards participation in the agricultural sector should be placed first on those with real aspirations and interest towards participating in the agricultural sector in order to ensure that the scarce resources available to attract or support youth towards the sector are used efficiently.

### **8.2.2 T2: Non-occupational youth with negative psychological capital (non-occupational)**

The key characteristics of this typology include having the lowest access to land, the lowest experience and participation in agricultural activities, negative Psycap, and the lowest endowment in social capital.

- Human capital

Respondents in this typology are mainly (57%) not currently involved in the agricultural sector. The remaining 43%, who are involved in the sector, mainly participate in agricultural activities part-time as part of family activities (27%). Very few are engaged on a full-time basis. Some 8.6% are involved on a full-time basis as an individual, and 7.7% full-time as a cooperative member. This further constrains their security to land, considering that land decisions will be mainly controlled by the family's elders, and that succession of female household members is not prioritised in society. Given the low level of involvement, it is essential to determine their occupation. It was found that most were unemployed (45%), followed by being a student (24%), self-employed (11%), and as full-time farmers (10%). Some indicated that they do have salaried and temporary jobs. Thus, this typology consists mostly of youth who are not currently involved in the workforce of the South African economy.

Since most respondents are not involved in the sector, it can be expected that few have participated in agricultural-related training and programmes. The results show that only 15% of the respondents in this typology have participated in agricultural training, which mainly focused on the production system related to agricultural commodities (crops, 11%; animal production, 3%), farm management (2%), and water and climate management (8%). However, the respondents in this typology have received the most training concerning business-related topics, such as business-plan writing (4%) and bookkeeping (2%). Despite the highest participation in training, it must be questioned whether this is enough to ensure the successful participation of these youth in the agricultural sector.

- Social capital

The respondents in the *non-occupational with negative Psycap* typology were found to be more endowed with access to and participation in social capital assets than the *Income-secure* typology are. This typology has the highest reported access to social media (92.31%), youth club membership (14%) and agricultural cooperative membership (22%). Furthermore, this typology has the second-highest interaction with extension services (33.5%). The respondents are thus integrated into some of the networks available in their regions. However, when youth clubs and agricultural cooperatives in the agricultural sector are considered, participation remains very low. Some comments made during FGDs indicated ineffectiveness of, and unhappiness about, cooperatives, mainly regarding management, decision-making and governance. However, the respondents involved in cooperatives were primarily happy with governance (92%), and (90%) had trust in the leadership of the cooperatives they were involved in.

The high participation in social media provides a means to distribute information relatively quickly to respondents of this typology. Social media allows the sharing of information at the press of a button, and is almost immediately available to a broad audience. However, to ensure that the respondents access information relevant to attracting them towards the sector, it must be determined what type of information they access. Differently from the income-secure typology, these respondents are, overall, less business orientated, as the information accessed is updated on friends and celebrities (49%), education/life skills (47%), followed by general news (35%). Aspects related to the agricultural sector were found to comprise the information least accessed by this typology. This shows that, although they are active on social media,

definite strategies would be required to ensure they have gain access to and read agricultural information through social media.

- Natural capital

Youth in the T2 category have the highest average land size (5 ha), but the lowest access to land. Although females dominate the group, more numbers of males (54%) have access to land as compared with females, and the average land size accessed by the male respondents is approximately 10 hectares, compared with the 0.7 hectares accessed by females. Land rights are mainly held through PTOs and are privately held. Respondents in this typology access the smallest areas of land through leasing, borrowing and permission from the chief. This highlights the persisting gender-based inequalities that need to be addressed when it comes to access to land. Poor access and control over land were highlighted to limit the participation of youth respondents in agricultural activities during the FGDs. Comments by the youth mainly highlighted land distribution processes in their communities as disadvantaging the youth. Arable communal land is available, but youth cannot meet certain requirements such as being married, while gender biases disadvantage females, as does favouritism displayed by traditional leaders. The land is then by default being made accessible to older community members. In the QwaQwa area, the point was highlighted that communal land is mainly allocated to established livestock farmers. Efforts to gain access to land through leasing have left one of the respondents frustrated, as she highlighted the point that owners of the land might decide to take back their land, even after they had already started planting crops.

- Physical capital

Household assets were, as in the *Income-secure* youth typology, owned by most of the respondents of the typology, albeit to a lesser extent. One noticeable difference was in relation to access to computers. Only 37% have access, as compared with the 78% of respondents in the *Income-secure* youth typology. The considerable access to social media can further be explained by the number of respondents with access to smartphones or tablets (75%). In relation to agricultural production assets, the situation is similar to the *Income-secure* youth typology with limited access to any agricultural production assets. However, the ownership or access to agricultural productive assets mentioned earlier is even lower for this typology. For those who did indicate having access to physical resources such as motor vehicles, tractors and

implements, these are mainly accessed from the family or through cooperatives, as highlighted during FGDs.

Some of the respondents do have access to livestock (31%), which is comprised mostly of cattle (62%), domestic chickens (57%), sheep (39%), goats (17%) and pigs (12%). Additional reasons were provided by the respondents for having access to livestock, when compared with the business-orientated indication in the income-secure youth typology. The main reason remains sales (61%), followed by consumption (36%). Wealth (13%) was also a reason provided, which was complemented by cultural (12%) reasons, which is also an aspect highlighted in literature for the ownership of livestock. Travel and draught power were also indicated as reasons by a few of the respondents. The markets used for the sales of livestock were more informal, with sales being made to neighbours (44%) and hawkers (42%). This was followed by the formal market, comprising local butcheries (25%), auctions (9%) and supermarkets (7%).

- Financial capital

This typology is characterised by the highest percentage of social grants accessed through the household. The youth in this typology receive their income from a range of sources, which include permanent (12%) and temporary (29%) employment, remittances (24%), crop income (19%), and livestock income (15%). The typology is less income secure than the income-secure typology, given the higher reporting of temporary employment and reliance on social grants. The respondents in this typology also indicated social grants as being essential for the survival of their households. The households receiving income grants suggested that they do not use grant money very often for agricultural purposes such as buying inputs (23%), paying labour (7%) or leasing land (1%), which indicates the importance of the grants for the survival of the household as indicated.

Access to other financial resources was also limited, with very few respondents having access to credit (8%), which was sourced from relatives or friends (24%), savings clubs (18%) and moneylenders (12%). This typology was, however, the only category where access to credit from a bank and from the government was indicated, with 24% of those who accessed credit and indicated banks as being their source. The government was the source of credit for 6% of the respondents in this typology. The typology received access to credit from the most diverse sources, when compared with all the other typologies.

- Aspiration, willingness, and interest towards the agricultural sector

The majority (86%) of the non-occupational respondents<sup>10</sup> in this typology indicated that they aspire to becoming involved in the agricultural sector, while 11% indicated that they are not sure. This provides promise for involving youth in the agricultural sector, considering that most of the respondents associated with this typology were either students or unemployed. Educating the youth on the different levels of participation available would be important, since the high levels of aspirations expressed towards the sector could not be complemented with a clear indication of the level at which they would aspire to become involved. Their aspirations could thus be motivated by their current conditions. The number of respondents who are willing to become involved in the agricultural sector is lower than the indications of those who aspire towards the sector. Only 64% of the respondents indicated that they are willing to participate in the sector, and when the interest to participate in the sector is considered, it was found that less than 60% show an interest to become involved in agriculture or related economic activities. Value-adding activities have been shown to attract interest from respondents in this typology. The results show the importance of the point made earlier, that assistance should be focused on the youth who really have an interest towards participating. A focus should also be placed on marketing the agricultural sector as being broader than only primary production, and on emphasising the opportunities that exist along the value chains and in value-adding activities.

### **8.2.3 T3: Social-grant-reliant youth**

The main characteristics of this typology include sourcing income mainly from social grants, largest average household size, lowest land size access, low entrepreneurial characteristics, and positive Psycap.

- Human capital

*Social-grant-reliant* respondents mainly participate in part-time family businesses. This typology has the most of the single respondents, compared with the other typologies. It is also characterised by respondents who are still living with larger families, as is evident from the highest average household size. Furthermore, this typology has the highest number of respondents who indicated that they are unemployed (55%) and students (15%). The high level

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<sup>10</sup> There were 98 participants in the typology who participated during the second phase of data collection involving aspiration, willingness and interest towards the agricultural sector.

of unemployment and those who are students provide a scenario where there are several youth individuals who can potentially get involved in the sector as an occupation, since there are already several who are involved part-time as part of family businesses (36%). Some 17% are already involved full-time as individuals, and 4% are involved full-time as members of cooperatives. The respondents in this typology have the lowest participation in agricultural-related training, with only 13% reporting to have received training. The training received, again, is mainly in crop production, water management, and proposal or business-plan writing. This typology thus represents youth with very little access to training and support, and who would rely on other means to access knowledge and information regarding the agricultural sector.

- Social capital

Although cooperatives could provide support with gaining access to resources such as physical assets and land for these youth, their limited participation through cooperatives (8.2%) stems from some of the factors highlighted during FGDs on the previous typology on why youth shun participation through cooperatives. Reasons include the ineffectiveness of cooperatives, mainly reflected in issues concerning management, decision-making and governance. However, most of the respondents who were still active in agricultural cooperatives were happy with the governance (78%) and trusted their respective entities' leaders (78%). Membership in youth clubs in the agricultural sector (10%) was found to be the second lowest among the four typologies. There are thus few sources to which these youth can turn for information and knowledge, given the low membership in formal agricultural structures and participation in training and support programmes. Access to extension services was similar to the two previous typologies discussed, where less than 30% of the respondents indicated that they had interacted with extension services.

Social media was found to be a source of information for 57% of the respondents. They mainly accessed information related to education/life skills (43%), and updates on friends and celebrities (31%). This group accessed business or entrepreneurial opportunities (26%) through social media more than other groups did, which might indicate that the respondents in this typology are looking for opportunities to enhance their livelihoods. Thus, it is essential to ensure that they are connected with relevant information sources to provide them access and

thereby assist them in identifying and assessing possible business opportunities in the agricultural sector.

- Natural capital

Although this typology has the second highest access to land, with 65% of respondents indicating they have access to land, the typology is characterised by having access to the lowest average land size (1 ha). Land size might thus be a constraint for the youth in this typology, potentially influencing their ambitions and scale of production. The respondents appear to be more secure in their land rights compared with the previous two typologies, with the majority indicating that they own the land privately (58%) or hold land under a PTO (65%). It can be deduced from the information provided by the respondents that some have access to more than one plot of land, which they also access through different rights.

- Physical capital

Access to general household assets is not a concern for youth in this typology, which has consistently been the case for all typologies discussed thus far. The findings indicate that, generally, youth have better access to physical assets such as cellphones, computers, radios and televisions, but limited access to productive assets such as tractors and implements. Access to household assets for the *Social-grant* typology is lower, compared with the *Income-secure* and *non-occupational* typologies, indicating that the respondents in this typology are more resource restricted. The youth in this typology also have the lowest access to livestock, with only 30% of the respondents reporting having access to or owning livestock. The livestock includes cattle (55%), domestic chickens (48%), sheep (30%), goats (21%) and pigs (12%). The purpose of keeping livestock is mainly for sales (61%), consumption (39%) and wealth (15%). The reason of the youth in this typology for keeping livestock for cultural reasons was found to be the second highest of all, at 12%. The livestock sales were mostly conducted through informal markets, with only neighbours and hawkers being reported as the markets used by the respondents in this typology. Thus, the respondents have no participation in formal markets in relation to their livestock, at present.

- Financial capital

The *social grant*-oriented cluster confirms the reliance on social grants as a main source of income in developing economies, such as South Africa. Social grants are considered indispensable by the respondents in this typology, as they contribute significantly to their

survival. Grant money is also used to purchase inputs. This is expected, given that grants represent a significant portion of their household income.

Remittances are also considered an important source of income for this typology, indicating that the youth are primarily still residing with families. Given the indication so far, the youth respondents of this typology seem to be primarily involved in agriculture through family participation because they do not have alternative options (employment or career options) or as part of their household duties (family labour). Low access to credit and savings is expected, considering the sources of income indicated by this typology, which cannot be utilised as collateral to secure credit and are not sufficient to provide an excess of savings that could be used as deposits, for example. Credit is sourced from relatives, friends, and moneylenders, indicating mostly informal sources. Some 40% of the respondents indicated that savings were mainly held at formal institutions.

- Aspiration, willingness, and interest towards the agricultural sector

This typology also represents respondents<sup>11</sup> with high aspirations (92%) to participate in agriculture and related activities, and who perceive the sector positively. Not only do the majority of the respondents aspire towards the agricultural sector, but 50% also indicated that they are willing to become involved in the sector. Similar to the *non-occupational* typology, an even lower number is willing to become involved in the sector. However, as with the *non-occupational* typology, low interest (45%) in participating in agricultural activities was found. The low interest to participate is observed, despite the fact that 91% of the respondents indicated that they had a positive perception towards the agricultural sector at the time of the interview. The lack of interest was also underlined during FGDs as being one of the factors that hinder active youth participation in agricultural activities. During an interview with key informants, an extension officer mentioned that “*most youth are not interested, we do have meetings with them to try and give them information but actually they want money, they don’t want to work*”.

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<sup>11</sup> There were 71 participants from this typology who participated during the second phase of data collection involving aspiration, willingness and interest towards the agricultural sector.



#### 8.2.4 T4: Resource-poor traditional livestock farmers

Youth characterised by this typology have the lowest access to resources, compared with the other selected typologies. Participants who identified with this typology were characterised by having poor access to most of the required resources, non-farming income was their primary source of income, and they have no interest in expanding their livestock production activities.

- Human Capital

The *resource-poor, traditional livestock farmers* typology has the second highest participation (66%) in the agricultural sector. Being partly involved in family businesses has been their primary means of involvement, followed by full-time as an individual (17%) and full-time as part of a cooperative (9%). This typology represents youth with the highest average age and lowest education levels, as compared with the previous typologies, where most respondents had completed their matric schooling. The respondents who are involved in the agricultural sector indicated having an average of 6 years of experience in the agricultural industry, illustrating that they have been engaged for some time.

Again, most of the respondents were found to be unemployed (54%). This typology, however, has the lowest number of students compared with the others, at only 9%. It was also found that 14% of the respondents had participated in short-term agricultural training. Despite this being the second-highest participation of the four typologies, participation in short-term agricultural training remains very low.

- Social capital

The respondents in this typology have the second highest (11.4%) involvement in agricultural cooperatives, compared with the other typologies. Although the respondents indicated that they have trust (94%) in the leadership of their cooperatives, some suggested that they have some issues when governance (77%) is considered. Although some indicated being unhappy with the governance of the cooperative, they were not always able to precisely indicate why. One of the issues that were mentioned is that the leadership runs the cooperative project without involving the youth, which suggests that the youth are not really involved, and ultimately not gaining from being a member. Furthermore, the typology has the lowest membership of youth clubs, with only 5% indicating being members in local clubs.

The trend of limited access to social assets continues, with only 40% accessing or receiving information from extension services. Given that this typology has the second highest level of participation in the agricultural sector, it could be expected that the respondents would have greater access to extension services, but this is not the case. The youth in this typology thus need more sources from which they could access new knowledge and information, apart from training and support programmes. Although access to social media is available, the research shows that only 31% of youth in this typology participate in social media activities, representing the lowest among all the typologies. The interaction on social media is mainly related to updates on family and celebrities, education and life skills, social events, and general news. Few (11%) indicated that they access social media to look for or gather information on business and entrepreneurial opportunities. This typology has the lowest interaction with information when farming aspects such as techniques and information are considered. Social media would consequently not be a very effective means of communication with youth in this typology.

- Natural capital

T4 is mainly characterised by limited access to the resources discussed thus far; however, one aspect in which this typology stands out is that 93% of the land accessed by respondents in this typology is achieved through PTOs. This is followed by privately owned land. Unfortunately, the respondents did not indicate who provided the permissions to occupy to them. However, previous indications of being involved as part of the family could suggest that it is possible that family members might hold the PTO, and the youth access the land through their family members. This is further supported by the fact that around 2% of the land access rights have been received temporarily from the chief or headman.

- Physical Capital

Access to and participation in social media has been shown to be lower for this typology, as compared with the other typologies. One of the reasons could be the limited access that the respondents have to smart devices such as smartphones (44%) and computers or laptops (20%). This limits their ability to participate in social media events or information sharing, making them rely on other methods for accessing information. The results show that they do have access to resources such as radios (74%), televisions (71%) and non-smart cell phones (62%),

which do provide some means of accessing information and assistance. Concerning productive assets, the situation is very similar to the previous typologies, where the youth in this typology mainly have access to water tanks (10%) and vehicles (9%).

This typology has the highest access to livestock of all the typologies, providing them with a basis for entering or enhancing participation in the agricultural sector. The livestock mainly consists of cattle (61%), domestic chickens (54%), and sheep (41%). Some respondents also indicated that they keep goats and pigs. Participating in livestock production is a manner through which they can enter the agricultural sector. In that case, it is essential to use livestock for commercial purposes, as opposed to predominantly for own consumption or cultural reasons. Although the majority (60%) of respondents with access to livestock indicated sales as their primary purpose of livestock production, non-farming income represented their main source of income. The purpose for keeping livestock was revealed as sales, closely followed by consumption. A few also indicated wealth and cultural purposes. Similar to the non-occupation and social grant typologies, the sales within this typology were predominantly conducted through informal markets such as neighbours and hawkers. Very few respondents used auctions (10%), local butcheries (9%), or supermarkets (2%) as outlets for their livestock. Access to formal markets could provide valuable revenue-earning opportunities to this typology, given that they could meet the requirements such as for quality and quantity demanded, in some instances.

- Financial Capital

Non-farming income is also an important source of income for this typology. This can be attributed to the fact that many of the respondents for the *resource-poor* typology (29%) receive their income from temporary employment. The importance of social grants is again found, with 46% of the respondents being involved in a household where social grants provide a source of income. Of these, 80% have indicated that social grants are essential for them to ensure that they meet their basic needs. It was further found that 29% use money from social grants to purchase inputs for agricultural production. Income from agricultural sources was lower than non-farming income, with 25% of the respondents in this typology receiving income from crops, and 19% from livestock production. Given the indications of access to livestock and that fact that they are kept primarily for sales, it could be expected that livestock would provide a greater share of income. This represents a possible opportunity to enhance their current level

of involvement by guiding the existing resource of livestock ownership towards viable business opportunities, given that the respondents have the necessary willingness and interest to participate in the agricultural sector.

- Aspiration, willingness and interest towards the agricultural sector

Given the previous evidence noted of low access to resources, especially those associated with agricultural participation, it might have been expected that the respondents<sup>12</sup> in this typology would have lower aspirations towards the agricultural sector. However, although 81% of the respondents indicated that they aspire toward participation in the agricultural sector. Again, fewer respondents are willing to become involved in the sector, with only 42% indicating that they are keen to become involved in primary agriculture, and slightly more than 48% in value-adding activities. A possible explanation could be that the respondents in this typology indicated having the lowest number of positive perception indications (66%) towards the agricultural sector, compared with 80%, 85% and 91%, respectively, for the other typologies. Although most respondents have a positive perception of the sector, there are indications of negative views that would impact on their interest in participating. The respondents were found to have the lowest interest (37%) in participating in agricultural activities.

The elaboration of the various typologies enhances the understanding of the typologies by gaining a better understanding of their various resource endowments. Exploring the characteristics of each typology guides the process of identifying the various areas where support needs to be targeted in order to enhance the active engagement of youth in agricultural activities. While the support interventions discussed in Chapter 2 have addressed some of the constraints impeding active youth engagement in agricultural activities and creating employment for youth, the low engagement of youth in agricultural activities and youth unemployment persist. In 4.2.1, it was found that, despite the number of support programmes that are available in the South Africa, participation by the youth in these programmes ranges from limited to none. This is surprising, given the emphasis that is allocated towards youth and their participation in economic activities, and the role that has been allotted to agriculture for reducing unemployment, not only for youth but also generally in South Africa. Therefore, the suggestion is that the already developed and available programmes should be managed

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<sup>12</sup> There were 59 participants in this typology who participated during the second phase of data collection involving aspiration, willingness and interest towards the agricultural sector.

efficiently and directed towards deserving individuals, which would result in a positive contribution to the country. Enhancing youth participation in the sector would thus require that the deserving youths be linked with the correct existing programmes before suggestions are made for developing new programmes and policies. The following section recommends four pathways for enhancing the purposeful participation of the youth by using the developed typologies as a basis.

### **8.3 Youth functional development pathways**

The following section suggests functional pathways to either involve or enhance involvement of youth in the agricultural sector. Each of the pathways are developed to be dynamic, meaning that a youth can make use of more than one pathway to achieve a set goal in relation to either participating or enhancing their participation in agriculture. Emphasis is thus placed on developing the youth, allowing interrelationships and different starting points of development within the pathway. Progression along the pathway is dependent on the development of livelihood assets and some soft skills specifically identified within the pathway. The pathways are developed by considering the assets that youth are endowed with and how they could enhance their access, before support from external development role players is considered. The emphasis is thus very much on what the youth can do for themselves, before considering other options. The suggested pathways – business-orientated, gender-orientated, occupation-orientated and livestock-orientated pathways – are discussed below.

#### **8.3.1 Business-oriented development pathway**

This pathway aims to develop youth with a secure source of income (occupation) that is not derived from the agricultural sector. Thus, these youth already have a source of livelihood, and the farming business is a strategy to diversify their business portfolio. The youth may or may not be involved in the sector full-time. However, it is expected that youth who are partially involved would be more likely to follow this pathway. The reason is that they would retain their occupation outside of agriculture and diversify to become more involved or expand their current agricultural activities.

The business-orientated path consists of four primary considerations of access to assets, for which specific options are suggested to reach a particular outcome and ultimately reach the goal of 1) being involved in the sector while retaining their main occupation outside of the agricultural sector, or 2) expanding their current level of involvement to ensure the growth of their existing business.

The main assumption or starting point in this development pathway is that these youth do have access to land and/or an occupation other than in the agricultural sector, which provides the main income source for their livelihoods. Youth who do not have access to land or who do not have a main occupation would be advised to follow one of the other pathways. In this pathway, however, the youth would have access to land because they are already participating in the industry, but their current level of activities needs to be increased to ensure growth. Also, there needs to be a willingness to use the financial resources from non-farming income to grow their farming business. When there is no access to land, the youth would be advised or directed to a different development pathway to guide them to reach a level where they might be able to acquire access to land. The youth can then either continue with the path to the intended outcome, or be redirected towards the business-orientated pathway, which is illustrated in Figure 8.1.

The first step (BO1) of the development path is to determine and ensure that the youth are indeed interested in participating in the agricultural sector. Given that the pathway is specifically aimed at youth who are interested in participating in the agricultural industry, their current business activities would provide the necessary indications of their interest. When the youth are not interested in participating in the sector, it would be best to advise them to seek alternative options, gain some experience, or conduct other activities that might provide them with opportunities outside of the sector. They could then follow a pathway outside of the agricultural sector. An alternative would also be providing them with opportunities that could trickle their interest towards the agricultural sector.

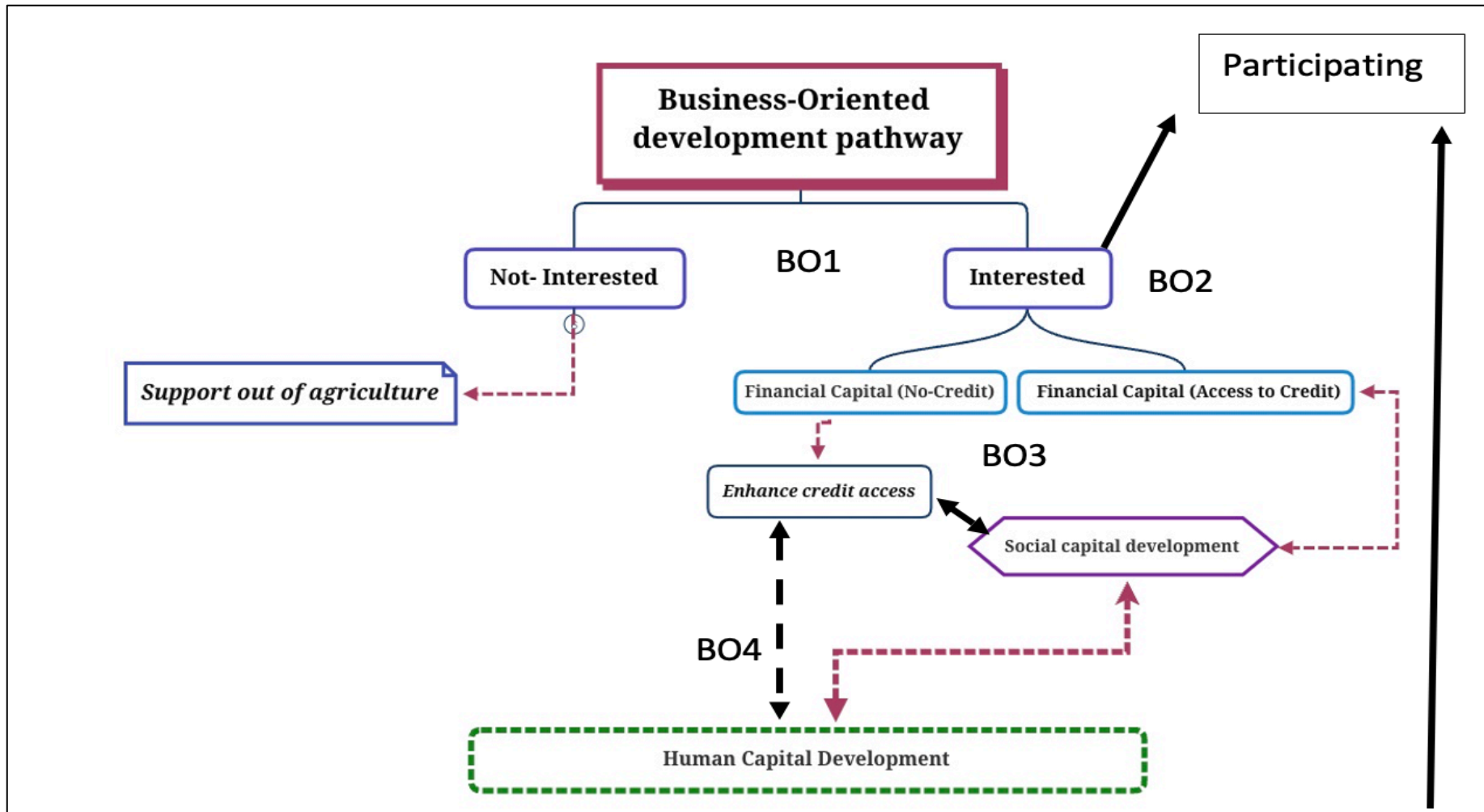


Figure 8.1: Business-orientated development pathway

While access to land is a necessary condition to actively participate in primary agriculture, it is not sufficient to ensure that youth would operate farming businesses successfully. They would also need financial capital to operate their farming businesses. The second step (BO2) is thus concerned with gaining access to agricultural credit needed to achieve the set aims of the farm business. Given that their current income sources are insufficient to expand their operations or they are unwilling to use their non-farm income for the agricultural business, other sources of financial capital should be explored. Credit and savings are other sources of financial capital. However, the research has shown that very few of the youth have savings, meaning savings would not provide sufficient capital. This means that the youth should consider credit capital as a source of financial capital.

Although some of the youth who would be targeted for this pathway have access to credit and savings, that credit is mainly used for personal purposes and derives from insecure sources such as informal moneylenders. One factor that was highlighted during FGDs and seen in Chapters 4 and 7 was the limited access to formal credit. The discussion highlighted the lack of knowledge of the requirements to qualify for support such as credit. The youth who would be targeted for this pathway have access to physical resources, such as laptops, smartphones and motor vehicles, and are able to use the internet to access information on requirements or to visit the local offices of financial service providers in person. Credit constraints such as lack of collateral (Dimelu et al., 2020) among youth have also been highlighted. The possibility of using land owned by youth as collateral and the youth's secure income as proof of affordability could be an option for these youth to gain access to credit. Requirements for credit applications include criteria such as presenting viable business plans, business records, and financial statements.

Youth could take the initiative to gain an understanding of the requirements for accessing credit from various institutions to ascertain what services are available, and most requirement details are published on the websites of the various financial service providers. Training can also be undertaken through the training schemes that are available through support initiatives such as SEDA, CASP and NYDA. The youth considered under this step of the pathway should be able to apply from formal credit sources, given that these youth already have non-farming income. Alternatively, other sources of credit could be explored. When access to credit or other financial resources has been secured, the youth could implement the required adjustments to



expand their farming businesses. Where unsuccessful youth applicants have exhausted their efforts to access credit, other options for obtaining credit could also involve MAFISA. If not, options indicated as step BO3 should be considered, as shown in Figure 8.1 above, which involve social capital

Social capital has been documented to help resource-poor farmers to overcome a number of the constraints they typically face. BO3 focuses on enhancing the social capital endowment of the youth who are following this development pathway. The research has shown that many of the youth have minimal participation in social networks, especially agricultural cooperatives and youth clubs. Social capital provides the options to use their networks to access financial resources by expanding their income-generating abilities. This can be done when social networks enhance their market access. A business cannot be successfully operated, thus making a profit, without a stable and reliable market. The main markets indicated during FGDs included the community, local small shops, bakkie traders, tuckshops, crèches and caterers. A variety of markets exists, which can be accessed and the youth need to ensure that they have or are connected with the necessary individuals to gain access to these markets. This would mainly depend on the youth being able to position themselves so that they would gain access to the networks that provide direct access to the markets. Lack of market intelligence, limited knowledge on market systems and key market factors, such as understanding consumer needs and preferences, are all factors that limit access to formal markets, and these are all obstacles that the youth could overcome without requiring access to significant financial resources.

Participation in collective action, such as through cooperatives, youth groups and entrepreneurship groups, could increase access to markets and business networks where farmer-to-farmer skills transfer might also take place. Youth could develop their market intelligence by learning from others and by being involved in groups based on products or services. Learning to build relationships, leadership and trust in these groups could assist youth to develop and maintain relationships in markets. Youth could also organise market days in communities to allow youth to sell their products without incurring much transport or marketing costs. Youth could also apply to benefit from support programmes such as CASP that support farmers, including youth farmers, through providing marketing training and knowledge. ICT (Information and Communication Technologies) skills can enhance the development of business networks (Yami et al., 2019) that can improve marketing access.

Youth can use ICT platforms such as cell phones and the internet that they use for socialising to market their products to family and friends.

When the youth experience further constraints after all the options in BO1 and BO2 have been exhausted, they should consider enhancing their skills (human capital). Human capital is a major need for managing a farming business. The development of human capital to enhance entrepreneurial and other skills is the final consideration for these youth to enable them to operate their businesses effectively. Human capital development could assist youth to access credit. Youth who are not interested in participating in agricultural activities can be supported to participate in off-farm economic activities, as they are already employed. Youth targeted within the business-oriented pathways will need to be equipped with specific skills to successfully engage in business activities. Skills such as record keeping, business planning, budgeting, marketing, pricing, business literacy and selling can be developed through different training platforms and mentorship. Training forms the basis of fostering skills development, as implemented by the government and other development stakeholders. Youth can participate in skills development and training programmes funded by non-governmental organisations and associations, such as LIMA Rural Development Foundation, South African Grain Farmers Association (SAGRA), Agri SA and African Pathways Youth Development Organisation (PATHWAYS) in efforts to revitalise agriculture. Support provided through YARD, NYDA and CASP is also beneficial for developing skills along the development pathway. Through training, the youth targeted by this pathway may be better equipped to participate in both primary production and value chain business ventures that are sustainable.

Technological advancements in the agricultural sector can be used to their advantage by youth through training in fostering innovative business strategies. These youth already participate in training, but it is necessary to include training in entrepreneurial business skills. The training was highlighted during focus group discussions as being the key support that the youth need. Specifically, business skills were emphasised for operating agricultural activities as profit-making business ventures. One participant mentioned, “*I am interested if I am trained to get skills*”. Youth who are more financially literate, for example, are more likely to run their business with farm budgets and business plans than those without such literacy are (Moore, 2015), which is a key element to achieving success in farming businesses. Other training necessary for youth to engage in enterprises comprise training on marketing activities, financial management, business skills, technical leadership and value addition to farm products. If

guided to draft business plans, youth in this typology might also be able to secure credit to establish their farm businesses through developing human capital. Since youth in this typology already participate in agricultural activities to diversify their income, business skills, such as price risk management, product quality management, and networking, could assist them in structuring their farming operations as a business that aims to make a profit and effectively diversify their income.

### **8.3.2 Gender-oriented pathway**

This development pathway targets enhancing the participation of female youth in agricultural activities, taking into cognisance specific challenges such as negative Psycap and access to land that hinder the active engagement of females in the agricultural sector. Because of society norms and beliefs about gender roles, females are not inclined towards actively pursuing agricultural livelihoods. However, youth are characterised with positive entrepreneurial characteristics, which could enable them to take advantage of entrepreneurial opportunities within agriculture. The youth targeted for this pathway are mostly unemployed and participate in agricultural activities that contribute to household income. Figure 8.2 below depicts the development pathway.

This pathway comprises four steps that the targeted youth could go through to enhance their access to specific livelihoods assets to allow them to actively engage in the sector and earn an income. The starting point (GO1) allows a split to be made between males and females, as the typology used to inform the pathway included both genders. This allows specifically for gender-sensitive considerations to be taken into account in terms of enhancing access to assets along the pathway. The participation by females in agriculture is complicated by the array of roles that they are expected to fulfil by society, and by the societal norms that do not consider females to be capable of participating in agricultural activities, as these are considered to be a career for males. Hence, a gender distinction regarding the types of efforts to enhance livelihood assets is necessary.

For youth to be developed along this pathway, access to natural capital such as land is key. This is considered in step GO2. Access to land is complex for females, given the gender biases when it comes to family succession and inheritance, where males get preferences. Access to

land for females is also complicated by certain considerations such as marital status that are considered by traditional leaders in granting permission to access communal land. For males who have access to land, a recommendation can be made that they could join another applicable pathway, such as the employment-oriented pathway, so they could still get employment through agriculture. If youth do not have access to land, enhancing social capital and financial capital can be considered for gaining access to land for both males and females.

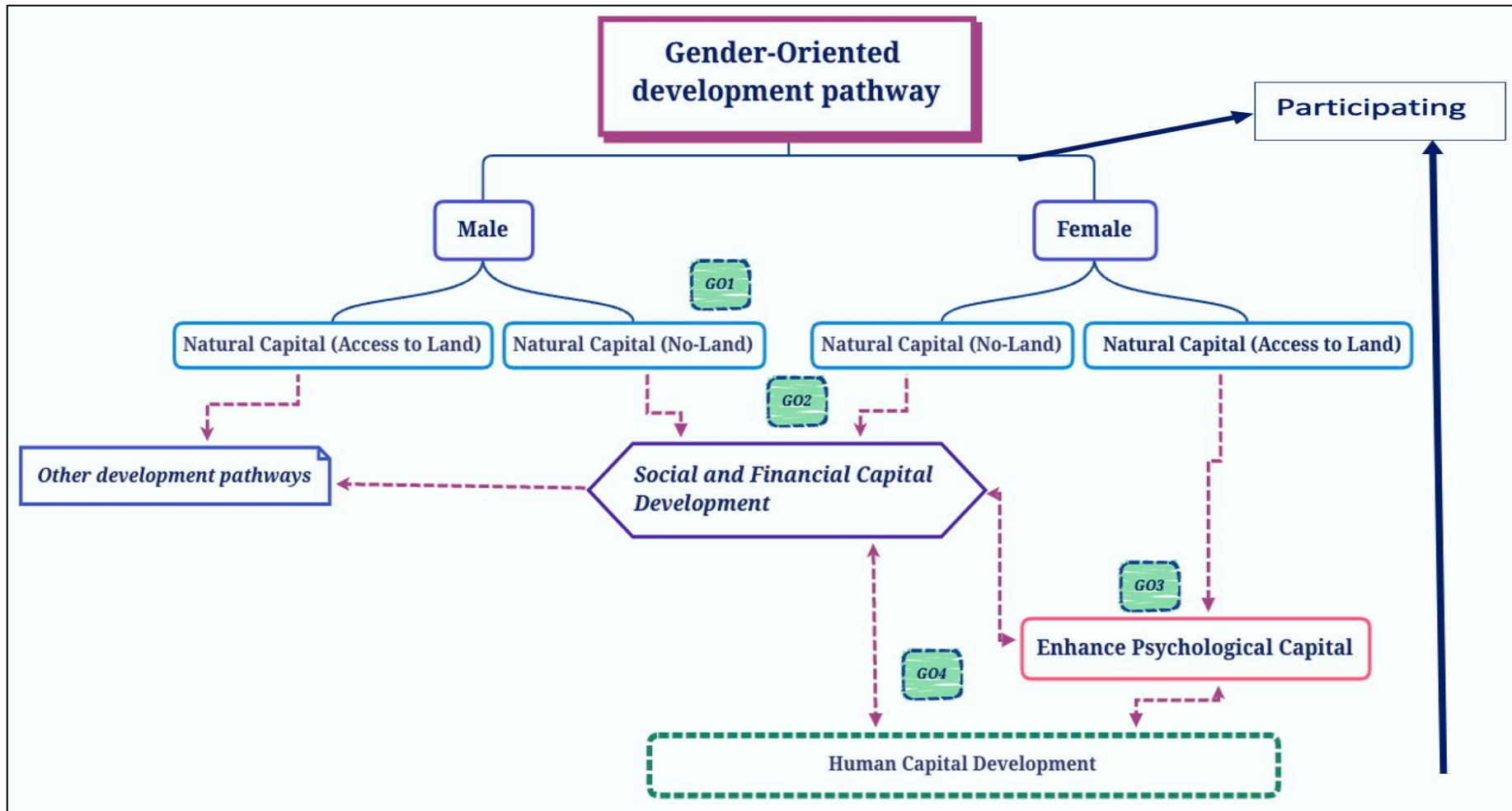


Figure 8.2: Gender-oriented pathway

Collective action taken through cooperatives and youth clubs, for which the youth in this typology are targeted, and in which some already participate, could assist the youth to work communal land through groups. The youth targeted for this development pathway indicated having the highest average participation in youth groups and cooperatives. Intentional and active involvement in such support initiatives would improve access to productive assets such as land for youth. Although some dissatisfaction was expressed by some of the youth in terms of the leadership of the cooperatives by elders, youth could get involved through simple administrative roles, such as minute taking and following up on the progress of planned activities, to enhance their benefits of participation. To facilitate succession and inheritance decisions, female youth could vocalise their aspirations and interest to participate in agricultural activities as a career choice. Positive speech on their vision, such as “I will take over my parents farming business one day” or “I will be a leader in the agricultural industry”, might become normalised. This could boost the confidence of traditional leaders, parents, and community elders in the possibility of females earning their own livelihoods in agriculture, and might assist females with gaining access to land through succession, inheritance, or PTOs for parts of communal land. The use of signed agreements is then recommended, rather than word-of-mouth agreements, with traditional leaders or family members to give youth security and confidence to use the land.

Land can also be accessed through purchases and rental. Access to credit can enable youth to, at least, rent land. However, access to credit from formal institutions might be limited, given that the youth targeted within this pathway are mostly unemployed and would not meet the credit criterion of being “bankable”. Access to credit by youth from private institutions such as banks is constrained mainly by the lack of collateral. Access to funds through other support initiatives such as MAFISA, SEDA and NYDA require youth to understand the eligibility criteria. Most of the information is readily available on the websites of the supporting organisations, and some is available in hardcopy at relevant offices. Female youth should take the initiative to understand these criteria. Requirements such as having a business plan and a registered business, would require youth to seek training before submitting applications for funding. Sometimes, a lack of awareness of local banking services, such as savings and loans, also hamper access to financial resources for females. Practical support should be sought from adult peers and extension services through financial education and information sharing. Attending training to boost financial literacy should assist youth to use credit or funding

effectively, once accessed. Enhancing human capital should be considered for those youth who still have no access to land by enhancing their social and financial capital.

Once youth have access to land, developing Psycap (GO3) for female youth is important for improving their self-confidence for participating in agricultural activities. The lack of self-confidence, hopelessness and pessimism that characterise females participating in agricultural activities negatively impact on their active engagement, as they already consider themselves to be not important stakeholders in the sector. To change this mentality among female youth, they firstly need to be proud of the expectation that they must undertake an array of roles simultaneously, such as being a farmer, a wife, and a mother, rather than to consider these titles a burden. This positive mentality could boost confidence that they are able to be successful in the different areas and make a significant contribution in society.

Social modelling (learning from others) and social persuasion (creating situations for success) could be boosted through young females taking initiatives to visit farms of successful female entrepreneurs or farms managed by females, which might decrease their feelings of doubt and uncertainty on the role that females can play in the sector, when they relate with achievements of fellow females. Female youth could request assistance from extension service officers to arrange for such visits. Visualising success in agriculture could give youth hope and a sense of purpose, where they aspire for achieving a livelihood in agriculture.

Considering the nature of their access to social media platforms described by the youth in this typology, it might assist to improve their hope of succeeding if these youth were to follow motivational speakers on social media platforms, especially females who are successful in agricultural businesses. This could provide coaching through the motivational speakers sharing their stories on how they started their businesses. Through coaching, the youth could set goals and map out ways of achieving and celebrating any milestone achieved to reduce the feeling of pessimism induced by not believing in their capabilities. Although most of the youth in this typology might not qualify to participate in competitions, such as young farmers of the year and Youth in Agriculture, Forestry and Fisheries (YAFF), the youth could take initiatives to attend such platforms, and so be motivated to see that agricultural businesses could provide viable and profitable business opportunities. Support initiatives accessed through CWP (community work programmes), NYDA and CASP products and services include mentorship and coaching, which can be implemented along the pathway to boost the Psycap of youth.

After a positive mindset has been fostered, human capital development to enhance skills in farming and entrepreneurial activities (GO4) would assist youth to actively engage in agricultural activities. Youth targeted for the development pathway have the lowest average years of farming experience, compared with the other groups. This means that youth should focus on developing basic primary farming skills, such as best practices for production of enterprises like vegetables and livestock like chicken, before developing business and entrepreneurial skills. Thus, youth should seek opportunities to develop skills through internships, scholarship, social networks or temporary employment. These youth need basic training on livestock farming, such as feed and vaccinations. For crop enterprises, training on how to plant specific vegetables and crops, when to plant, and how to care for the crops, will be important before packaging or marketing skills should be developed. Internships can expose youth to practical experiences, especially within the primary production level. Youth could develop skills through participation in initiatives, such as community work programmes (CWP), specifically for female youth interested in engaging in agricultural activities. The DALRRD, through extension services, hosts farmer's days where information on certain production practices is presented to community members. Youth need to take the initiative to attend these information days. Youth could also take initiative through collective groups, such as the agricultural cooperatives or youth groups that they are already involved in, to access inputs of production. For vegetables such as pumpkins, seeds can be collected from previous harvests to reduce input costs.

Participation in training recommended for the business-oriented development pathway is also applicable for this pathway, after basic farming skills have been developed. Where skills such as record-keeping and business planning are developed for these youth, they would be able to plan, form a vision, and set goals. Specifically, marketing skills will be crucial if the enterprises pursued by young female farmers produce mainly vegetables that have a short shelf lifetime.

Enhanced human capital can also result through the development of Psycap for youth. Endowed with necessary skills, females would feel more confident in participating in agricultural activities that represents positive Psycap. Accessing training, internships and initiatives, such as CWP through cooperatives or youth groups, in order to develop skills and build social networks also results in acquiring enhanced social capital.



### **8.3.3 Occupation-orientated development pathway**

Typology 3 (T3: Occupation-oriented youth) is represented by the youth in households that predominantly rely on social grants. There were indications from the youth that social grants are essential to ensure their survival. A pathway is thus required to enhance youth participation in the agricultural sector to reduce their reliance on social grants. The pathway is aimed at enabling the youth to find occupations in agricultural activities, both in primary agriculture and value-chain activities. The involvement could be achieved through either creating their own business ventures, participating in family businesses, or finding employment within the agricultural sector.

The youth who do have access to land need to develop their human capital to build their production skills and entrepreneurial skills. The development of human capital could also provide a starting point for youth to develop the necessary social and financial capital to gain access to land. However, for the youth who do not have interest in the sector, it is recommended that they should be supported to engage in off-farm activities, and those youth would then instead follow a path moving out of agriculture.

The first step (OO1) of the pathway to involve Occupation-oriented (Typology 3) youth in agriculture, as shown in Figure 8.3 below, is to determine their interest to participate in agricultural activities. Since females have other responsibilities in their households, it is a priority to determine whether they are actually interested in being involved in agriculture. If there is no interest, options in other sectors should be explored by the youth, allowing them to follow a career or livelihood outside agriculture. Those female youth who do show interest in becoming involved in agriculture should follow string OO2.

In OO2, access to land is the aspect under consideration. The access to, or ownership of, land is essential for engaging in agricultural activities, especially in primary agriculture. The research has shown that land is mostly accessed through land that is granted under PTOs, privately owned, leased, borrowed or received from a chief. These are all options that could be explored by the youth who still need access to land.

Financial capital is required if the youth wish to purchase or lease land. Given the typically limited access to financial resources by the youth, options such as leasing and purchasing of

land might thus be out of their reach. Therefore, priority should be given to the other ways of acquiring land. As explained for the Business-orientated development path (BO2), social networks could help the youth to gain access to land, for example, through being a member of an agricultural cooperative or other collective entity.

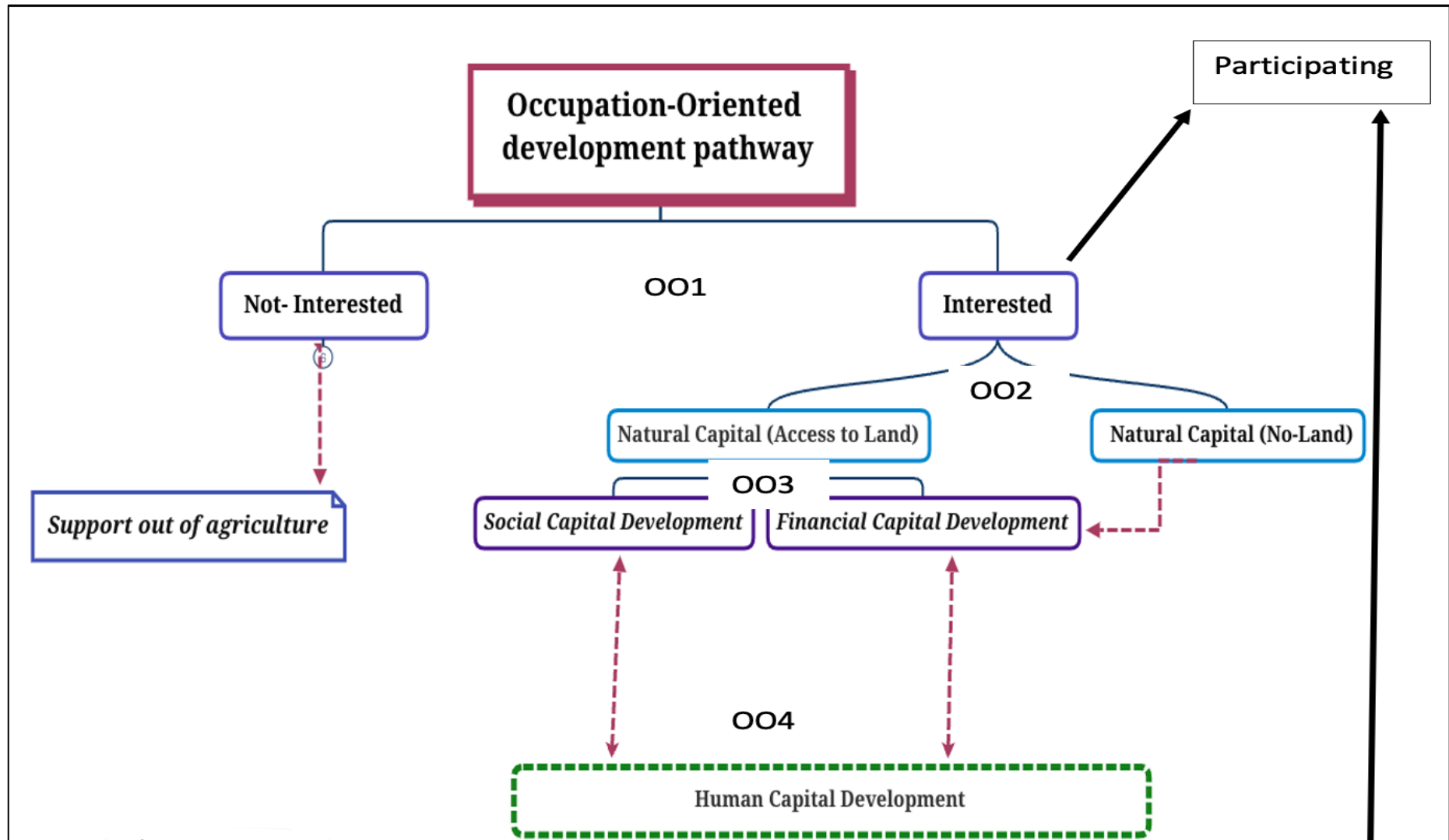


Figure 8.3: Occupation-oriented development pathway

Youth also need to show aptitude, interest, and willingness by taking initiatives to develop both their production and management skills, so as to convince the older generation to initiate land rights transfer processes while they are still involved. Communal and commonage land can be accessed through collective action, such as that represented by participation in cooperatives and youth clubs. Although somewhat limited participation in cooperatives has been reported in the research, there are members of the youth who have successfully participated in agricultural cooperatives. There is an example in one of the study areas, where cooperative members accessed one hectare of land through a government initiative (one hectare per household programme).

Benefiting from support programmes offered by both government and private development partners could also enhance the access to land by the youth. Younger individuals who are still in school can also make use of social initiatives, such as school garden schemes implemented through organisations such as SEDA and Ilima programmes. These can serve as platforms to gain access to land, which might be advantageous for them in later stages of their lives. This would thus require creative thinking and planning (entrepreneurial skills). Youth could also participate in incubator farms that are provided through initiatives, such as Job Funds, an initiative of the Department of the National Treasury, so that the lack of access to land would not continue to hinder their participation in agricultural activities. Given that the initiatives taken have not produced sufficiently successful results, the next step would be to see whether there are any other possible means to make use of human capital resources.

If the initiatives were successful and the youth would then have access to land, their access to financial capital would still remain an obstacle. With social grants constituting the main source of income, the possibility of utilising this income for the procurement of agricultural production input or physical resources is minimal. Gaining access to credit and savings could improve financial capital endowment in this pathway, and assist youth in starting their own business ventures or expanding family businesses. Access to credit remains a major obstacle for the youth who are interested to participate, and also for those who are already participating, in the agricultural sector. Youth in this pathway are also hindered by the fact that they are unable to provide sufficient collateral that is deemed essential for credit access. Participation in collective action through cooperatives could enhance access to production grants and input subsidies and so lessen the financial burden of purchasing production inputs. Youth could also take initiative to develop skills, such as business planning and financial literacy, through training and

mentoring in order to be considered by formal credit institutions. The initiatives that youth could take to enhance their access to credit and the support available are similar to those discussed under the gender-oriented development pathway. The last option available for the youth would be to consider their own abilities. It might be necessary for the youth to empower themselves with the necessary skills and abilities that are required for making use of all the other types of capital.

The final step (OO4) entails the youth taking the initiative to empower themselves. With access to natural, social and financial capital, the development of human capital can contribute to youth becoming occupied in the agricultural sector. Enhancing human capital includes developing farming and entrepreneurial skills. Youth can attend training and farmer days, and ask for guidance from elders within family businesses, who would mentor the youth to develop farming skills in enterprises such as vegetables and chickens that may not be too complex for the youth to master. Youth should understand the complexity of the activities that they can manage to avoid becoming disheartened and losing interest. Another consideration is to participate in mentorship programmes, apprenticeships and internships that would allow youth to experience success stories and to change their mindset positively about the agricultural sector. Youth could also make use of the different social media platforms they are part of to learn and develop skills. The youth considered in this development pathway are characterised by having low self-reliance and low ability to embrace change and seize business opportunities. Youth could take the initiative to attend training in technical, business, marketing, leadership and financial management skills. Training could be accessed through the support initiatives offered by SEDA and CASP. Cooperatives also provide a platform for youth to be mentored and trained to develop an array of skills and nurture high-quality relationships through building personal and professional networks with peers and near-peers.

Developing human capital could also assist youth to access financial and enhanced social capital. With improved financial literacy, business acumen and skills such as business planning, youth would be enabled to engage with formal institutions to access credit and to access support initiatives such as MAFISA. Developing human capital through collective action enhances one's social capital and might also help to access natural capital such as land.

### **8.3.4 Livestock farming oriented**

The development pathway aims to target youth who are interested in participating in agriculture and related activities through livestock farming. The youth targeted for this pathway are characterised by low endowment in most productive resources. Determining whether they are actually interested in participating in livestock farming is the first step in the pathway. For those youth who are not interested, a pathway out of agriculture is recommended. Access to land determines the level of participation that interested youth can engage in.

The livestock farming orientated pathway consists of three primary considerations of access to assets. The goal is to involve the youth through the livestock they either own or have access to. This would also include the youth who keep livestock for cultural purposes, as opposed to business purposes.

As with the business-orientated pathway, the livestock farming pathway starts with the assumption that the youth have access to livestock, which then forms the centre point of the pathway, as shown in Figure 8.4 below. The pathway first considers the interest of the youth in agricultural participation and, as with the previous pathways, recommends that those youth who are not interested in agriculture should instead follow a career pathway out of agriculture. For those who are interested, the second step (LS2) would be to determine their access to land. This step would entail similar steps to those already discussed for the previous pathways. One different aspect that would need to be considered is the size of land required for livestock farming. The livestock that are typically owned by the youth who would follow this pathway mostly include cattle, chicken and sheep. Extensive livestock farming that includes cattle and sheep requires larger land sizes, which need to be provided for by the youth. However, cattle and sheep can be farmed intensively in ways that require less land, but do require certain infrastructure such as fencing, housing and water infrastructure. Chicken or poultry farming is similar, where infrastructure such as a chicken coup might be required. All of these require financial capital. An alternative form of accessing land to be considered, which requires less financial capital, is the use of communal land in the area. Land security remains a challenge, given that the rights to use land are mainly held through PTOs. Discussions with key informants highlighted ongoing discussions within government stakeholders to implement a more effective youth LandCare programme that considers factors such as gender and succession processes.

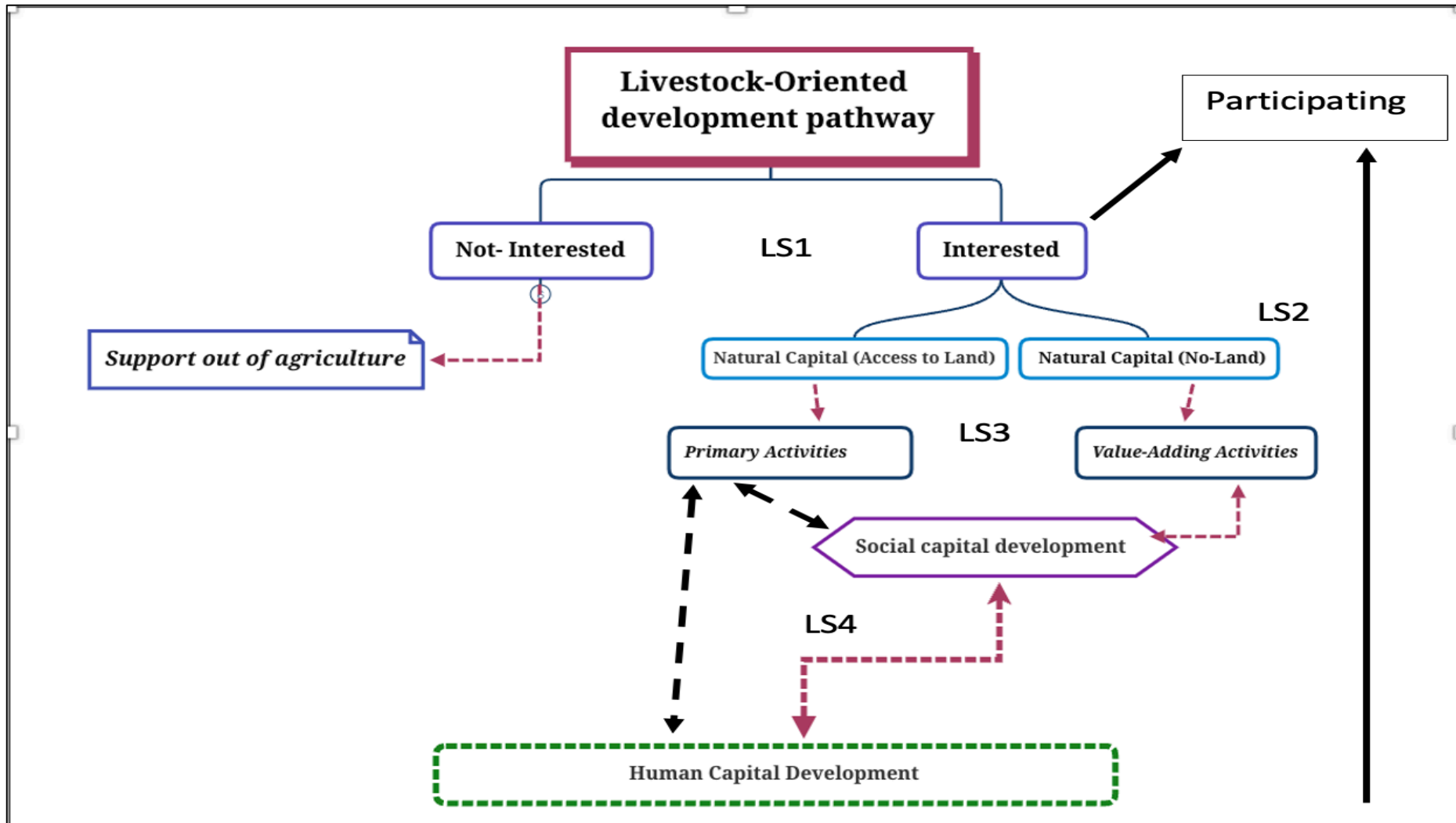


Figure 8.4: Livestock farmers development pathway

The third string of the pathway (LS3) relates to the enhancement of the social and financial capital of youth. Since some of the youth might require larger pieces of land, access to sufficient financial capital would be required to purchase land. When renting land is considered, the price might be more affordable, but would then require the youth to make use of their human or social capital to develop a business plan or to produce financial statements to determine whether there would be any economic benefits, given the determined price. The youth's expertise or capacity should be considered if they do not have the capacity to make these determinations independently. These would also be included in the setting up of a formal agreement to rent land to ensure that the agreement meets the requirements to provide the youth with secure land tenure. Secure land rights have secondary implications for youth, as they could result in the youth gaining enhanced access to financial assets, especially credit. Collective action through participation in youth cooperatives, as suggested in previous pathways, is considered for enhancing their development through the pathway.

Youth who are targeted for the development pathway have the lowest access to social media, which means that their social networks are key to accessing information by them. Given that the youth are also characterised by having the least interest in participating in agricultural activities, participation by them in cooperatives or youth groups could influence a positive perception and mindset about a livelihood in agriculture through learning and exposure to success stories. Youth could work together to engage in agricultural value chains prioritised in their specific areas. This might simplify their access to resources, marketing, mentorship, competitiveness and business visibility in communities, and attract more of these youth to participate in such activities. For youth engaging in value-adding activities, cooperatives could facilitate personal skills development, such as in trust and conflict management, leadership and ability to build business networks, which are key for successfully engaging in a complex value chain that has diverse role players. Exposing the youth to success stories about excelling young farmers through support initiatives such as YAFF might break the detrimental mindset and attitude, and encourage youth to embrace a career in agriculture where one can earn an income.

Enhanced access to credit is key for these youth to operate profitable enterprises. Youth can take initiatives to access credit, as highlighted in previous pathways. Participation in support interventions through programmes, such as MAFISA, suggested in previous development pathways, would also be applicable for these youth to access financial capital.



LS4 shown in Figure 8.4 above suggest the final steps to take, if all previous attempts have failed, and represents skills enhancement that would contribute towards overall human capital development. Youth will need skills to successfully engage in livestock production activities, such as breed knowledge, feeding management and vaccinations. Participating in training, mentorship and internships, as suggested in other development pathways, is also applicable for building skills and enhancing human capital for the youth in this pathway. Youth can attend training in basic business management skills such as record keeping that could influence their independence in decision-making, which might motivate them to engage in farming activities as a business, as opposed to as a way of life. Promoting the operation of modern, innovative and entrepreneurial livestock enterprises through participation in support initiatives, such as the Sernick emerging farmer's programme, could be considered for enhancing skills. To successfully engage in value-adding activities linked to livestock production, such as the production of meat, eggs, chicken, milk and cheese, the youth will need to acquire entrepreneurial skills such as product transformation, packaging and marketing.

#### **8.4 Summary**

The chapter has shown that there is distinct difference between the four typologies developed in Chapter 7. The interests of the youth to be involved in the agricultural sector were found to vary between the four typologies, illustrating that the actual interest towards the sector is something that needs to be considered in the development pathways to ensure that resources are allocated and used efficiently. Getting youth involved in primary agriculture was found to be a starting point, given that most youth are involved in agriculture through family businesses and in primary agriculture, as shown in their income structures. Land is thus a requirement for practising primary agriculture. Secondly, the financial resources of the youth were found to be limited, which restricts the ability of the youth to perform certain tasks or access resources, which relates to their physical capital, especially productive assets. These points provide an overview of key aspects to be considered in the development of the functional pathways.

The pathways that were developed must be seen as being dynamic, functional pathways. This means that the prospects of the youth can be developed by making use of more than one pathway to help them to achieve their goals, which might be to get involved in the sector or to enhance their existing participation. Although there are unique steps within each pathway, it was found that the resources that are required to assist during the implementation of the

pathways are similar, given the low resource endowments of the youth, in general. The research suggest that youth must first see what they can achieve themselves, before relying on other or outside assistance, although this does not mean they should not ask for assistance. Rather, instead of youth waiting for assistance to arrive at their doorstep or taking access to a programme for granted, the youth must be actively search for alternatives and thus move away from the dependency syndrome mentioned in literature.

### 9.1 Summary

South African youth are experiencing a very high level of unemployment, especially in rural areas, which has contributed towards the movement of youth away from the rural areas to urban areas. This only contributes towards the problem. The agricultural sector has been identified as providing a solution to counter the unemployment issues of the country, and several initiatives have been introduced to create jobs in the sector. However, many of these initiatives have not provided the expected outcomes, and the unemployment in the rural areas remains high, including for the youth. Interventions are thus required to show that the sector is indeed a viable option through which youth can enhance their livelihoods.

One of the problems is the perception that is widely held regarding the agricultural sector. The sector is seen as a hardworking, low return area, which is not appealing to the youth. This is despite the indications and success stories about the youth who are making a decent living and enhancing their livelihoods through participating in the agricultural sector. The attitudes of youth towards farming need to be changed, and the government's policies should create favourable conditions for youth to become involved, not only as workers but also as owners of farming businesses. There is a need to develop pathways through which youth can become involved in the sector by making use of their resources. Therefore, the main objective for this research was to review and evaluate appropriate entrepreneurial development paths for establishing small-scale, rain-fed crop farming businesses in the food value chain by the youth for improved rural livelihoods in at least two selected provinces of South Africa with rural unemployment.

#### Specific Aims:

- To evaluate natural, physical and financial assets (including market access) within a sustainable livelihoods framework for Southern Africa and to give specific attention to smallholder rain-fed farming potential in rural areas.
- To evaluate human, social and psychological assets (including incentives of secure land tenure and leadership capabilities) in relation to entrepreneurial spirit and management

requirements, with particular attention given to the youth in the selected rain-fed farming areas.

- To evaluate currently available incentive schemes, and the access and effectiveness of the operation of these schemes for the youth.
- To evaluate access to information such as market information and available advisory and support services such as extension and training.
- To determine:
  - (a) Reasons for interest/disinterest of youth in small-scale businesses in the rain-fed crop-farming food value chains.
  - (b) Motivations for encouraging the participation of youth in small-scale businesses in the rain-fed crop-farming food value chains; and
  - (c) Opportunities for small-scale businesses in the rain-fed crop-farming food value chains.
- To determine the aspirations and goals of youth for participating in rain-fed crop-farming businesses and related food value chains;
- To formulate and test appropriate development paths and farming models for establishing sustainable small-scale rain-fed crop farming businesses by the youth to increase food security, profitability, employment opportunities and livelihoods in rural areas.

The findings of the research show that the respondent youth are very limited in their endowments of resources required for agricultural participation. There were slightly more respondents who are not currently involved in the agricultural sector. The respondents who are involved in the sector mostly participate through or as part of family activities, followed by full-time involvement as members of cooperatives, and lastly, full-time involvement as an individual. There are thus very few of the respondents who are involved full-time in the agricultural sector, and even those who are involved part-time in the sector do not see it as a full-time occupation. This is despite the significant efforts made towards enhancing participation in the agricultural sector, including for youth. The respondents aspire to be involved in the agricultural sector. However, there are fewer respondents who indicated that they are willing to become involved in the sector, and the numbers were even lower when the interests of the youth to participate in the sector are considered. There is a clear trend found in the research showing that youth do aspire to be involved in the sector, but are not that keen to

participate in the sector. There is a need to properly determine who is actually interested in becoming involved in the sector, and to allocate the necessary time and resources towards those youths. This would ensure that the scarce resources are used more efficiently, which might produce the necessary results to involve the youth through their development in the agricultural sector.

Respondents did show levels of entrepreneurial behaviour, as they are willing to explore alternative options (problem-solving), and to act and allocate the necessary time and effort (motivated, persistent and determined) to make a success. However, the youth were found to be risk averse and would be less likely to consider risky opportunities. Options to attract the youth towards the sector should thus consider their risk attitude and provide strategies to minimise or transfer risk away from the youth. This could also be achieved by ensuring that youth have the necessary knowledge to construct and make use of business plans that would provide strategic assistance to them. The respondents tend to have a mindset and behaviour that is willing to make necessary adjustments to take on opportunities to improve their current situations. For the youth to thrive in the agricultural sector, improvements need to be made in their livelihood assets, which are limiting them in certain cases, such as the availability of secure land tenure, education and effective cooperatives. The results show that the respondents still have some shortcomings in their available resources that would ensure participation in value chains.

Getting the youth involved in primary agriculture was found to be a starting point, given that most youths are involved through family businesses and are involved in primary agriculture. Land is thus a requirement for practising primary agriculture. Financial resources were found to be limited, which restricts the ability of the youth to perform certain tasks or to access resources that relate to physical capital, especially productive assets. These points provide an overview of the key aspects to be considered in the development of the functional pathways.

## **9.2 Conclusions**

Youth unemployment is a multidimensional challenge that requires everyone to play their role, with an emphasis on the youth. The youth comprise a heterogenous social group, whose behaviour and decisions are influenced by their respective endowments in livelihood assets,

states of mind and soft skills. Addressing youth unemployment through enhancing youth participation in agriculture and related activities is an endeavour that should be pursued with a coordinated and integrated approach that recognises development as a progressive process, influenced by the diverse opportunity spaces of the youth.

The pathways developed in this study focus on the interest of youth in being involved in the agricultural sector. This was followed by assessing their endowments in the different resource capitals. The respondent youth mostly have access to land, although the control and property rights over the land can be a limiting factor, as it is mainly accessed through permissions to occupy (PTO). Thus, although the land is accessed, it is not secure as the control and ownership of it is mainly under rights held by the family elders, whether parents, grandparents or guardians. Female youth in agriculture face additional socio-cultural barriers that limit their access to productive resources such as land. Traditional leaders are reluctant to allocate parcels of land to young female farmers because they typically believe that females are simply not capable of engaging actively in agricultural activities, as compared with their male counterparts. Factors such as being unmarried have acted as barriers to gaining access to land for some female youth.

Youth can take an active role by ensuring that, when they are awarded access to land, the necessary institutional arrangements are put in place, thus properly allowing them to benefit. This requires the youth to utilise their human capital and social capital. Social capital can provide access to extension officers, friends and family, and also to legal experts who can provide assistance and guidance in the setting up of formal agreement to ensure that the land rights are more secure. Secure land rights have secondary implications for youth, as they could result in the youth gaining enhanced access to financial assets, especially credit.

Access to credit was found to be very low, with only a few youth having access to credit in the agricultural sector. Without initiatives to improve access to credit for youth, active engagement in agricultural activities, specifically, the businesses of youth will remain constrained. More than half of the households surveyed have access to social grants, and consider the grants as an essential source of income. Income sourced from social grants is, however, mainly utilised for personal upkeep. Some of the youth are characterised by having access to stable, non-farming income that is derived from occupations outside of farming. In scenarios where there is no collateral available to serve as security for loans, access to a stable income could be to the

advantage of youth as a possible means to access credit. This income might also be specifically utilised for obtaining agricultural credit, which would then be used to enhance active engagement in agricultural activities by complementing non-farming resources with the farming business. It can be concluded that having access to income sources such as social grants provides a relatively easy means of income. It is, however, not sufficient to use as start-up capital for a farming business, or for funding production inputs for the farming businesses.

Access to livestock can play a key role in relaxing the financial constraints experienced by youth. Most of the livestock is produced for selling, which can provide a platform to support youth to engage in profitable enterprises. Most of the youth make use of indigenous knowledge in decision-making. They need to receive more training on how to run their production and business activities effectively and efficiently, which would supplement their indigenous knowledge. Targeted training for chicken production could be prioritised. Youth have access to physical resources, such as cell phones, televisions, laptops and radios, but access to productive assets such as tractors and farm implements is low. Collective action initiatives that have been implemented to improve access to productive assets have yet to yield the expected results, as youth participation in cooperatives or youth clubs is low. While collective action is considered key to enhancing access to productive resources, youth currently need to make more effort to receive the benefits made available by being members of cooperatives and youth clubs. Support through government initiatives has not been accessed by most youth, which might explain the limited effectiveness of support efforts to engage youth in agricultural activities. For those who have accessed the support, the duration of the support initiatives was a limiting factor to significantly benefit from the support, as most initiatives were offered only on a once-off basis.

Youth were found to be generally resilient and hopeful. These characteristics indicate positive Psycap, which can be used as a platform for engaging youth through skills development and improving their access to resources to enhance their participation in agricultural activities. Without much support for gaining access to resources such as land, and with limited belief in their ability to engage in agricultural activities successfully, the resulting negative Psycap would hinder their active engagement in agricultural activities. The youth also illustrated behaviour towards being proactive and independent, with a strong drive to achieve and be innovative, while having a problem-solving attitude. However, some of the youth, specifically those who had constrained access to most resources, showed low levels of self-reliance, of the

ability to seize business opportunities, and of determination. When agriculture is not considered to be a profitable venture, it is difficult for a youth to identify viable business opportunities and be determined to succeed. Being mostly involved as part of family businesses, the low income derived from agricultural activities discourages them from viewing agriculture in a positive light. Being self-reliant can be daunting for youth, when access and control to resources that would enable them to make decisions still rest with the parental generation.

Despite these constraints, some youth are interested in engaging in agricultural activities. It is important to identify the youth who have a real interest to become involved in the sector, as opposed to those who aspire to be involved as a short-term solution. Several initiatives have been introduced to enhance youth participation in the agricultural sector. However, the unemployment problem has remained. This shows that a real focus should be placed on those of the youth who are actually interested in becoming involved in the sector. The pathways developed in this research serve to provide a functional road map, where the youth would remain involved in their activities, while they take an active role in enhancing their chances of accessing the required resources. Interest in being involved in agriculture is key in each of the four pathways as a starting point.

### **New Knowledge**

The four development pathways address the various needs of youth, based on their varying resource endowments. The focus of the pathways is to empower the youth, and to establish a culture of self-help among them, rather than them waiting for intervention from government or other third parties. The first part of the solution in a pathway is to show the youth where to find a solution for a particular challenge. Only when such self-help solutions are not available, is intervention from outside parties recommended. Lastly, when outside intervention is still insufficient, it is recommended that changes to policies or the formulation of new programmes or projects be then made.

Based on the pathways that were developed through the research, it is concluded that the existing programmes, policies and support structures may be sufficient to address the challenges of involving youth in agriculture to mitigate youth unemployment. A self-help mindset, with some assistance in the form of a knowledge or information hub, might help the youth to follow a pathway to become involved in the agricultural sector.



Although there are different typologies of youth, it was concluded that the typology in which a particular youth is grouped should not confine him or her to a particular pathway. The specific pathways are more of an indication of an entry point for youth with certain characteristics. The dynamic nature of the developed pathways allows a person to move between the different pathways, based on the specific needs he or she has at the moment. Although there are unique steps within each pathway, it was found that the resources that are required to assist during the implementation of the pathways are similar, given the low resource endowment of youth in general. Ultimately, the aim of the pathways is to provide youth with a roadmap that they could use to help themselves on the way to becoming actively involved in the agricultural sector.

### **9.3 Recommendations**

This research makes several recommendations for enhancing the active engagement of youth in agricultural activities, including businesses, in the endeavour to address youth unemployment, and develop and sustain the agricultural sector. Recommendations include those regarding the role that development partners can play to address youth unemployment through active engagement in agricultural activities.

#### **9.3.1 Recommendations for Youth**

- The youth need to understand their environment and the resulting opportunity spaces to guide their interests and aspirations in specific agricultural activities and to improve the effectiveness of collective action. Youth need to respond to opportunities rather than to be driven by the necessity to simply earn an income. Youth are currently driven by the need to find employment and earn an income, and without focusing on activities they are interested in. As a result, they drop out of cooperatives when realising that they are not interested and there is only limited income to be earned, which compromises the success of such initiatives.
- Youth should be solution-driven and cultivate a self-help culture, rather than being problem-driven and relying on support from the government. The dependency syndrome has resulted in youth mostly vocalising their limitations, rather than taking initiatives that could improve their livelihoods. The use by the youth of resources at

their disposal, such as their own savings, to initiate engagement in agricultural activities might motivate development partners to support their endeavours.

- Youth need to take initiatives to develop their production, management and entrepreneurial skills in order to simplify land succession and inheritance decisions. This proactivity by the youth could revive the moral and social obligations of elders to support the younger generation with grants of start-up land to enable the youth to become independent. Youth, more especially females, should also understand and become aware of their land rights by seeking information from relevant sources to hold the older generation accountable, as societal norms only influence some gender biases.
- The image of agriculture and mindset held by the youth about the sector need to change, and they should rather view agriculture as a viable career choice, and not only as a safety net while seeking off-farm employment. The majority of youth engaged in agricultural activities through family businesses, but with limited training, have signalled their reliance on indigenous knowledge. The youth should focus mainly on developing skills that would allow them to engage in other value chain opportunities in agriculture that could spark their interests.
- The youth still in school should take advantage of the knowledge and skills that are developed through modules, such as entrepreneurship, when engaging in agricultural activities. Developing human capital would benefit the youth to enhance other livelihood assets such as social and financial capital.
- Social capital enhancement should be prioritised by youth through active engagement in collective action (cooperatives and youth clubs) and the effective use of social media platforms. The youth need to change their negative attitude towards cooperatives. Access to resources, knowledge and skills development, which are among the key factors limiting youth participation in agriculture, could be improved through social networks.

### **9.3.2 Recommendations for policy and other role players**

- Agricultural projects could be implemented in schools, and these would give the youth greater exposure to farming from a young age. Greater exposure leads to greater experience in farming and related economic activities. Farming experience will enable

the youth to continuously participate in agriculture, which eventually leads to improved livelihoods and socio-economic statuses.

- Improved networking and partnerships among government, private and academic sectors is required to improve the quality, coordination, integration and implementation of support initiatives. Implementing support in fragments has not effectively addressed the diverse support needs of youth. Implementation should be made through a comprehensive approach that addresses the heterogeneity of youth, enhances their access to livelihood capitals and soft skills, and effectively develops them in agriculture, and that avoids mismatches between needs and support.
- To possibly improve their interest and ability to participate in the sector, consideration should be given to developing programmes where the youth who show interest towards the sector would provide evidence of their current activity in the agricultural sector, or to launching smaller agricultural projects for the youth, with assistance from governmental extension officers. By thus making sure that these youth are able to prove their active interest and participation, this could potentially motivate others to also start similar agricultural projects, which would qualify for assistance programmes. Moreover, it could result in the youth developing positive aspirations towards the sector. Minor projects like these could also be built around youth clubs, where one youth member would be given access to certain resources, and the responsibilities would then be shared between the various members to ensure the success of the project or projects. It would thus be important for these projects to receive the necessary assistance from, for instance, governmental departments and/or extension officers through providing advice and training. Support initiatives should implement clear contractual conditions to ensure the effective use of support by the youth to avoid depending on handouts and grants that might incentivise youth to stay in worse off positions and might cripple their development mentality. Support initiatives should be embedded in development efforts, with follow-ups being made on the beneficiaries of support to ensure their progress and adherence to the conditions of support.
- Government and private organisations should implement support initiatives guided by the characteristics of youth. Development in production, management and entrepreneurial skills should be prioritised before access and control over natural and physical resources is addressed. The heterogeneity of youth means they will have different starting points of development.

- The research institutions and private organisations should foster the development of soft skills such as entrepreneurship through engaged scholarship and corporate social responsibility platforms, respectively. Soft skills are essential for youth to be able to successfully engage in profitable agricultural businesses.
- The youth need to understand their environment and the resulting opportunity spaces to guide their interests and aspirations in specific agricultural activities. Deliberate agricultural policies are needed to be put in place to support the youth in developing interest and enthusiasm to participate in agriculture. Achieving that requires easing access to resources and providing institutional support for the youth. The support and access to productive resources will retain the youth in agriculture and positively influence their aspirations and perceptions towards agricultural participation.
- Research institutions and private organisations should foster the development of soft skills such as entrepreneurship through engaged scholarship and corporate social responsibility platforms, respectively. Soft skills are important for youth to be able to successfully engage in agricultural businesses that are profitable.
- Skills development should be prioritised by both government and private stakeholders for high value enterprise activities that are attractive to youth. Although high value enterprises may be risky in nature, support, especially from private organisations, to fund such activities is necessary for youth to experience agriculture beyond the traditional practices that they are exposed to within their family businesses.
- Government needs to reform the agricultural land policy to specifically target youth, guaranteeing equal rights, regardless of gender, and sensitising and educating customary authorities on the gender imbalances and hold them accountable for any biases. Land policy should promote formal signed agreements when land is accessed through traditional arrangements, rather than relying on word-of-mouth agreements.
- Innovative agricultural financing support models for youth should be prioritised to enhance their credit access, savings, productivity and investments. Government and private organisation should partner to support youth through blended finance, digital finance and credit guarantees, offering financial products and services that are tailor-made and easily accessible to youth in agriculture in terms of eligibility criteria, interest rates, repayment periods and conditions. Access to credit will enhance the establishment and expansion of sustainable farming businesses.

- Government extension support should be tailor-made for youth and possibly partially privatised. This is critical, as extension services currently represent the network between development partners and youth as beneficiaries. This might entail the use of ICT by extension service officials to improve information access by youth.
- Boosting psychological capital for female youth should be prioritised through gender-sensitive initiatives, such as mentorship, training, collective action and social modelling efforts, pioneered by both private and government organisations that recognise the dynamics of social norms. There is need to promote a positive mindset among females through acknowledging the significant contribution they could make as farmers and leaders in the agricultural industry.
- Youth should be solution driven rather than problem driven and depending on support from the government. The use of their own resources at their disposal, such as own savings, to initiate engagement in agricultural activities could motivate development partners to support their endeavours.
- The current incentive schemes should be reviewed, although many on the face of them do meet the needs of the sector. The problem is, however, that in many cases, the wrong individuals gain access to the support, in the sense that they are not able to properly make use of the support, or squander the support. The consequences are that the individuals who are really interested in and are able to be involved in the sector do not receive the necessary assistance through the programmes, and are thus lost to the sector. Policies should be clear and provide incentives for youth to become involved in the sector, and evidence of activities or similar could be added to requirement criteria, rather than criteria that simply accept statements that no resources are owned.
- Youth need respond to opportunities, rather than being driven by a necessity to supplement off-farm income.
- Youth need to take initiatives to develop their production, management and entrepreneurial skills in order to be able to simplify land succession and inheritance decisions. This proactivity by youth could revive the moral and social obligations of elders to support the younger generation with grants of start-up land to enable the youth to become independent.

- The image of agriculture and mindset held by the youth about the sector need to change, and they should rather view agriculture as a viable career choice, and not only as a safety net while seeking off-farm employment.
- The youth still in school should take advantage of the knowledge and skills that are developed through modules, such as entrepreneurship, when engaging in agricultural activities.
- Gaining access to resources, knowledge and skills development can be improved through participation in social networks; hence, youth should prioritise their efforts to become participants in social networks.

### **9.3.3 Recommendations for further research**

The following recommendations were identified during the research, including from suggestions made in post-graduate studies.

- Future research should further explore the development pathways for youth. This research has developed typologies that are different from those of Chipfupa and Tagwi (2021). Both the studies used similar frameworks, but these were applied in different regions of South Africa, thus illustrating that the resource endowments of youth differ between regions. This could ultimately lead to the identification of different needs for different pathways, which would then be used to guide the development of the youth for agricultural participation in different regions.
- The development paths suggested could be used in action research through which they are implemented and tested. This would provide an opportunity to further validate, adjust and improve the paths.
- This research based the measurement of Psycap and entrepreneurial characteristics using the behavioural approach. Future research could include developing an entrepreneurial measurement through observing the actual behaviour of youth in the agricultural sector. This could potentially be done through case studies in rural areas where youth are followed through their experiences of establishing an agricultural business, and are observed through their journey. This could provide valuable knowledge towards understanding smallholder farming entrepreneurship knowledge.

- It would be instructive to undertake a profiling of stakeholders in order to understand their interest and institutional capabilities for engaging in development pathways for the youth.
- Future research could investigate the access by the youth to agricultural information that is specific to agriculture. This should include a review of what information is accessed and through which methods, especially in a South African rural environment context. Although telecommunication infrastructure has improved over the years, there are still rural areas with limited to no access to social media and other means of electronic communication. A lack of access means that the rural youth affected do not have access to information at the same time as do the youth in semi-rural and urban areas. Their lack of access to fast-spreading information through social media is a potential barrier and could lead to them missing opportunities.
- More research is required to be done to gain an understanding of the role of social grants as a source of income for rural households and of the potential impact thereof on the willingness and interest of youth to be involved in the agricultural sector. Given the indications from the research that social grants are deemed essential for the survival of households, the grants might dissipate the initiative to be involved in agriculture, which requires work to be done, as opposed to relying on “handouts” as a source of income. Research on the topic could provide valuable indications and inform the question as to whether structural changes are required be made to incentivise youth in rural households to actively participate in agriculture, rather than to simply rely on social grants.
- A comprehensive review is necessary of the support initiatives supporting the engagement of youth in agriculture and related activities in order to match the actual needs youth and to support them accordingly. The research has mentioned that the youth should take the initiative and be pro-active in searching for support and opportunities to enhance their participation in the sector. A review of current programmes could be beneficial to gain an understanding of who the people are who have benefited and whether they are they still involved in the sector. The way in which programmes are implemented and analysed should also be reviewed.
- An exploration should be made of the differences in and the independence of the decision-making among the youth within each typology, given their participation in

agricultural activities as part of a family business. The role of youth should be better understood in a rural household context. Their roles should be explored, such as whether they are involved in decision-making processes, and whether they are able to make changes to the family business, or whether they are seen as family labour, or whether they are only performing family chores.

- It would be beneficial to explore the factors that might enhance the effectiveness of collective action by the youth to actively engage in agricultural activities. Collective action has been proven to provide access to valuable resources that assist in the performance of farming businesses and smallholder agriculture. Despite these indications, the youth are very limited in their participation in collective structures, and those who indicated not participating stated that they have major issues or concerns with the operations of existing collective structures. An understanding of or an exploration as to why youth are not considering these options provide potential for future research.



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## Appendix 1: Contact details of support initiatives

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- **National Development Plan**

**E-mail:** [info@npconline.co.za](mailto:info@npconline.co.za)(link sends e-mail)  
**Tel:** 012 312 0235  
**Facebook:** <https://www.facebook.com/NDP2030/>

- **National Youth Development Agency**

National

**Address:** Woodmead North Office Park, 54 Maxwell Drive,  
Woodmead, 2191, South Africa  
**Phone:** +27 11 651 7000  
**Fax:** 0800525252  
**E-mail/Website** <https://www.nyda.gov.za/>

Free State Province

**Address:** GF Shop 125, Sanlam Plaza, Cnr Maitland and East Burger  
Street, Bloemfontein, 9301  
**Phone:** 087 158 7606  
**Fax:**  
**E-mail/Website** [Bloemfontein@nyda.gov.za](mailto:Bloemfontein@nyda.gov.za)

- **National Empowerment fund**

National

**Address:** West Block, 187 Rivonia Road, Morningside 2057 PO Box 31,  
Melrose Arch, Melrose North 2076  
**Phone:** [+27 \(11\) 305 8000](tel:+27113058000)  
**Fax:** [+27 \(11\) 305 8001](tel:+27113058001)  
**Call Centre:** [0861 843 633](tel:0861843633) / [0861](tel:0861) (THE NEF)  
**E-mail/Website** [applications@necorp.co.za](mailto:applications@necorp.co.za) (Normal fund applications)  
[covidfund@necorp.co.za](mailto:covidfund@necorp.co.za) (COVID-19 relief fund  
applications)  
[distressfund@necorp.co.za](mailto:distressfund@necorp.co.za) (COVID-19 distress fund  
applications)  
[info@necorp.co.za](mailto:info@necorp.co.za) (General Enquiries)

Free State Province

**Address:** Office No 75, Cnr Charlotte Maxeke and East Burger Street ,  
Bloem Plaza, Bloemfontein Central  
**Tel:** [0861 NEF FSP](tel:0861NEFFSP) ([0861 633 377](tel:0861633377))  
**Fax:** [0861 FSP NEF](tel:0861FSPNEF) ([0861 377 633](tel:0861377633))  
**E-mail/Website** [freestate@necorp.co.za](mailto:freestate@necorp.co.za)

- **IDC**

National: Head Office

**Address:** 19 Fredman Drive, Sandown  
PO Box 784055, Sandton, 2146  
**Phone:** 011 269 3000  
**Fax:** [+27 \(11\) 305 8001](tel:+27113058001)  
**Call Centre:** 0860 693 888  
**E-mail/Website:** [callcentre@idc.co.za](mailto:callcentre@idc.co.za)

**FREE STATE:**

Provincial: Bloemfontein

**Address:** 10 Barnes Street, 2nd floor, Westdene, Bloemfontein  
**Phone:** 051 411 1450  
**Fax:** 051 4474895  
**Call Centre:**  
**E-mail/Website:** [fs@idc.co.za](mailto:fs@idc.co.za)

- Department of Agriculture, Land Reform and Rural Development  
National

**Address:** Agriculture Place 20 Steve Biko (Formerly Beatrix) Street,  
Arcadia Pretoria, 0002  
**Tel:** (012) 319 6000/012 312 8911  
**Fax:**  
**E-mail/Website:** [queries@dalrrd.gov.za](mailto:queries@dalrrd.gov.za) / [info@dalrrd.gov.za](mailto:info@dalrrd.gov.za)  
[www.dalrrd.gov.za](http://www.dalrrd.gov.za)

Free State: Department of agriculture and rural development (office: head of department)

**Address:** **Office of the MEC**, Main Building, Gielie Joubert Street,  
Glen, Bloemfontein, 9360  
**Tel:** 051 861 8440  
**Fax:** 051 861 8452  
**E-mail/Website:** [hodofficemanager@dard.gov.za](mailto:hodofficemanager@dard.gov.za)  
<http://www.ard.fs.gov.za>

- SEDA

**Provincial Manager:**

**Address:** Telkom Building, Block B 1st Floor, Nelson Mandela Road,  
Bloemfontein, 9300  
**Tel:** (051) 411 3820  
**Fax:** (051) 444 4235  
**E-mail/Website:** <http://www.seda.org.za/>

Seda Mangaung Branch Office

**Address:** Bloemplaza Mall, 133 Charles Street, Bloemfontein  
**Tel:** (051) 411 8300  
**Fax:**  
**E-mail/Website:** <http://www.seda.org.za/ContactUs/Pages/Free-State.aspx>

Seda Thabo Mofutsanyana Branch Office

**Address:** Phuthaditjhaba  
**Tel:** (058) 718 5900  
**Fax:**  
**E-mail/Website** <http://www.seda.org.za/ContactUs/Pages/Free-State.aspx>

- SEFA

**Address:** Byls Bridge Office Park, Cnr Olievenhoutbosch Street & Jean Avenue, Building 14, Block D, 11 Byls Bridge Boulevard Highveld Extension 73 Centurion, 0157  
**Tel:** 012 748 9600  
**Fax:**  
**E-mail/Website** [helpline@sefa.org.za](mailto:helpline@sefa.org.za)

- Free State Development Corporation

**Address:** 33 Kellner Street, Westdene, Bloemfontein, 9301  
**Tel:** (051) 400 1500  
**Fax:**  
**E-mail/Website** [wecare@fdc.co.za](mailto:wecare@fdc.co.za)





**YOUTHS' ASPIRATIONS AND PERCEPTIONS TOWARDS AGRICULTURAL PARTICIPATION:**

**A CASE OF TWO FREE STATE REGIONS**

The information to be captured in this questionnaire is strictly confidential and will be used for research purposes by staff and students at the University of KwaZulu-Natal and Free State. It is meant to evaluate natural, physical, financial, human, social and psychological assets within a sustainable livelihoods' framework with a specific attention to smallholder rain-fed farming by youth in rural areas. There are no wrong or right answers to these questions. You are free to be or not part of this survey. UFS ethical clearance number: **UFS-HSD2018/0947**.

Participation is voluntary and that there is no penalty or loss of benefit for non-participation. Being in this study is voluntary and you are under no obligation to consent to participation. You are free to withdraw at any time during the completion of the questionnaire without giving a reason. However, when the questionnaire has been completed and the information has been submitted, it would not be possible to withdraw. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

**There is no financial reward for participation in this study.**

**Would you like to participate in this survey? 1 = Yes 0 = No**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Incomplete

Complete

No:

**YOUTHS' ASPIRATIONS AND PERCEPTIONS TOWARDS AGRICULTURAL PARTICIPATION:**

**A CASE OF TWO FREE STATE REGIONS**

The information to be captured in this questionnaire is strictly confidential and will be used for research purposes by staff and students at the University of the Free State. It is meant to evaluate the natural, physical, financial, human, social and psychological assets within a sustainable livelihoods' framework as well aspirations and perceptions towards agricultural participation, with a specific attention to smallholder rain-fed farming by youth in rural areas. There are no wrong or right answers to these questions. You are free to be or not to be part of this survey. This research has received ethical clearance number from the University of the Free State committee under clearance number: **UFS-HSD2018/0947**.

Participation is voluntary and that there is no penalty or loss of benefit for non-participation. Being in this study is voluntary and you are under no obligation to consent to participation. You are free to withdraw at any time during the completion of the questionnaire without giving a reason. However, when the questionnaire has been completed and the information has been submitted, it would not be possible to withdraw. Your answers will be given a fictitious code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. In other words, your identity and response will remain anonymous/confidential.

**Would you like to participate in this survey? 1 = Yes 0 = No**

Date		Respondent No:	
Province		Enumerator name	
District		Ward No.	
Area/Municipality			

\_\_\_\_\_  
Signature

## A. HUMAN CAPITAL

### HOUSEHOLD DEMOGRAPHICS (ALL YOUTH)

#### Type of Youth:

- 1=Fulltime into farming/agricultural related economic activities (as an individual)  
 2=Fulltime into farming/agricultural related economic activities (as part of a cooperative)  
 3=Partially into farming/agricultural related economic activities (through family business/activities)  
 4=Not currently engaged in farming/agriculture related economic activities.  
 5=Other (also specify)

**A1.** What is the total number of members in your household?

*(Please include only those who stay in the household for 3 or more days per week and eat together)*

Please complete table below for household members where applicable.

A2.	A3.	A4.	A5.	A6.	A7.	A8.	
	Household member (name and surname)	Relationship to <b>household head</b> <sup>1</sup>	Age	Gender <sup>2</sup>	Marital status <sup>3</sup>	Main occupation <sup>4</sup>	Education level completed (e.g. Grade 7)
<b>1</b>	<b>RESPONDENT (youth)</b>						
<b>REMAINING MEMBERS OF THE HOUSEHOLD</b>							
<b>2</b>		<b>1= household head</b>					
<b>3</b>							
<b>4</b>							
<b>5</b>							
<b>6</b>							
<b>7</b>							
<b>8</b>							

#### Key

<b><u>Relation to household head<sup>1</sup></u></b> 1=Household head 2=Spouse 3=Son 4=Daughter	<b><u>Gender<sup>2</sup></u></b> 1=Male 0=Female	<b><u>Marital status<sup>3</sup></u></b> 1=Single 2=Married 3=Divorced 4=Widowed	<b><u>Main occupation<sup>4</sup></u></b> 1=Fulltime farmer 2=Regular salaried job 3=Temporary job 4=Self-employed 5=Student
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5=Grand son 6=Grand daughter 7=Other (specify e.g., in-law)			6=Retired 7=Unemployed 8=Other (specify)
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**YOUTH DETAILS (ALL YOUTH)**

Question		Response
<b>A9</b>	Do you have an agricultural related tertiary qualification? <b>1=Yes 0= No</b>	
<b>A10</b>	Current employment status ( <b>see code below</b> )	
<b>A11</b>	If answer to A10 is 2, 3 or 4, were you employed before? <b>1=Yes 0= No</b>	
<b>A12</b>	If yes in which sector? ( <b>see code below</b> )	
<b>A13</b>	Number of years of experience in farming or agriculture related economic activities?	
<b>A14</b>	Do you have any chronic illness (any condition/s that requires you to be on medication always)? <b>1=Yes 0= No</b>	
<b>A15</b>	Are you taking care of any chronically ill family member(s)? <b>1=Yes 0= No</b>	

**Code for A10.**

- 1= Employed (working for at least five hours in a week; indicate fulltime or part-time)*
- 2= Unemployed but actively pursuing job or business opportunities*
- 3= Discouraged worker (always wants to work but he/she does not see any opportunity in the area)*
- 4= Not actively pursuing job or business opportunities (able and available to work but do not work, not looking for a job or has not started own business)*
- 6= Student*

**Code for A12.**

- 1= Agricultural sector, 2=Transport sector, 3=Manufacturing sector, 4=Service sector, 5=Others (please specify)*

**A16.** Have you ever received any farming or agriculture business-related short-term training?

\_\_\_\_\_ **1=Yes 0=No**

If Yes to A16, please complete the table below for at most 3 important trainings received. If No go to A20

		A17.	A18.	A19.
		Training 1	Training 2	Training 3
a.	Type of training received (Code)			
b.	Who offered the training? (Code)			
<b>For each training received to what extent do you agree with the following statement (Code)</b>				
c.	I attended all the training sessions			
d.	I fully understood the content of the training			
e.	I was able to put into practice all the advice I received from the training			
f.	The training received was relevant			

**Code for (a):** 1 = Crop production; 2 = Livestock; 3 = Water management/Climate change coping strategies; 4 = Proposal writing / business planning; 5 = Financial management/bookkeeping; 6 = Agricultural commodity marketing (includes pricing); 7 = Value addition (processing and packaging) 8 = If other (please specify)

**Code for (b):** 1 = Extension officer; 2 = Fellow farmers; 3 = Private company; 4 = NGO; 5 = Parents/relative knowledge; 6 = Self-taught; 7 = Other (please specify)

**Code for (c-f)** 1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

**Ask questions A20-A21 only if fulltime or partially involved in farming or agriculture related economic activities. Otherwise go to A22.**

**A20.** What kind of indigenous knowledge have you acquired (inherited) over the years from your peers/network, other farmers, own experience and from your forefathers?

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*Note - Indigenous knowledge – Practically relevant Knowledge which is unique to specific (Traditions) or society in; the outcomes of own experience and/or acquired from others, relevant to various farming decisions and practices.*

**A21.** According to your own observation, to what extent do you agree with the following statements regarding indigenous knowledge?

\* 1 = *Strongly disagree*      2 = *Disagree*      3 = *Neutral/Not sure*      4 = *Agree*      5 = *Strong agree*

Statement	Response*
a.	Indigenous practices improve soil fertility and soil structures
b.	Indigenous practices reduce all forms of environmental pollution
c.	Indigenous practices are more efficient in reducing pests and diseases infestation
d.	Indigenous practices reduce input costs of production
e.	Indigenous practices increase value addition for agricultural produce
f.	Indigenous practices increase farmers' income with low cost
g.	Indigenous practices are transitionally difficult to sustain
h.	Indigenous practices increase crop/vegetable production and productivity
i.	Agricultural professionals lack adequate knowledge on indigenous knowledge
j.	Agricultural extension workers fail to appreciate the importance of indigenous knowledge
k.	Agricultural extension workers lack adequate understanding of indigenous knowledge

**A22.** Are you a beneficiary of any government (or otherwise) youth/agricultural/rural development support programs (financial assistance/support with inputs/training, etc.)?

1 = Yes 0 = No

**If yes, please complete the table below. If No go to B1**

A22.	A23.	A24.	A25.	A26.
Programme name	Who is providing?	Type/form of assistance	Duration <i>(indicate unit)</i>	Satisfaction with support <b>(Code)</b>
a				
b				
c				
d				

**Code for A24.** 1=Financial/funding; 2=inputs (specify); 3=training (specify); 4= other (specify)

**Code for A26.** 1= *Very unsatisfactory*; 2=*unsatisfactory*; 3=*Neutral*; 4 = *satisfactory*; 5 = *very satisfactory*

**A27.** If the answer to **A26 (PREVIOUS TABLE)** is 1 or 2, please explain why you were or are not satisfied with the programme?

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**A28.** What can be done to improve such program (s)?

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A29. Do you think the support has to always continue?

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

A30. Please explain the reason for your answer in A29.

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A31. Do you think you have benefited as a result of the support received?

1 = Yes 0 = No

A32. If Yes to A31, how did you benefit?

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A33. If No to A31, why?

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A34. If Yes to A31, was the benefit short-term and once off or was it long-term and permanent?

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0 = Short-term and once-off 1 = Long-term and permanent

## B. NATURAL CAPITAL

### LAND OWNERSHIP AND TENURE ISSUES

B1. Do you own or have access to land? 1 = Yes 0 = No

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(If YES proceed to B2, otherwise go to B11 on page 7)

B2. If yes to B1, what is the total number of plots you have?

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**B3.** How much land in hectares do you own/have access to?  
\_\_\_\_\_ Ha

**Please complete the following table regarding the land that you own/have access to.**

Plot		B4.	B5.	B6.	B7.
		Size of plot (hectares)	Means of ownership	Amount per ha per year if plot is leased/rented	Plot quality (fertility and drainage)
a.	Plot 1				
b.	Plot 2				
c.	Plot 2				
d.	Plot 4				
e.	Plot 5				
f.	Plot 6				

**\*Code for B5:** 1 = Owned (hold the permission to Occupy (PTO) rights); 2 = Owned (hold private property rights); 3 = Leased or rented; 4 = Borrowed; 5 = Received from the chief on a temporary basis; 6 = other (*specify*) \_\_\_\_\_

**Code for B8:** 1 = Very bad; 2 = Bad; 3 = neutral; 4 = Good; 5 = Very good

**B8.** Do you find it difficult to make long-term land use decisions due to the current land ownership system? \_\_\_\_\_ **1= Yes**  
**0= No**

**B9.** If Yes to **B8**, what have you done to deal with this difficulty?

\_\_\_\_\_

\_\_\_\_\_

**B11.** To what extent do you agree or disagree with the following?

**1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree**

Indicator	Response
a.	I believe I know my legal rights (i.e., guaranteed power/claims).
b.	I believe I am able to exercise my rights over land (i.e., the rights to use and exclude others from using or occupying the land).
c.	I believe I am free to choose what to produce on my plot.
d.	I trust I can use this land for more than 10 years if I want to.
e.	I do not see threats of eviction from the land.
f.	I believe I can transfer the land to family members if I want to.
g.	I believe I can transfer the land to people not related to me if I want to.
h.	I always find it easy to approach the police if there is conflict on land.
i.	I always find it easy to approach the traditional (informal) courts.
J.	I always find it easy to approach the traditional leaders to resolve disputes
k.	I believe I will be treated fairly by the police at any given moment.
l.	I believe I will be treated fairly by the traditional courts in any given case.
m.	I believe I will be treated fairly by the traditional leaders in any given case

**B12.** As a youth, are there any other challenges you are facing in relation to land?

\_\_\_\_\_

\_\_\_\_\_



**WATER RELATED ISSUES (ALL YOUTH)**

**B13.** How consistent has the rainfall patterns in your area been over the past 5 years (2014-2018)? \_\_\_\_\_

<b>1</b>	Unreliable	<b>2</b>	Somewhat reliable	<b>3</b>	Reliable/consistent
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**B14.** How has this affected farming activities in your area?

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**B15.** What has been the trend of the rainfall received per year for the past 5 years?

<b>1</b>	Decreasing	<b>2</b>	Increasing	<b>3</b>	Consistent
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Did you experience the following natural hazards in the last 5 years/production seasons?

Natural hazard		<b>B16.</b>	<b>B17.</b>
		In the last five years, how many times have you experienced natural hazards	If experienced any hazard, what impact did it have on farming (crop/livestock)?
<b>a.</b>	Drought		
<b>b.</b>	Flood		
<b>c.</b>	Hailstorm		
<b>d.</b>	Any other (please specify)		

**Ask B18 and B19 only if fulltime or partially involved in farming or agriculture related economic activities. Otherwise go to section C on page 8.**

**B18.** What have you done to try and reduce the effects of drought and inconsistent rainfall patterns?

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**B19.** What other water related challenges (if any) are you encountering?

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

### C. PHYSICAL CAPITAL

#### COMPLETE THE FOLLOWING TABLE ON OWNERSHIP AND ACCESS TO ASSETS (ALL YOUTH)

Ask C4 and C5 to only involved in farming/ agriculture related business

Assets		C1.	C2.	C3.	C4.
		Number of assets owned or have access to	Current market value per unit (s) (Rand)	Which ones do you own/access as a group?	Are the production assets adequate for your agricultural activities? 1= Yes 0=No
a.	Cell phone (non-smart)				
b.	Smart phone/iPad (Tablet)				
c.	Radio				
d.	Television				
e.	Computer/Laptop				
f.	Trailer/cart				
g.	Water tank				
h.	Motor vehicle in running order				
i.	Plough				
j.	Planter, harrow or cultivator				
k.	Tractor				
l.	Other (specify)				
m.	Other (specify)				
n.	Other (specify)				

C5. What equipment (that you do not have currently) do you think would improve your production and access to markets?

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C6. Do you own (ones they have control over) any livestock? \_\_\_\_\_ 1= Yes 0 = No

If YES to C6, complete table below on livestock ownership by the youth. If NO go to Section D

Type of livestock		C7.	C8.	C9.	C10.	C11.
		Number owned	Current value	Number sold in the previous six months	Current value per unit (Rand)	Main market livestock sold
a.	Goats					
b.	Cattle					
c.	Sheep					
d.	Domestic chicken					
g.	Other (specify)					

**Code for C11:** 1=Local butchery; 2=Supermarket; 3=Neighbours; 4=Hawkers; 5=Other (specify) \_\_\_\_\_

C12. What is your main purpose of keeping livestock (*multiple answers possible*)

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1 = Sales (income) 2 = Consumption 3 = Wealth 4 = Draught power 5 = Cultural reasons 6 = Other (please specify)

C13. Which of the issues shown below are your main challenges in livestock production? 1 = Yes; 0 No

FACTORS		
a.	Disease outbreaks	
b.	Unable to vaccinate due to financial constraints	
c.	Limited access grazing area	
d.	No access to support services	
e.	Other (specify below)	
f.		
g.		
h.		

#### D. FINANCIAL CAPITAL

Complete table below on sources of household income (ALL YOUTH)

Source of household income		D1.	D2.	D3.	D4.	D5.
		Source of income 1 = Yes 0 = No	Number of times you received this income in year 2018? E.g. once, 2 or 3 times/year, monthly, bi-monthly	Average income each time (Rands)	Total income	Rank of source of income (Code)
a.	Remittances (meputso)					
b.	Arts and craft					
c.	Permanent employment					
d.	Temporary employment					
e.	Social grants					
f.	Crop income					
g.	Livestock					
k.	Other (please specify)					

Code for D5: 1 = least important 2 = not sure 3 = important 4 = very important

D6. If YES to remittances, Major uses of remittances:

1 = Food and groceries 2 = Agricultural inputs 3 = School fees and supplies 4 = Health-related expenses  
5 = Transport 6 = Other (specify) \_\_\_\_\_ (multiple answers possible)

If you have social grants as a source of income, please complete the table below for members in your household/under your care receiving social grants:

Name of person		D7. Number of years receiving grant
<b>Child support grant</b>		
1		
2		
3		
<b>Old persons grant</b>		
1		
2		
3		
<b>Disability grant</b>		
1		
2		
3		
<b>Foster child grant**</b>		
1		
2		
3		
<b>Care dependency grant</b>		
1		
2		
3		

Grant	Name of person	Number of years receiving grants
1.		
2.		
3.		
4.		

*If Grants are received complete the following table, otherwise go to Savings and Credit (D18)*

<b>D8.</b>	Do you use some of your grant money to buy agricultural inputs? <b>1 = Yes 0 = No</b>	
<b>D9.</b>	If Yes, for what input(s)?	
<b>D10.</b>	Do you use some of your grant money to hire casual labour? <b>1 = Yes 0 = No</b>	
<b>D11.</b>	Do you use some of your grant money to hire farming equipment? <b>1 = Yes 0 = No</b>	
<b>D12.</b>	Do you use some of your grant money to lease or rent land? <b>1 = Yes 0 = No</b>	
<b>D13.</b>	If Yes to <b>D8-D12</b> , how often do you do that? <b>1 = Sometimes 2 = Often 3 = Always</b>	
<b>D14.</b>	Roughly, what proportion of your social grant do you use for <b>E8-E12</b> above? <b>1= None 2= A quarter 3= Half of it 4= Most of it 5= All of it</b>	
<b>D15.</b>	Do you consider the social grant as a means of survival to meet basic needs? <b>1 = Yes 2 = Somewhat 3 = No</b>	
<b>D16.</b>	Do you consider the social grant as your primary source of income? <b>1 = Yes 2 = Somewhat 3 = No</b>	
<b>D17.</b>	Do you consider that the social grant has supported personal and family needs? <b>1 = Yes 2 = Somewhat 3 = No</b>	

## SAVINGS AND ACCESS TO CREDIT

**D18.** Do you have any form of savings?

\_\_\_\_\_

**1 = Yes; 0 = No**

**D19.** If Yes to **E18** above, which type of savings? (See code below):

<b>1 = Formal</b>	<b>2 = informal (i.e. stokvel)</b>	<b>3 = both</b>
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**D20.** If Yes to **E18**, how much (Rand)? R \_\_\_\_\_

**D21.** Have you ever taken credit or used any loan facility in the past 12 months?

**1=Yes 0=No**

**If YES to D21, complete the table below, if NO go to D28**

		<b>a.</b>	<b>b.</b>	<b>c.</b>
		<b>Credit 1</b>	<b>Credit 2</b>	<b>Credit 3</b>
<b>D22.</b>	Type of credit ( <b>Code</b> )			
<b>D23.</b>	Indicate source of credit ( <b>Code</b> )			
<b>D24.</b>	How much did you receive from each source?			
<b>D25.</b>	Purpose of credit ( <b>Code</b> )			
<b>D26.</b>	Interest rate (% per month or % per annum)			
<b>D27.</b>	Were you able to pay back the loan/credit in time? <b>1=Yes 0=No</b>			

**Code for D22:** 1 = Consumption (e.g. food); 2 = Agricultural production; 3 = Other investment credit (please specify) \_\_\_\_\_

**Code for D23:** 1 = Relative or friend; 2 = Money lender; 3 = Savings club (e.g. stokvel or internal savings and lending schemes); 4 = Input supplier; 5 = Output buyer; 6 = Banks; 7 = Government; 8 = Microfinance institutions; 9 = Others (please specify)

**Code for D25:** 1 = Family needs-consumption; 2 = Agricultural purposes; 3 = Family emergency-consumption; 4 = Other (specify) \_\_\_\_\_

**D28.** If No to **D21**, please specify the reason(s) for not taking and/or using credit:

**(multiple answers possible)**

<b>1</b>	The interest rate is high	<b>2</b>	I couldn't secure/provide collateral	<b>3</b>	I have got my own sufficient money
<b>4</b>	It isn't easily accessible	<b>5</b>	I do not want to be indebted	<b>6</b>	Other (please specify)

**D29. Complete the table below and indicate the extent to which you agree with the following statements? (ALL YOUTH)**

*\*1= Strongly disagree      2= Disagree    3= Neutral    4= Agree      5 = Strongly agree*

Perceptions on access to credit		D29. Response*
<b>a.</b>	Consumption credit is easy to access but expensive (interest rate is too high)	
<b>b.</b>	Production credit (e.g. Lima) is difficult to access (due, for instance, to bureaucracy and collateral requirements)	
<b>c.</b>	Informal credit (e.g. from village money lenders) is easy to access but expensive (interest rate is too high)	
<b>d.</b>	Formal credit (e.g. from banks, credit & saving associations) is difficult to access but affordable	

## E. CROP PRODUCTION AND MARKETING

Please note: Only ask this section to YOUTH WHO ARE FULLTIME IN FARMING. Otherwise go to Section F.

Complete table for crops grown in 2018 (Please indicate units of produce for each crop)

Crop 1				Crop 2					
<b>INCOME</b>				<b>INCOME</b>					
Area of production				Area of production					
Quantity harvested				Quantity harvested					
Quantity sold				Quantity sold					
Quantity retained/consumed				Quantity retained/consumed					
Unit of sale				Unit of sale					
Average price				Average price					
Market outlet (See Code)				Market outlet (See Code)					
1 = farm gate; 2 = Hawkers; 3 = Local shops; 4 = shops; 5 = van traders; 6 = roadside; 7 = other specify _____ (Multiple options possible)				1 = farm gate; 2 = Hawkers; 3 = Local shops; 4 = shops; 5 = van traders; 6 = roadside; 7 = other specify _____ (Multiple options possible)					
<b>EXPENDITURES</b>				<b>EXPENDITURES</b>					
<b>Inputs</b>		<b>Unit (kg, etc.)</b>	<b>Quantity/ Number</b>	<b>Cost per unit (R)</b>	<b>Inputs</b>		<b>Unit (kg, etc.)</b>	<b>Quantity/ Number</b>	<b>Cost per unit (R)</b>
a.	Seeds				a.	Seeds			
b.	Basal fertilizer				b.	Basal fertilizer			
c.	Top fertilizer				c.	Top fertilizer			
d.	Manure				d.	Manure			
e.	Herbicides				e.	Herbicides			
f.	Pesticides				f.	Pesticides			
g.	Tractor / ox				g.	Tractor / ox			
h.	Transport cost				h.	Transport cost			
i.	Hired labour				i.	Hired labour			
j.	Transaction costs				j.	Transaction costs			

Crop 3				Crop 4					
<b>INCOME</b>				<b>INCOME</b>					
Area of production				Area of production					
Quantity harvested				Quantity harvested					
Quantity sold				Quantity sold					
Quantity retained/consumed				Quantity retained/consumed					
Unit of sale				Unit of sale					
Average price				Average price					
Market outlet (See Code)				Market outlet (See Code)					
1 = farm gate; 2 = Hawkers; 3 = Local shops; 4 = shops; 5 = van traders; 6 = roadside; 7 = other specify _____ (Multiple options possible)				1 = farm gate; 2 = Hawkers; 3 = Local shops; 4 = shops; 5 = van traders; 6 = roadside; 7 = other specify _____ (Multiple options possible)					
<b>EXPENDITURES</b>				<b>EXPENDITURES</b>					
<b>Inputs</b>		<b>Unit (kg, etc.)</b>	<b>Quantity/ Number</b>	<b>Cost per unit (R)</b>	<b>Inputs</b>		<b>Unit (kg, etc.)</b>	<b>Quantity/ Number</b>	<b>Cost per unit (R)</b>
a.	Seeds				a.	Seeds			
b.	Basal fertilizer				b.	Basal fertilizer			
c.	Top fertilizer				c.	Top fertilizer			
d.	Manure				d.	Manure			
e.	Herbicides				e.	Herbicides			
f.	Pesticides				f.	Pesticides			
g.	Tractor / ox				g.	Tractor / ox			
h.	Transport cost				h.	Transport cost			
i.	Hired labour				i.	Hired labour			
j.	Transaction costs				j.	Transaction costs			

**Please note: Marketing costs are those associated with marketing information and search, negotiating and bargaining**



**E11.** Do you sell some of your produce as a group?

*1=Yes 0=No*

**E12.** If No to **E11**, despite the several advantages of selling your produce collectively, why not?

**E13a.** What is the distance to the nearest source of major inputs (minutes)?

**E13b.** What is the distance to the nearest point of sale of your produce (minutes)?

**E13c.** What type of road do you use to access your major input/output markets?

**1 = gravel; 2 = paved road**

**E13d.** Please rate the accessibility of your major road to the input/output markets?

**1=Not accessible at all; 2= not accessible during rainy season; 3=accessible**

**E18. To what extent do you agree or disagree with the following?**

*1= strongly disagree    2= Disagree    3= Neutral    4= Agree    5= strongly agree*

<b>Farming constraints</b>		<b>E17.</b>
		Response
<b>a.</b>	For me, lack of access to inputs (seeds, fertilizer and chemicals etc.) is the major constraint in farming.	
<b>b.</b>	For me, large (unaffordable) increase in input prices is the major constraint in farming.	
<b>c.</b>	Limited or lack of farming knowledge and skills is a major constraint.	
<b>d.</b>	Lack of access to adequate land is a major constraint.	
<b>e.</b>	Insecure land ownership is a major constraint.	
<b>f.</b>	Lack of access to financial resources is a major constraint.	
<b>g.</b>	Too high labour cost is a major constraint.	
<b>h.</b>	Poor rainfall distribution is a major constraint.	
<b>i.</b>	Lack of adequate storage facilities for vegetables or fresh produce is a major constraint.	
<b>j.</b>	Poor output price is a frequent challenge.	
<b>k.</b>	Limited access to market information is a major constraint.	
<b>l.</b>	Lack of access to transport services for marketing agricultural produce is a major constraint.	
<b>m.</b>	Access to the agricultural extension service is a major constraint.	
<b>n.</b>	Inadequate and poor quality of agricultural extension service is a major constraint.	
<b>o.</b>	Local or social conflict- in natural resources management/use is a major constraint.	
<b>p.</b>	Stray animals destroy my crops in the field.	
<b>q.</b>	Expensive data bundles limiting access to information is a major constraint.	

## F. PSYCHOLOGICAL CAPITAL AND ENTREPRENEURIAL CHARACTERISTICS

### ASK F1 - F5 TO YOUTH ENGAGED IN FARMING/AGRICULTURAL RELATED ECONOMIC ACTIVITIES

**F1.** Complete table below on reasons for engaging in farming/agricultural related economic activities

Reasons		F1a.	F1b.
		Tick all applicable	Rank importance
<b>a.</b>	I mainly do farming and related activities for family consumption		
<b>b.</b>	I mainly do farming and related activities for income		
<b>c.</b>	I mainly do farming and related activities to create employment for myself		
<b>d.</b>	I mainly do farming and related activities to create employment for other people		
<b>e.</b>	Other (specify)		

**Code F1b:** 1= *Not important*; 2 = *Rarely important*; 3 = *Neutral*; 4 = *Important*; 5 = *Most important*.

**F2.** Do you separate your business operations from family operations?

\_\_\_\_\_

*1 = Always    2 = Often    3 = Sometimes    4 = Rarely    5 = Not at all*

**F3.** If your answer to **F2** is **4** or **5**, Why?

\_\_\_\_\_

**F4.** Do you keep records of your business activities?

*1 = Always    2 = Often    3 = Sometimes    4 = Rarely    5 = Not at all*

**F5.** How do you measure the success of your farming business?

\_\_\_\_\_

### DIMENSIONS OF PSYCHOLOGICAL CAPITAL (ALL YOUTH)

#### HOPE

**F6.** Youth in South Africa face challenges in trying to access land. Let's say you are one such youth who is interested in farming but facing challenges in trying to access the land.

To solve the problem, to what extent are you most likely to do the following:		Respond*
<b>a.</b>	Engage your family so that they parcel out to you a piece of land	
<b>b.</b>	Talk to traditional leaders to check for the possibility of acquiring land	
<b>c.</b>	Do nothing and hope that they will be available land soon	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

\_\_\_\_\_

**F7.** Young people/youth often face challenges with unemployment, lack access to capital, lack of access to information and poverty, among others.

Given the possibility of any of these constraints existing, to what extent do you believe that:		Response*
<b>a.</b>	There is no possibility of resolving these constraints.	
<b>b.</b>	You still have the potential to work through the challenges and turn things around.	
<b>c.</b>	The government can address the issues.	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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### RESILIENCE

**F8.** Suppose your application for financial support from a bank or funding agency has been rejected multiple times?

To what extent are you most likely to:		Response*
<b>a.</b>	Give up and forget about the business?	
<b>b.</b>	Consult your peers already in business to find out how they managed to obtain funding	
<b>c.</b>	Send your application to a different financial institution?	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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**F9.** Making profit is one of the reasons why people start businesses. Suppose you're running a business and you have been making losses for the past three years?

To what extent are you most likely to:		Response*
<b>a.</b>	Give up and forget about the business?	
<b>b.</b>	Continue with the business and consult a business advisor/peer	
<b>c.</b>	Continue with the business and change the way you run your daily business activities?	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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## SELF-EFFICACY / SELF-CONFIDENCE

**F10.** Suppose the government approaches you with a deal of a farm with inputs provided and you're required to form and lead a youth cooperative who will be funded under this support.

To what extent are you most likely to:		Response*
<b>a.</b>	Accept the deal?	
<b>b.</b>	Ask them to find someone else?	
<b>c.</b>	Ask them to wait because you still want to think about it?	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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**F11.** Suppose you are a member of a youth cooperative in your area and you attend monthly meeting. In these meetings, you do not always agree with some of the decisions taken by the leadership.

You are in one such meeting and wish to oppose some ideas raised by the leaders, to what extent are you mostly likely to:		Response*
<b>a.</b>	Oppose the leader's opinions that are not aligned with your beliefs?	
<b>b.</b>	Agree with the leaders to avoid conflict?	
<b>c.</b>	Agree with the leader to show respect for their position?	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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## OPTIMISM

**F12.** Let's say you have been running your business for some time and you are familiar with the daily responsibilities of your business. Lately, however, you have been making no profit.

To what extent are you most likely to:		Response*
<b>a.</b>	Continue with the business and see these failures and setbacks as temporary	
<b>b.</b>	Invest less of your time on your business and seek other opportunities	
<b>c.</b>	Quit the business and find something else to do	
<b>d.</b>	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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**F13.** Suppose that you own a farming/agriculture related business that has been struggling and someone approaches you attempting to buy the business for a considerable amount of money.

Given this scenario or situation, what will you most likely do?		Response*
a.	Sell the business	
b.	Sell a part of the business	
c.	Refuse to sell and continue with the business.	
d.	Any other (please specify)	

\*1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly agree

Please justify your response(s)

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### Entrepreneurship characteristics

#### **F14. Risk-taking, tolerance for failure**

Financial constraint is one of the major challenges facing young entrepreneurs. Suppose there is an investment introduced to you with two options.

To what extent are you most likely to:		Response*
a.	choose an investment with 50% chance of losing everything and 50% chance that your money will be doubled?	
b.	choose an investment with 100% guarantee that your money will generate a 15% return on investment?	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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#### **F15. Seizing an opportunity,**

Suppose you have a stable job with great benefits and realize a business opportunity in your community

To what extent are you most likely to:		Response*
a.	Quit the job and pursue the business opportunity.	
b.	Continue with your job and ignore the opportunity	
c.	Partner with people and utilize the opportunity while working	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F16. Being determined and persistent, problem solving attitude**

Most youth intending to get into business do not meet the commercial banks' credit requirements to access financial resources. If you face this challenge,

To what extent are you most likely to:		Response*
a.	source finance from other formal organisations that offer financial support, e.g. microfinance organizations	
b.	Source finances from informal organisations like community cooperatives, stokvels and loan sharks	
c.	Source out money from family and friends.	
b.	Do nothing – opt out of business	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F17. Proactive, curious, strong drive to achieve**

At some stage in the business, it is possible to receive many contracts from buyers in the same week. Suppose you have more contracts than usual, need to attend a compulsory meeting and have some family commitments at the same time.

To what extent would you:		Response*
a.	Work longer hours than usual including weekends or hire someone to get the job done?	
b.	Cancel some contracts to minimise work load?	
c.	Contract neighbour businesses to make up quantity.	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F18. Independent**

Young people often face financial constraints and challenges in their lives. There are times when one needs money to buy toiletries, data/ airtime or other personal items. Suppose you find yourself in such a situation,

To what extent are you most likely to:		Response*
a.	Look for piece work/ informal work and earn some money for yourself	
b.	Ask your family to give you money	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F19. Innovation or creativity**

Suppose you are running your own business and you intend to expand it and increase your profits by attracting more customers.

To what extent are you likely to:	Response*
a. Increase production and flood the market with your products	
b. Rebrand your products, give them a fresh and new look?	

1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F20. Efficiency, and profitability**

Suppose you are running a labour-intensive business and an opportunity arises for you to make more money through adopting new equipment/technology. However, taking this route means laying-off a significant number of your employees.

To what extent are you likely to:	Response*
a. Adopt the new technology and retrench most of your workers?	
b. Continue being labour intensive and forego the potential profits	

1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F21. Embracing change/growth**

Farmers are introduced to new modern methods of operating their businesses that are different from their traditional methods. For example, they are introduced to modern inputs like genetically improved seeds, artificial insemination, new packaging machinery, computers for record keeping, etc. Suppose you are a young farmer who has been using the traditional method,

To what extent are you likely to:	Response*
a. Switch to modern technology?	
b. Continue with the traditional methods?	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F22. Internal locus of control, self-reliance and motivation,**

The success of any young entrepreneurs depends on both internal and external factors. Suppose you are given a start-up capital to start a business,

To what extent are you most likely to:	Response*
a. Successfully initiate and run the business with less assistance/mentorship	
b. Need close assistance and mentorship from government and other stakeholders to successfully run the business	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**F23. Visionary and goal oriented, knowing where the farm is destined**

Planning and setting goals helps young entrepreneurs stay productive and focused. The business plan also enables banks and other investors to take you seriously when applying for business funding.

To what extent do you:	Response*
a. do business planning for your farming?	
b. farm without a business plan?	

\*1=Very unlikely 2=Unlikely 3=Neutral 4=Likely 5=Very likely

Please justify your response(s)

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**G. SOCIAL CAPITAL**

**PLEASE ANSWER THE FOLLOWING QUESTIONS REGARDING MEMBERSHIP TO DIFFERENT SOCIAL NETWORKS OR GROUPINGS.**

**G1. Are you a member of an agricultural related cooperative? 1= Yes 0= No**

**G2. If No to G1, Why Not?**

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**G3. If Yes to G1, are you happy with the governance and management of the cooperative? 1= Yes 0= No**

**G4. If you are not happy, what are the issues?**

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**G5. Do you have trust in the cooperative leadership?**

**1= Yes 0= No**

**G6. If No, what are the reasons for your lack of trust?**

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**G7. Are you a member of a youth club/group such as YARD or other? 1= Yes 0= No**

Provide name if possible:

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**G8. How has the membership helped you as a farmer?**

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**G9.** Are you a member of any **social media groups** (WhatsApp or Facebook)?  
**1= Yes 0= No**

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**G10.** How do you think the membership to a social media group has helped you as a farmer/young entrepreneur?

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**G11.** How do you think social media platforms can be used to support youth in farming/agricultural related businesses?

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Please specify other social networks that you are part of and how they have helped you as a young person.

	<b>G12. Other social network/s</b>	<b>G13. How have they helped?</b>
<b>a</b>		
<b>b</b>		
<b>c</b>		

**G14.** If you are not a member of any social network, why Not?

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**(ALL YOUTH)**

**Please indicate the three most common sources of information used in the past starting with the most important.**

		<b>a.</b>	<b>b.</b>	<b>c.</b>
		<b>Source 1</b>	<b>Source 2</b>	<b>Source 3</b>
<b>G15.</b>	Information source			
<b>G16a.</b>	Any cost involved in acquiring the information? <b>1=Yes; 0=No</b>			
<b>G16b.</b>	If Yes, please explain.			
<b>G17a.</b>	How reliable is the information received? <b>1= not reliable; 2= reliable</b>			
<b>G17b.</b>	Please explain.			
<b>G18a.</b>	How useful is the information received? <b>1= not useful; 2= useful</b>			
<b>G18b.</b>	Please explain.			

**Code for G15:** 1= Extension officers; 2= Fellow farmers; 3= Irrigation / Scheme committees; 4= Cooperative leaders; 5= Traditional leaders; 6= Non-governmental organizations (NGOs); 7= Media (newspapers, radio, TV); 8= Training workshops; 9= Community meetings; 10= Phone SMS/text; 11= Social media (Facebook, WhatsApp, etc.); 12. Other (Please specify)

**G19.** How often do you get in contact with extension officers or other industry role players?  
 (Code) \_\_\_\_\_

<i>1 = never;</i>	<i>2 = rarely;</i>	<i>3 = sometimes;</i>	<i>4 = often;</i>	<i>5 = always</i>
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**PLEASE NOTE: ASK QUESTIONS G20 – G25 TO YOUTH WHO INDICATED IN SECTION C THAT THEY OWN/HAVE ACCESS TO A CELLPHONE/COMPUTER.**

**G20.** Do you have access to the social media (Facebook, WhatsApp, Instagram, snapchat, etc.) through your smartphone/computer/laptop? \_\_\_\_\_ **1= Yes; 0= No**

**G21.** If no to **G20**, Why?

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**G22a.** How many hours do you spend on social media per day?

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**G22b.** How much money do you spend on airtime/data per month?

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**G23.** What **type of information** do you access through the different social media platforms?  
 (*Multiple answers possible*) \_\_\_\_\_

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**For G23 see options below.**

<b>1</b>	updates on friends/celebrities	<b>2</b>	social events	<b>3</b>	education/life skills
<b>4</b>	religion	<b>5</b>	Entrepreneurial opportunities	<b>6</b>	general news
<b>7</b>	farming (techniques and technology)	<b>8</b>	output markets and product prices	<b>9</b>	Other (specify).

**G24.** Please indicate the extent to which you agree with the following statements regarding use of ICTs.

*1= Strongly agree      2= Agree      3= Neutral      4= Disagree      5= Strongly disagree*

<b>ICT use</b>	<b>G25. Response</b>
a. Cell phones are too expensive and unaffordable	
b. The high cost of data bundles affects my access to social media/internet.	
c. Poor network/connectivity is major constraint to use of cell phones	
d. Lack of knowledge affects the use of cellphones for productive purposes	
e. I search for information with a mobile phone	
f. I share photos, status and postings using my mobile phone	
g. I send and receive emails through my mobile phone	
h. I send and receive information on sms through my mobile phone	
i. I use my mobile phone to access information about markets	
j. I use my phone to access information on inputs/new technology	
k. I use my mobile phone to access financial services/credit institutions	
l. I communicate with my clients/other business colleagues/market brokers through my mobile phone	
m. I use my mobile phone to increase knowledge on farming/agriculture related economic activities	
n. I use my mobile phone to enhance decision making	

**G25.** Please indicate the extent to which you agree with the following statements on youth attitudes towards ICT

*1= Strongly agree      2= Agree      3= Neutral      4= Disagree      5= Strongly disagree*

<b>ICT attitudes</b>	<b>G25. Response</b>
a. I get anxious when I don't have the Internet available to me	
b. I am dependent on my technology	
c. I get anxious when I don't have my cell phone	
d. I feel that I get more accomplished because of technology	
e. With technology anything is possible	
f. Technology will provide solutions to many of our problems	
g. I feel it is important to be able to access the Internet any time I want	
h. I feel it is important to be able to find any information whenever I want online	
i. I think it is important to keep up with the latest trends in technology	
j. New technology makes people waste too much time	
k. New technology makes people more isolated	
l. New technology makes life more complicated	

## H. PERCEPTIONS

Please complete the table below in relation to your general and agricultural perceptions towards agriculture.

*1 = Strongly Agree    2 = Agree    3 = Neutral    4 = Disagree    5 = Strongly Disagree*

Statement	Response
<b>General perceptions</b>	<b>H 1.</b>
Primary rain-fed agriculture can offer better livelihood support and is the best way to alleviate poverty	
Primary rain-fed agriculture is unattractive, dirty and backbreaking	
Primary rain-fed agriculture is an option for under-achieving Students and adults	
Primary rain-fed agriculture is reserved for old uneducated people	
I find that primary rain-fed agriculture is attractive to me as a young person	
Primary rain-fed agriculture would be the last choice if other non-farm options are available	
I have seen elders improving their life through primary rain-fed smallholder agriculture	
I prefer irrigated smallholder agriculture to rain-fed smallholder farming	
Value adding agricultural activities are physically demanding	
I prefer an office job than an outside / field job	
I can be wealthy / rich through engagement in agricultural value chain economic activities	
The youth can engage in agricultural value chain activities related businesses	
<b>Perception Towards Small-holder agriculture</b>	<b>H 2.</b>
Smallholder agriculture is not a profitable venture	
Participation in agricultural economic activities will lead to economic empowerment of young people	
Most people known to me love agriculture and agriculture related businesses	
I believe most people known to me will support me if I choose to initiate agricultural business	
Agriculture creates employment for the majority of the rural poor	
<b>Technology Perception</b>	<b>H 3.</b>
The use of technology makes farming easier	
Technology complicates farming	
You cannot rely on technology for farming and related activities	
Morden technology will improve youth participation in agriculture	

**H 4.** What influenced the way you perceive agriculture?

<b>0</b>	My peers	<b>1</b>	My parents	<b>2</b>	The community
<b>3</b>	My experience	<b>4</b>	School	<b>5</b>	Other (Specify)

<b>0</b>	Negative	<b>1</b>	Positive	<b>2</b>	I don't know
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**H 5.** At this point, what would you say your perception towards agriculture is?

Please read the statement provided in the table below and indicate your response using the provided code in the appropriate cell

***Strongly Agree = 1    2 = Agree    3 = Neutral    4 = Disagree    5 = Strongly Disagree***

<b>Knowledge on Agricultural value adding economic activities</b>		<b>H6 Response</b>
<b>a.</b>	Before this interview, I did not know there are other opportunities in agriculture besides primary agriculture	
<b>b.</b>	Before this interview, I did not know I can open a business in the agricultural sector without necessarily engaging in primary agriculture	
<b>c.</b>	I have always known about agricultural value adding economic activities	
<b>Statement</b>		<b>H7 Response</b>
<b>a.</b>	Education can improve the way youth view agriculture	
<b>b.</b>	Access to resources can positively change the way youth perceive agriculture	
<b>c.</b>	Agricultural mentorship programs will change the negative perceptions of youth towards agriculture	
<b>d.</b>	Improved financial income from agriculture will improve the way youth perceive agriculture	
<b>e.</b>	Better extension support will positively shape the views of young people in agriculture	

**A. ASPIRATIONS**

**GENERAL, EDUCATIONAL, OCCUPATIONAL AND AGRICULTURAL ASPIRATIONS FORMATION OF ASPIRATIONS**

**I 1.** Do you aspire to participate in agriculture?

<b>0</b>	No	<b>1</b>	Yes	<b>2</b>	Not sure
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I 2. At which level in agriculture, do you aspire to participate?

\_\_\_\_\_

<b>0</b>	Primary	<b>1</b>	Agricultural value adding economic activities	<b>2</b>	Commercial agriculture	<b>3</b>	Other ( <i>Specify</i> )
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I 3. My Aspirations towards agriculture and related activities was influenced by:

*(Please justify response)*

\_\_\_\_\_

I 4. I aspire to expand my operation (grow the business) in the future

\_\_\_\_\_

*1 = Yes 0 = No*

### ASPIRATIONS TOWARDS AGRICULTURE AND RELATED ACTIVITIES

I 5. Please read the statement provided in the table below and indicate your response using the provided code in the appropriate cell.

**Code: I5: Strongly Agree = 1      2 = Agree      3 = Neutral      4 = Disagree      5 = Strongly Disagree**

Statement		I 5. Response*
a.	I aspire to be involved in rain fed farming	
b.	I aspire to be a successful farmer	
c.	I aspire to become a commercial farmer one day	
d.	I aspire to increase my agricultural production at a later stage	
e.	I aspire to acquire agricultural training and education	
f.	I aspire to an occupation beyond farming, especially primary agriculture	

### ENTERPRISE ASPIRATION

I 6. Would you aspire to venture into an agricultural value adding economic activities:

\_\_\_\_\_ *1 = Yes 0 = No*

**I 7.** Would you aspire to venture into any primary agricultural enterprise activities below  
(*Multiple options possible*): \_\_\_\_\_ *1 = Yes 0 = No*

*1 = Very likely    2 = Likely    3 = Neutral    4 = Unlikely    5 = Very Unlikely*

Enterprises		
a.	Crop production	
b.	Vegetable production	
c.	Livestock	
d.	Dairy	

**I 8.** If YES to any of the above, would you opt for any of the agricultural value adding activities below? (*Multiple options possible*)

*1 = Very likely    2 = Likely    3 = Neutral    4 = Unlikely    5 = Very Unlikely*

Agricultural business along the food value chain, Specify if any ideas of type of business:		
a.	<b>Transportation of produce</b>	
b.	Retailing of produce	
c.	Selling of animal products	
d.	Butchery	
e.	Milling	
f.	Making traditional clothing from animal skin	
<b>Other</b>		
g.		
h.		
i.		

## OCCUPATIONAL ASPIRATIONS

**I 8.** I aspire for a career in:

\_\_\_\_\_

**Following career occupation (*Multiple option possible*):**

<b>0</b>	Office work	<b>1</b>	Medicine	<b>2</b>	Farming	<b>3</b>	Entertainment	<b>4</b>	Banking
<b>5</b>	Engineering	<b>6</b>	Mining	<b>7</b>	ICTs	<b>8</b>	Beauty	<b>9</b>	Other (specify)

(*Please justify response*)

\_\_\_\_\_

## EDUCATIONAL ASPIRATIONS (ALL YOUTH)

**I 9.** Do you aspire to further your education?

\_\_\_\_\_

*1 = Yes    0 = No*

**I 10.** If yes, up to which level?

\_\_\_\_\_

<b>0</b>	Matric	<b>1</b>	Certificate	<b>2</b>	Diploma	<b>3</b>	Degree	<b>4</b>	Postgraduate
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**I 11.** Would you aspire to study an agriculture related qualification?

\_\_\_\_\_

**1 = Yes 0 = No**

**I 12.** If No, what is the reason?

\_\_\_\_\_

<b>1</b>	No money	<b>2</b>	No facilities	<b>3</b>	Not Interested	<b>4</b>	Other (Specify below)
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*Please specify here:*

\_\_\_\_\_

## B. WILLINGNESS

### WILLINGNESS TO PARTICIPATE (YOUTH NOT INVOLVED)

**J 1.** Are you willing to participate in primary agriculture activities? \_\_\_\_\_ **1**  
= *Yes*; **0** = *No*

Please justify your response to **J 1**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**J 2.** Are you willing to participate in agricultural value adding activities (Businesses along the value chain)? \_\_\_\_\_ **1** = *Yes*; **0** = *No*

**J 3. At which level are you willing to participate?**

<b>1</b>	Smallholder primary agriculture level	<b>2</b>	Small business agricultural value adding economic activities	<b>3</b>	Commercial level
<b>4</b>	Research/Academia	<b>5</b>	Other (specify)		

**J 4.** Would you be willing to participate in agriculture or related economic activities, if all the necessary resources are provided to you? \_\_\_\_\_ **1** = *Yes*; **0** = *No*



**C. INTEREST**

**INTEREST IN AGRICULTURE AND RELATED ACTIVITIES (YOUTH NOT INVOLVED)**

**K 1.** Do you have interest in participating in agriculture and related activities?

\_\_\_\_\_ **1 = Yes; 0 =No**

Activity		1 = Yes; 0 =No	If yes, please rate your level of interest
<b>a.</b>	Agricultural value adding economic activities		
<b>b.</b>	Primary agriculture only		
<b>c.</b>	Both primary and value chain activities		
<b>d.</b>	Not interested to participating in any value chain or primary agricultural activities		

*\*1=Strongly not interested; 2=Not interested; 3=Neutral; 4=Interested; 5 = Highly interested*

If **NOT** interested in agricultural value chain activities, (option D) answer the following questions, otherwise go to **K3**

**K 2.** If not interested in Agricultural value chain activities, Why not?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**K 3.** If not interested in primary agriculture, Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**K 4.** If interested, how much time are you willing to allocate to an activity of your choice? (8am-5pm)

\_\_\_\_\_

\_\_\_\_\_

**K 5.** If yes, go to K6 and If No go to K7

**K 6.** What drives your interest in agriculture and related activities?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**K 7.** What drives your disinterest in agriculture and related economic activities?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**K 8.** Please indicate any enterprises that you have interest on, within Primary agricultural sector.

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**K 9.** Please indicate any enterprises that you have interest on, within the agricultural value chain (other than primary agriculture).

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**K 10.** Would you be interested to join any youth agricultural programs within your area?

**1 = Yes; 0 =No**

**K 11.** In your opinion, what could government and organised agriculture do to make agriculture interesting for young people?

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#### **D. AGRICULTURAL PARTICIPATION**

**Please** complete the table below on agricultural participation, read the activity on the left column and respond accordingly.

*Ask only to the youth who are currently participating in agriculture and related activities*

**L 1.** How are you involved in agriculture and related activities?

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**L 2.** Are you involved in any important decision making related to agricultural or other related activities? \_\_\_\_\_ **1 = Yes; 0 =No**

**L 3.** What kind of decisions do you take in as far as your involvement is concerned?

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**L 4.** How many hours do you spend on farming activities in a week?

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**L 5.** How many hours do you spend on agriculture value adding activities in a week?

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**L 6.** Do you intend to continue with participation in agriculture and related activities in the future? \_\_\_\_\_

**1 = Yes; 0 =No**

**L 7.** Does some of the youth in your area participate in agriculture and related economic activities? \_\_\_\_\_ **1 = Yes; 0 =No**

**L 8.** If yes, why do you think some do not participate in agriculture and related economic activities? \_\_\_\_\_ *(Multiple answers possible)*

<b>1</b>	Negative attitude toward farming	<b>2</b>	Lack of farming knowledge	<b>3</b>	Lack of government support
<b>4</b>	Lack of access to resources	<b>5</b>	They are not interested	<b>6</b>	<b>Other</b> <i>(Please specify below)</i>

*(Please specify here)*

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**L 9.** What influenced your participation in Agriculture and related activities?

*(Multiple options possible)*

<b>1</b>	Parents	<b>2</b>	Extended family/relative	<b>3</b>	Peers	<b>4</b>	Extension officers
<b>5</b>	Media	<b>6</b>	School	<b>7</b>	Mentor	<b>8</b>	Other <i>(specify below)</i>

*(Please specify here)*

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### **EXTENSION PARTICIPATION**

Please complete the following table regarding extension participation *(See codes)*

Have you been involved or participated in any of the below extension activities before?  
*(Respond with either yes or no, in the appropriate cell) 1 = Yes; 0 =No*

Activity		L 10.
		Participation *Response
<b>a.</b>	Farmers days	
<b>b.</b>	Agricultural Exhibitions	
<b>c.</b>	Agriculture study groups	
<b>d.</b>	Trainings	
<b>e.</b>	Conferences	
<b>f.</b>	Work shops	

**IF NOT PARTICIPATING, PLEASE ANSWER THE FOLLOWING (L 11 – L 14)**

**L 11.** What are your reasons for not participating in agriculture and related activities?

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**L 12.** What can be done to enhance youth participation in your area? **In general (excluding government):**

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**L 13.** What can be done to enhance youth participation in your area? **By the South African government:**

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**L 14.** What kind of support do you think can help youth to start agricultural business? Not only farming businesses, but also businesses along the value chain.

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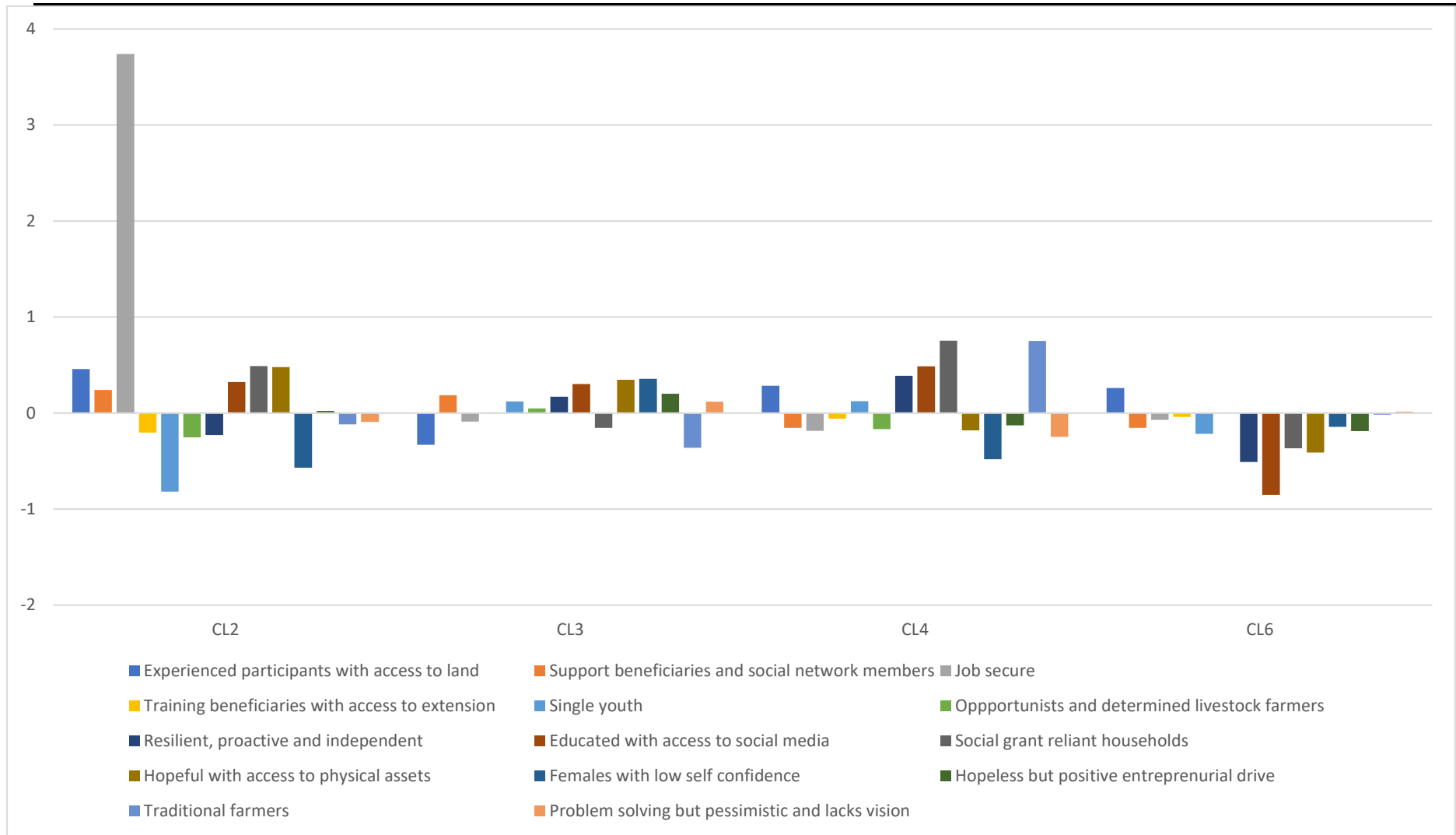
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**\*\*\*End of Questionnaire\*\*\***

**Thank you / Ke a leboha**

### Appendix 3: Cluster centres for selected clusters



## Appendix 4: List of post Graduate Students

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Songca, S.S. (2021). the role of livelihood assets and psychological capital towards youth participation in agricultural support initiatives. M Agric dissertation, Department of Agricultural Economics, University of the Free State, Bloemfontein.

August, M.M. (2020). Youth's aspirations and perceptions towards agricultural participation: A case of two Free State regions. M Agric dissertation, Department of Agricultural Economics, University of the Free State, Bloemfontein.

Jammer B.D. (2020). Determining youth entrepreneurial competencies in two rural areas of the Free State. M Agric dissertation, Department of Agricultural Economics, University of the Free State, Bloemfontein.

Madende, P (Current). Tailor-made development pathways to enhance youth participation in agriculture. Ph.D. thesis, University of the Free State. Bloemfontein. South Africa.

## Appendix 5: Abstract of post graduate students

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a) Brent Damian Jammer

**Title:** DETERMINING YOUTH ENTREPRENEURIAL COMPETENCIES IN TWO RURAL AREAS OF THE FREE STATE PROVINCE

**Abstract:**

Unemployment is one of the biggest socio-economic concerns among youth in South Africa. Agriculture has been identified as a livelihood strategy which can be utilised to eradicate unemployment, as well as improve the livelihoods of youth. The Sustainable Livelihoods Framework (SLF) is a tool that comprises a range of assets and is used by people for achieving better livelihoods. However, youth involvement in agriculture remains relatively low, which adds to the concerns of unemployment. Agriculture can be used for subsistence as well as business platforms. When using agriculture for business opportunities, it can be said that a venture of entrepreneurship is then pursued. Entrepreneurship, however, comprises a set of skills and competencies that can be used to increase youth agricultural production and involvement.

The main objective of this study was to determine youth entrepreneurial competencies in order to determine their influence, together with sustainable livelihood assets, on youth participation in agriculture. The study was conducted in two rural areas of the Free State, South Africa, namely QwaQwa and Thaba Nchu, where data was obtained from youth in the area. Youth entrepreneurial competencies were determined by making use of a Principal Component Analysis (PCA). The PCA allowed the calculation of five entrepreneurial indexes (competencies). A multinomial logit regression model was employed to analyse the influence of entrepreneurial competencies and sustainable livelihood assets on youth participation in agriculture. Participation in agriculture were categorised as: (1) full-time in farming/agricultural related economic activities (as an individual), (2) full-time in farming/agricultural related economic activities (as a cooperative), (3) partially in farming/agricultural related economic activities (through a family business), and lastly (4) not involved in farming/agricultural related economic activities.

The results show that the majority of the youth are not currently participating in agriculture, and the minority are participating as part of a cooperative. Characteristically, the data survey shows that unemployment reigns among the youth in these areas, while the minority are full-

time farmers, students, employed, or self-employed. Education is one of the key factors in these areas, with most youth members having some sort of education, and the minority having no education at all.

According to the empirical results, full-time agricultural participation (full-time as an individual or as part of a cooperative, or partial involvement through family business) is positively influenced by various factors. These factors include: farming experience, having an occupation as a full-time farmer, education, agricultural training, access to land, access to livestock, government support programmes, government extension support, being part of a cooperative, savings, social grants utilisation, as well as self-efficacy entrepreneurial competency. The entrepreneurial competency indexes that account for willingness to work and institutional finance sourcing had a negative influence on youth participation in agriculture. Entrepreneurial competencies and sustainable livelihood assets have been found to influence youth participation in agriculture or related economic activities. The main conclusion drawn from this study is that, in order to get youth involved in agriculture or related economic activities, policymakers should consider improving sustainable livelihood assets of the youth, as well as their entrepreneurial competence. This could lead to major economic enhancements as well as the reduction of unemployment among youth in South Africa.

**Key words:** Youth, agricultural participation, entrepreneurship, entrepreneurial competencies, sustainable livelihoods assets, PCA, multinomial logit.



b) MOATLHODI M. AUGUST

Title: YOUTHS' ASPIRATIONS AND PERCEPTIONS TOWARDS AGRICULTURAL PARTICIPATION:

**Abstract:**

Youth unemployment, food insecurity, and poverty are some of the major problems facing countries around the world, and South Africa is no exception. The aforementioned challenges can be reduced through improved agricultural participation by the youth. The main aim of this study is to explore the influence of the youths' aspirations and perceptions towards participation in agriculture. This was achieved through two sub objectives; the first objective was to measure the youths' aspirations and perceptions towards participation in agriculture and the second sub objective was to determine the influence of livelihood assets, aspirations and perceptions towards agricultural participation. This study employed a stratified random sampling method, and 178 youth respondents between the ages of 18 and 36 were interviewed through a structured questionnaire. Out of the total sample size, 49 % of the youth participated in agriculture and 51 % did not participate in agriculture. To achieve the first sub objective, a Principal component analysis was used to generate two indexes (aspiration index and perception index) in SPSS to measure the youths' perceptions and aspirations towards agriculture and related activities. The results show low scores regarding perceptions for economic motivation, agricultural value chain and the attractiveness of agriculture and rain-fed farming as a livelihood strategy, while the perceptions on interest and inclusiveness showed higher scores, signifying better perception with regard to the inclusiveness and interest in agriculture.

To achieve the second objective, a binary logistic model was used to determine the influence of the Sustainable Livelihood Assets (SLA) and perceptions and aspirations on agricultural participation. A total of 31 variables were included in the binary logistic model, which consisted of: total number of household, age, gender, marital status, number of years of experience in farming or agriculture-related activities, access to agricultural training, land access, livestock ownership, grant use for agricultural inputs, access to savings, access to savings, co-operative membership, youth club/group membership, social media group membership, extension contact, full-time farmer, employed, self-employed, student, matric, grade 11 or less, degree/diploma and higher, market access, household income, and aspIndex and percptIndex (interest in agriculture and attractiveness of agriculture). Eleven (11) out of 31

predictor variables came out as significant, and five were positive (number of years of experience in farming or agriculture-related activities, employed, self-employed, interest in agriculture, and attractiveness of agriculture) which indicate a positive association with the likelihood of agricultural participation. The other six variables (age, land access, grant use for agricultural inputs, access to savings, extension contact, and market access) were negative, which indicates the decrease in the likelihood of agricultural participation.

The study found that the youth do take part in smallholder farming and other agriculture-related activities. However, the youth still have generally low aspirations and poor perceptions towards agriculture and therefore, efforts need to be made to invest in improving the youth perceptions and aspirations. Access to resources is fundamental for agricultural participation, as better access to productive resources has the potential to enhance youth participation in agriculture. It is therefore important that the government pays more attention to resource allocation and better strategies in terms of resource provision. Market access, training, extension support, and government support are lacking in QwaQwa and Thaba 'Nchu. It is important that the government improves youth access to these important resources.

**Key Words:** Agriculture, youth, perceptions, aspirations, participation, farming

c) SANEZWA SESETHU SONGCA

Title: THE ROLE OF LIVELIHOOD ASSETS AND PSYCHOLOGICAL CAPITAL TOWARDS YOUTH PARTICIPATION IN AGRICULTURAL SUPPORT INITIATIVES

***Abstract:***

Agriculture is known to contribute towards reducing poverty and creating employment. Youth unemployment has been identified as a concern in many countries, and agriculture has been seen as a job creation sector, which the youth can participate in. However, the youth often do not have an interest in agriculture, or perceive it to be a back-breaking career. Efforts have been taken by government and others to encourage the participation of youth in the agricultural sector through the introduction of various support initiatives in terms of training and support programmes. Despite these initiatives, the participation by youth in agriculture has been low and remains low, even though support initiatives have been developed and introduced to assist in increasing their participation in agriculture. The main aim of this study is to explore whether differences in access to livelihood assets and psychological capital (Psycap) by the youth influences their participation in agricultural support initiatives. The study was conducted in QwaQwa and Thaba 'Nchu, in the Free State Province, South Africa, where the data was collected from the youth. The study used stratified random sampling, and 369 respondents between the ages of 18 and 35 were interviewed. Some 76.8% of the youth indicated that they did not participate in support initiatives. Principal Component Analysis (PCA) was used to determine the psychological capital components. The PCA generated four components that were used in the regression as independent variables. A binary logit regression model was used to analyse the influence of livelihoods assets and Psycap in youth participation in support initiatives. A total of 21 independent variables were included in the binary regression.

The results show that there are a few youths who participate in agricultural support initiatives. However, the participation in support initiatives could still be improved, leading to encouraging more youth to participate in agriculture. Livelihood assets and Psycap that positively influence youth participation in support initiatives include participation in agriculture, marital status, cooperative membership, social grant used for inputs, resilience and optimism. A livelihood asset that had a negatively influence on youth participation in support initiatives is the household size. It is concluded that, to enable an increase in participation in support initiatives, the youth need to be able to seek and access the support initiatives and their livelihood assets need to be improved to be able them to access those support initiatives. In view of the lack

of knowledge about the support initiatives, it is recommended in this study that the utilisation of digital platforms such as social media, websites and online surveys by the government and all associated stakeholders could play a role in disseminating knowledge of, and providing access to, the initiatives, as most youth are familiar with digital platforms.

**Key words:** Youth, Livelihood, support initiatives, Sustainable Livelihood Assets, Psychological capital, Rural development, PCA, Binary logistic

## Appendix 6: List of publications and presentations

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### **Publications**

#### Journal (Scientific)

Henning, J.I.F., Jammer, B.D. and Jordaan, H. (2022). Youth participation in agriculture, accounting for entrepreneurial dimensions. *Southern African journal of Entrepreneurship and small business management*. 14(1) a461. <https://doi.org/10.4102/sajesbm.v14i1.461>.

Henning J.I.F., Matthews N, August M, Madende P. (2022) Youths' Perceptions and Aspiration towards Participating in the Agricultural Sector: A South African Case Study. *Social Sciences*. 2022; 11(5):215. <https://doi.org/10.3390/socsci11050215>.

Madende, P., Henning, J.I.F. and Jordaan, H. (2023). Accounting for Heterogeneity among Youth: A Missing Link in Enhancing Youth Participation in Agriculture—A South African Case Study. *Sustainability*; 15(6):4981. <https://doi.org/10.3390/su15064981>

#### Popular (Magazine)

Jammer, B., Henning, J and Jordaan, H. 2022. Entrepreneurship in agriculture: The key to greater youth involvement in rural areas. *Stockfarm*. January 2022. Vol 12(1): 16-17

Jammer, B., Henning, J and Jordaan, H. 2021. Entrepreneurskap in Landbou: Die sleutel tot groter betrokkenheid van jeug in landelike gebiede. *Veeplaas*. Desember 2021. Vol. 12(12): 90-91.

Madende, P., Henning, J.I.F. and Jordaan H. 2023. Functional development strategies to promote youth engagement in agricultural activities. *Tuli Journal* 2023: 30 – 34.

### **Conference presentation**

Madende, P., Henning, J.I.F. and Jordaan, H. (2022). Accounting for heterogeneity among youth: A missing link in enhancing youth participation in agriculture. A South African case study. Paper presented at the 59<sup>th</sup> AEASA conference. 2-5 October 2022. Swakopmund, Namibia.