

**Entrepreneurial and Leadership skills prevalent in smallholder farmers in
Gauteng: an exploratory study**

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Abstract

In South Africa, since the first democratic elections in 1994, a high percentage of its population (29%) remains unemployed which in turn has aggravated income inequality, especially between the white and the non-white population, led to social anxiety and severe economic distress. The National Development Plan (NDP) was created to possibly provide 11 million jobs by 2030 with agricultural industry as a key component in increasing employment by increasing food security, reducing income inequality and as a result benefit the country's economy. By supporting smallholder farming, the government has a chance to not just develop the economy but also to uplift previously disadvantaged population. Therefore, the long-term survival of smallholder farmers is critical to NDP's strategy in the advancement of the economy and the society. This paper's aim was to explore leadership and entrepreneurial skills of smallholder farmers, and these skills' role in supporting the long-term survival of these farmers and their eventual progression into commercial farming.

The researcher adopted a qualitative, exploratory research method with the intention to gain new insights into the prevalence of leadership and entrepreneurial skills present in smallholder farmers. A total of 11 semi-structured, in-depth interviews were conducted with smallholder farmers in Gauteng. With the help of Atlas Ti, each interview was analysed using thematic content analysis.

Keywords: agriculture, leadership, entrepreneurship, smallholder farmers

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Manjula Mangalmurti

Date: 11 November 2019

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Abbreviations and Acronyms

ASGISA – Accelerated and Shared Growth Initiative for South Africa

DAFF – Department of Agriculture, Forestry and Fisheries

EO – Extension Officers

FGM – Fixed and Growth Mindset

GDP – Gross Domestic Product

NDP – The National Development Plan 2013

NGO – Non-Governmental Organisations

SPSS – The Strategic Plan for Smallholder Support

UJ – The University of Johannesburg

ZA – South African

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1. Chapter 1: Introduction to the research problem

1.1 Introduction

This study was undertaken as an exploration to ascertain whether leadership and in turn entrepreneurial skills are prevalent amongst smallholder farmers in South Africa's Gauteng province. In this exploration, the researcher was able to establish that smallholder farmers do apply leadership and entrepreneurial skills in their daily work life but were not utilising these skills consistently and comprehensively. In other words, the farmers applied these skills subconsciously in their daily farming-related activities.

Policies and recommendations need to be developed to assist smallholder farmers become profitable and sustainable in the long run, therefore one must establish the level of leadership and entrepreneurial skills in these farmers (Alvarez & Barney, 2014). Schumpeter (1934) said that entrepreneurship can help in the reduction of poverty as entrepreneurial activity often leads to economic growth in any economy. Entrepreneurs are individuals who can exploit opportunities before others can; they, at the same time, create new emergent opportunities for themselves through continuous experimentation and learning and all this together leads to wealth creation (Alvarez & Barney, 2014). In this way they stimulate the economy by providing goods and services to society in the most efficient manner.

It is also acknowledged, based on Knightian uncertainty, that entrepreneurship thrives, and profits increase with the availability of abundant human capital, easy access to property and financial capital. Another attractive feature of entrepreneurship is that it creates an opportunity for self-employment (Alvarez & Barney, 2014) although not without risks. Knightian uncertainty was an argument put forth by Frank Knight. He argued that the spirit of entrepreneurship is in decision-making during unpredictability; entrepreneurs can make profits even in the presence of a perfectly competitive environment, last longing market equilibrium and product scarcity (Sarasvathy & Kotha, 2001). Mr. Knight theorised that a risky situation arises when outcomes are uncertain yet predictable but a Knightian entrepreneur operates in an environment of true uncertainty whereby outcomes are uncertain and unpredictable (Edoho, Sheriff, Muffatto, 2015). Darmadji (2016)

states entrepreneurship is key in agribusiness. Therefore, establishing levels of entrepreneurship for smallholder farmers can have far reaching benefits for promoting self-employment, food security and equitable distribution of capital in the South African (ZA) economy.

One of the characteristics of entrepreneurship is leadership and within leadership the act of taking risks is argued to be crucial for success (Darmadji, 2016). Taking responsibility for one's actions is one of the key characteristics of leaders, along with setting objectives, organising and motivating people around them, taking initiative, showing perseverance, having a positive attitude especially when things are not going as planned and be adaptable to the changing environment (Cismas, Dona, & Andreiasu, 2016).

Based on the opinions above, smallholder farmers too need to be entrepreneurial and have leadership skills to be successful. Firstly, they must utilise the available opportunities and through continuous experimentation and learning be able to produce crops and increase their yields. Smallholder farmers must manage their farm as an owner, manager, employer, subcontractor or a mix of all these positions; in other words, they should manage their farms like one would manage any other business. Generally, most farms are family businesses and therefore a distinction cannot be made between management and control (Dias, Rodrigues, & Ferreira, 2018) like in big organisations. A smallholder farmer must lead the farm with its employees and family members and show the traits of leadership as mentioned above.

1.2 Background to the Research Problem

In South Africa, after the 1899-1902 Anglo-Boer war, the two most powerful groups divided land, power and capital amongst each other. The interests of non-whites comprising of Africans, Coloured and Indians were completely disregarded. Ownership of farms remained primarily with Afrikaners and mines to English-speaking whites. Subsequently the Natives Land Act of 1913 restricted African ownership of land to a mere 7% which was later increased to 13.7% in 1936. Agricultural investment was solely directed to the benefit of Afrikaner farmers which led to the development of a risk-taking culture as they were supported by the state.

This culture of taking risks led to the development of entrepreneurial white Afrikaner farmers. This, in turn, resulted in their economic growth, which has passed down from generation to generation (Lipton, 2016). This intergenerational, willing transfer of knowledge, values and other behavioural factors happened through continuous teaching and imitation. The dark side or the failure of this one-sided investment in a community was the static “collective programming of the mind which distinguishes the members of one group (workers) from those of another”. (Chakraborty, Thompson, & Yehoue, 2016). This manifested into apartheid with its separate development culture along racial lines. A word of caution here is that the current policies of land redistribution in only in black-owned farms designed to rectify past investment decision should not manifest into creating the converse of past segregation incentives/motives

As mentioned earlier, with more reforms, scientific techniques and capital were directed towards white Afrikaners to take up farming which helped these farmers to become even better in their profession. Furthermore, the Natives Land Act of 1913 resulted in the displacement of non-white commercial sharecroppers to homelands or rural areas. Historically, land was used for sharecropping where mostly white owners let out farms to non-white commercial smallholder farmers who would share the produce with the white owners. Non-white sharecroppers were successful and innovative farmers (Beinart & Delius, 2014). As non-white commercial were now only allowed to own land in their homelands, these commercial smallholder farmers moved to the homelands in rural areas. In pre-democratic South Africa, as a result of the widespread and effective political suppression of the non-white farmers in rural communities, such as the implementation of the Natives Land Act, their livelihoods drastically changed to a mere subsistence level. During the same period, there was a shortage of labour in agriculture due to enforced labour migration to mines. This further led to the demise of the commercial smallholder farmers in rural areas as now less or no intergenerational transfer of knowledge was taking place (Fischer & Hajdu, 2015).

In other countries, one would find farms of various sizes, which range from subsistence farmers to the very large agribusinesses (Kirsten & van Zyl, 1998). In 2014, the top 20% of farmers in South Africa had sophisticated, specialised capital-intensive farms; these are large commercial farmers that are mainly white and, in

most instances understandably Afrikaner. Hence, the current agrarian structure is still “class- and racially biased”. (Cousins, 2015).

Since agriculture ceased to exist as a profession in non-white community compounded by the availability of labour, the result was that households shifted their focus on gardening over farming in the more distant fields. Interestingly, the lack of availability of labour was also the reason farmers switched to growing maize instead of sorghum as a staple crop as maize cultivation does not require as much labour as sorghum. Due to the consistent, purposive undermining of non-white commercial smallholder farming, the rural community still perceives farming more as subsistence and not as an income generating activity (Fischer & Hajdu, 2015).

In 1994, a new more inclusive government came into power, the Land Act of 1913 fell away, and previously disadvantaged smallholder farmers slowly started to emerge. However, these farmers did not have a deep understanding and, knowledge or a skills base to make their farms successful.

Since the time of the first democratic government in 1994, the level of support provided to the smallholder farmers is still very low. How then should the smallholder farmers acquire to make a success of the career they have chosen and what else is needed to support them in their endeavour? Hence, the business need for this research is supported by the argument that even though land can be transferred as has been, it is more difficult to transfer farming skills and knowledge as these take more than a generation to accumulate as has been shown by the success of the Afrikaner farmer where the intergenerational transfer of knowledge, values and other behavioural factors through continuous teaching and imitation has led to their success. For example skills such as leadership and entrepreneurship have not been passed on to the next generation of non-white smallholder farmers.

For the reasons above, the land reform process has also been provided for even in the ZA Constitution and comprises of three main pillars – restitution, redistribution and reform via tenure. The restitution pillar’s specific aim is to either return the land back or to compensate the black communities from whom the land was forcibly taken away from in the previous apartheid regime. The redistribution pillar’s aim is to increase black ownership of land in rural areas by transferring land from white commercial farmers to black individuals and communities that have inadequate or

no access to land. Again, this is provided for in the ZA Constitution, Section 25(5) and states that “the state must take reasonable legislative and other measures, within its available resources, to foster conditions which enable citizens to gain access to land on an equitable basis.” The last pillar, tenure reform’s main objective is to provide tenure security to the former workers who continue to work on the land that will and has been redistributed (Chikozho, Makombe, & Milondzo, 2019).

The new democratic government has introduced various initiatives for land reform, however, most smallholder farmers still remain poor with limited farm productivity (Ncube, 2018). Furthermore, a country with a high number of rural poor people, where at the same time, a sophisticated marketplace exists, requires more time and resources to create a more equal agrarian structure, to create successful commercial smallholder farmers (Lahiff, 2016).

Metelerkamp, Drimie, & Biggs’ (2019) research discusses the capacity development for emerging farmers as a solution to building a just and equal society. One of the reasons past efforts to develop emerging farmers have been unsuccessful is because farming is misjudged as a profession that is easy to master and a profession of last resort but. Metelerkamp et al. (2019) discuss a variety of skills that the modern farmers need to achieve financial success – “small business management, financial planning, agronomy, chemistry and physics”. Metelerkamp et al. go on to recommend that if efforts are aimed at developing farming skills at a family and/ or community level, this will have a longer lasting effect on the viability of the smallholder farmers’ business, this may eventually add to the future intergenerational transfer of knowledge as discussed in section 1.2 above.

1.3 The Research Problem

In South Africa about 20% of all households depend on subsistence or smallholding farming for partial or most of their sustenance and livelihoods (Louw & Jordaan, 2016), therefore the ZA government cannot ignore this economic unit, particularly considering the land reform process mentioned above. The other reason to support either of these groups of farmers is because they have the potential to reduce

poverty, increase food security and create employment. Therefore, it is imperative that we as a country, policy makers and businesses understand their farming environment, the constraints they face, the resources they lack and their other business needs to come up with strategies that will be able to support and grow these groups in the short and long term (Thamaga-Chitja & Morojele, 2014). However, land reform has been in implementation for more than twenty years, yet land reform continues to be challenging and full of uncertainty. The main drive behind land reform was to transfer land from previously advantaged communities (white commercial farmers) to a wider group of non-white small-scale farmers who could partake in the country's growth (Chikozho, Makombe, & Milondzo, 2019).

In light of the discussion above and as per the following, the ZA government is beginning to focus its attention on smallholder farmers. Even though smallholder farmers have been defined into three broad categories of farmers/producers, the scope of this research does not cover the subsistence farmer.

Strategic Plan for Smallholder Support (SPSS) divides smallholder farmers into:

- i. Subsistence farmer – these are the “resource-poor” farmers as they produce only for home consumption
- ii. Smallholder farmers – these farmers produce food for themselves and sell the surplus to the market with a conscious effort to earn an income. Farming is considered as part-time activity as these farmers generally have other sources of income too.
- iii. Commercial farmers – these are farmers who farm on a large scale

Agriculture plays a crucial role in reducing poverty and as the majority of poor people live in rural areas, their livelihood depends on agriculture even though they work as farm labourers. Therefore, investing in agriculture can turn out to be a sound strategy in transforming a rural economy (Tomich, Coley, Gollin, Meinzen-Dick, & Webb, 2019). As 49.2% of South Africa's population is lower than the upper boundary of the poverty line it is considered as a developing economy (Statistics South Africa, 2019) and most of these people come from rural areas. It is widely acknowledged that there is more poverty in the rural areas compared to the urban areas and the current estimation of people categorised as poorest in South Africa sits at about 70% (Kepe and Tessaro, 2014).

Agriculture also plays an important role in the socio-economic development of any community or country but despite this, the agricultural sector in the sub-Saharan African countries continue to show negative growth. There is no dearth of attention given to this sector, especially in the commercial context for poverty reduction in rural areas (Jones & Glover, 2019). The poor communities in South Africa face high levels of unemployment and food insecurity and this is encouraging food production initiatives (Satgar, 2011). Many food related gardens, projects, associations, and other efforts have come to the fore. The government is consciously promoting the emergent, previously disadvantaged farmers. Such initiatives have not been very successful, especially at the grassroots level (Satgar, 2011). By learning and applying these learnings from smallholder farmers to rural farmers, the ZA government can uplift the rural community socially and make them self-sufficient as well.

Another aspect that needs to be kept in mind is that in the past twenty-five years of democracy, South Africa's unemployment rate has predominantly followed an upward trend and is currently standing at 29.1% (Stats SA, 2019). This widespread unemployment and reduced labour participation are of national concern and therefore demands political focus NDP has made it their mission to "eliminate poverty and reduce inequality" and therefore is aiming to create 11 million new jobs by 2030. Amongst other things, the NDP aims to achieve faster and more inclusive economic growth by supporting small businesses, smallholder farmers form part of this section (NDP, 2017). Furthermore, the government has started an initiative where they aim to create 450 black commercial farmers in the medium term (National Treasury, 2019).

The Directorate of Smallholder Development, within the Department of Agriculture, Forestry and Fisheries' (2013) (DAFF) aim is to develop the production systems to support agricultural producers. Among other things, their main function is to:

- a. Provide guidelines for development of existing and new small-holder farmers
- b. Provide Programmes for support and graduation.
- c. Set norms and standards for viable farmer settlement programmes.
- d. Monitor and evaluate policies and programmes.
- e. Co-ordinate activities that are cross cutting with other entities.

- f. Develop and promote national policy and standards for household food security.
- g. Facilitate the design and planning of household food security programmes.

(Source: The Strategic Plan for Smallholder Support (SPSS))

The ZA government created SPSS with the main purpose to coordinate, align and bring together all existing and future programmes to promote food security and economic returns in a sustainable manner. In 2011, the government's five-year target was to establish and support an extra 50 000 new smallholder producers to the existing smallholder farming community. Consecutively, the government also wanted to support the existing smallholder producers and help them progress to commercial producers. (DAFF, 2019).

NDP acknowledges that land reform will help in the growth of the agricultural sector through employment creation. The ZA government, in line with other developing economies, is busy putting in land redistribution legislation, and thus making ownership of property more equitable for the previously disadvantaged population (Centre for development and enterprise, n.d.). Again, the business need is supported by the argument that rapid urbanisation, which is predicted to an increase in demand of food in urban areas is another factor that the ZA government should bear in mind whilst developing agrarian policies and procedures. Any knowledge and skills acquired by smallholder farmers should be such that it can be easily replicated (Thornton, Kristjanson, Förch, Barahona, Cramer, & Pradhan, 2018). In addition, Collier and Dercon (2014) argue that an exclusive focus on smallholders will not drive structural transformation in Africa. Rather, they recommend an alternative model for agriculture, based on new forms of commercial organization involving 'hybrid' forms of interaction between smallholders and commercial (farm) enterprises.

1.4 The Research Objectives

The ZA government has a keen interest in helping smallholder farmers to develop them into becoming commercial farmers. There are various studies (Jones & Glover, 2019; Satgar, 2011; Khapayi & Celliers, 2016) that have been undertaken and valuable information has been gathered but there is still a lack of scientific

backing that defines the challenges faced in succinct manner. Khapayi & Celliers (2016) mention that various policies and procedures have been implemented by the ZA government. The budgets for such strategies have also been increased to support the smallholder farmers. However, South Africa is yet to see actual evidence if these measures have had any success (Khapayi & Celliers, 2016). Interestingly, most of these findings highlighted the challenges that these smallholder farmers face are mostly physical infrastructure related challenges. In the infrastructure section the challenges were poor roads, transportation; in the marketing section the challenges were dearth of marketing skills and market information. What was needed by smallholder farmers was access to land to expand production, easy access to agricultural machinery and training related to farm management and interpretation of market information. It was also established that the government had a crucial role to play in providing all the above (Khapayi & Celliers, 2016).

Cousins (2015) has remarked that investments have been predominantly directed towards land reform initiatives and has concluded that these initiatives have not worked to support the black smallholder farmers adequately, especially in the former homelands. In light of this and the fact that soft skills such as leadership are often passed down, imitated and/or transferred from generation to generation could be an area to be researched further. Entrepreneurship on the other hand thrives in an environment of financial support and access to markets. As mentioned earlier, when land was parcelled to the Afrikaners and government policies were designed to promote only white farmers, entrepreneurship thrived. Therefore, in conclusion, leadership and entrepreneurship have been chosen as two soft skills that could be required in addition to other initiatives in government policy that need to be fostered.

1.5 Research Scope

The research scope falls within the confines of smallholder farming in Gauteng, South Africa. Qualitative data will be collected and then analysed through face to face interviews with smallholder farmers to establish the existence of leadership and entrepreneurship traits in these farmers. Research analysis will be conducted

on the perception of these farmers and their understanding as per the questions posed in semi-structured interviews.

1.6 Structure of Research Report

The research report has been arranged in the following manner. Chapter one provides the motivation, purpose and objective of this research. Chapter two explores the literature that is available on leadership, entrepreneurship and smallholder farming and aims to explore the interrelationships between these concepts and constructs. Chapter three provided the research questions/ propositions/ hypothesis. Chapter four is a commentary on the research methodology applied to research the proposed questions. Chapter five discusses the results of the qualitative interviews conducted. Chapter six discusses the results and compares it to current and seminal literature that was discussed in chapter two. Chapter seven concludes by highlighting the principle findings, implications for policy makers, research limitations, and provides recommendations for possible future research.

2. Chapter 2 – Literature review

2.1 Introduction

This section provides the discussion of the main argument that soft skills such as leadership and entrepreneurship are key areas that dictate the success of smallholder farmers. The literature review of recent, peer-reviewed articles that follows, utilises facts that brings forward the motivations for this study and defines what a leadership style is and how it is linked to entrepreneurship in the context of smallholder farmers. The constructs of leadership and entrepreneurship, which have been discussed further on in this chapter, have been sought to discover the qualities in smallholder farmers in Gauteng in terms of importance, dimension and interconnectedness.

2.2 Leadership

2.2.1 Introduction

Nahavandi (2003) described leadership to be multi-layered, life-long, complex process which enables a person to persuade one or more people to achieve common objectives or goals (Kelling & Hoover, 2005). Leadership has been studied for over 100 years and is full of complexity and a multifaceted phenomenon. It can – entail passive or active motivation of teams, be linked to one person or a whole group, involve coercion or persuasion and targeted to one project, department or the whole company (Garfield, von Rueden, & Hagen, 2019). One study in construction industry found even though there are various styles of leadership, ranging from transformational to transactional, charismatic to directive, instrumental to strategic and many more, all these styles could lead to varied behavioural results. They found that strategic leadership style was most suited for encouraging sustainability practices and transformational leadership style is more successful in complex building projects (Mazutis, & Abolina, 2019).

It is important to develop leaders in agriculture who are capable to handle challenges that the world faces in the 21st century (Bush, Seibel, Corkins, & Elliott-

Engel, 2019). In the conclusion of their conceptual research Newstead, Dawkins, Macklin & Martin (2019) summarise that “good leadership, is aspirational”. They go on to say that when leaders take heed of their own ethical motivations and with continuous practice refine them further, this behaviour eventually becomes virtuous and due to its positive impact, is noticeable by the society at large – this is good leadership.

In 1969 Gibb concluded that it was not possible to isolate personality traits from leadership characteristics and therefore could not determine any relationship between personality and leadership. He however did acknowledge that personality traits do influence leadership (Andersen, 2016). In 1990, McClelland put forward his theory that the most effective managers were the ones that were power-motivated (Andersen, 2016). From the experiments conducted by Bales and Slater (1956) and Bales (1958) it emerged that it was a natural progression in leaderless groups for leadership to emerge. Bales (1958) also found that it was group dynamics that brought about leadership and not any perceptions regarding leadership (Andersen, 2016).

According to Lonati (2019), in the hunter-gatherer stage of human evolution, participative leadership style was prevalent. It was only after the adoption of agriculture, when societies became more diverse and denser due to population growth, group sizes increased and more conflicts surfaced; reciprocity-based tactics became progressively ineffective, and coordination and cooperation became increasingly difficult. Agriculture progressively became more intensive and required active management to increase agricultural yield and eventually directive leadership emerged (Lonati, 2019). Buggle (2018) found that societies that historically utilised irrigation in agriculture developed an embedded devotion to rules and regulations due to their concern to coordinate water supply to their fields successfully, the downside of this was that these societies ended up becoming less innovative.

The success of a farm is dependent on the quality of the relationship farmers maintain with their employees. Like any other business, the farmer is ranked high and the employees directly beneath in a farm business hierarchy (Janker, Mann, & Rist, 2019). Most of the smallholder farmers are owners who must direct and manage mostly unskilled and semi-skilled workers. Most agricultural jobs are

available for lesser skilled occupations, and the literacy levels amongst farmworkers is very low due to lack of access to education (Visser, Ferrer, 2015). These employees are sometimes also seasonal or casual labourers and therefore require daily, continuous and active management. This is very time consuming and hinders farmers' capacity to devote attention and focus on other priorities. It is therefore important to understand the impact of these challenges and how it affects the growers' capacity to understand leadership and its role in innovation and innovative practices (Giner 2009).

Furthermore, workers who are better educated have the capability to be more productive than workers who possess less skills (Pagés, & Stampini, 2009). Paradoxically, due to the high possibility of labour turnover, farmers who train their workers incur the risk of these employees finding better job opportunities elsewhere (Visser, Ferrer, 2015). Therefore, smallholder farmers generally utilise directive leadership which involves "structuring subordinates' work" by setting clear expectations and standards for the work at hand (Lonati, 2019).

2.2.2 Learning Mindset of Leaders

Buchanan & Kern (2017) discuss Dweck's (2006) 'Fixed and Growth Mindset' (FGM) and align it to expert and achiever levels of leadership maturity as shown in Figure 1. They discuss that FGM focuses only on the 'what' and 'how' of the actions performed, but a leader also needs to focus on the 'why'. Ms. Dweck (2006) likened a 'Fixed Mindset' to a stagnant learning capacity, and a 'Growth Mindset' to an individual's capability to adopt an open mind to learning and thus helping them reach a higher potential. Mindset is defined as the underlying assumptions upon which an individual's perception and understanding of the world is based upon and is a deep psychological construct that is fundamental to our unique views, beliefs, and values. More importantly, mindsets influence our actions and the way we conduct ourselves and our ability to learn which has a "cascading, self-fulfilling effect on reality". Bligh, Kohles, & Yan (2018) found that in an organisation, the main challenge in the learning process and application of change is to nullify the negative effects of previous successes or rewards and punishments, this is especially true for instances where the learning is intense and demanding at the same time. Similarly, farming is an intensive and demanding process and one

must start the year without keeping the past year's successes or failures in one's mind.

Through self-reflection (see Figure 1), when people transform their thinking to the Individualist level is when they learn to become the leaders of the ecosystems they lead. The Strategist level is attained when leaders reach an understanding of the 'world-centric perspective'. This is the stage where leaders can be effective in bringing about societal transformations and make significant difference for all the stakeholders. (Buchanan & Kern, 2017).

Figure 1: Leadership Maturity Framework (Buchanan, & Kern, 2017)

Maturity	%	Key Characteristics
Strategist	4%	<ul style="list-style-type: none"> - Embraces the tenets of an ecosystem worldview - Develops lifetime purpose - Committed to creating ecosystem benefit - Generates organizational and personal transformations
Individualist	10%	<ul style="list-style-type: none"> - Able to shift from ego to ecosystem awareness - Looks at the status quo through multiple perspectives - Able to query their assumptions, values and beliefs - Before solving problems, figures out what the problem is
Achiever	30%	<ul style="list-style-type: none"> - Goal and ideal oriented - Continues to grow and develop themselves - Often questions the "shoulds" in professional contexts - Independent, entrepreneurial and self-reliant
Expert	38%	<ul style="list-style-type: none"> - Interested in being successful - Ruled by logic and expertise - Has a strong sense of what "should" and "ought" to be - Likes to perfect their craft

The theory of adaptive leadership purports that to lead through complexity, leaders should be able to distinguish between problems that can be solved with known information (technical) or problems where there are no known solutions (adaptive) (Heifetz & Linsky, 2009).

To be adaptive, entrepreneurial courses commonly expose their students to experience of working in teams, interaction with the external environment and the presence of unpredictability and ambiguity, for the specific reason to encourage self-insight, encourage an entrepreneurial mindset, self-efficacy and tolerance of unpredictability and ambiguity in these students (Hermes, & Rimanoczy, 2018).

Klapper and Farber (2016), have emphasized the importance of experiential learning which leads to lasting imprints on learners' entrepreneurial mindset. Hermes, & Rimanoczy (2018) also state that "sustainability mindset" is developed through a broad understanding of the manifestations of the environment which includes social sensitivity, introspection of "one's personal values and higher self" which leads to collective actions for the benefit of the society.

Politis (2015) utilises Manz (1992) and Neck & Manz's (1996) definition of self-leadership to be the footing which leaders employ for effective self-influence and self-development. When people motivate themselves to achieve self-direction and positive outcomes, it is called self-leadership. Politis (2015) discussed self-leadership as a characteristic of three distinct outcomes:

- i. positive thought patterns (as opposed to negativity about future) and is related to creativity, productivity and entrepreneurship
- ii. behavioural-focused strategies involve behaviours of leaders such as: self-observation, self-goal setting, self-reward and punishment
- iii. natural reward strategies (as opposed to external rewards) involve being able to choose pleasant surroundings, participating in natural rewarding and pleasant facets of work, and has been found to have a close relationship with innovation and productivity

2.2.3 Mentorship as a Subset of Leadership

Mentorship is defined as the positive contribution from experienced individuals (mentors) to the lives of inexperienced willing learners (protégés) where both parties aim to develop the personal and professional growth of the protégé (Eby, Evans, & Ragins, 2006). Mentoring is found in almost all walks of life ranging from raising of a family, schooling, medicine, sports, farming, and various others, and takes place either over a short period or long-term. It is a gradual process of knowledge transfer where the inexperienced individual can combine the new knowledge gained with their own experiences and offers numerous advantages and disadvantages are none (Golele, Mautjana, & Makombe, 2018).

In agriculture, education related to extension services have for a long time been associated with mentorship as a subset of leadership (Rosch, 2013). Agricultural extension services provide support to smallholder farmers in terms of awareness,

advice, dissemination of information and training regarding tangible and intangible resources to increase productivity on their farms. In South Africa there are about four million people that are involved in commercial and subsistence agriculture and very few of these farmers can avail these critical services. Moreover, these services, when provided have been criticised for applying obsolete methods and not being in touch with the needs of the farmers (Baiyegunhi, Majokweni, & Ferrer, 2019). In a 2009 study by Mmbengwa, Gundidza, Groenewald, & Van Schalkwyk concluded that the extension officers (EO) who were representing the government to support smallholder farmers faced many challenges in fulfilling their duties. Most of the times these EOs are the only individuals who the smallholder farmers have access to, and the EOs are unable to advice smallholder farmers sourcing funding, giving training and technical advice, coaching, monitoring and evaluating smallholder farms. The main reason for this was that these EOs were not hired based on their knowledge of running and managing a farm. Moreover, these EOs were not given any further training in the management of production and marketing skills required for farming operations. This impacted the farmers negatively since access to markets and marketing of their produce are two most important aspects in the sustainability of smallholder business. (Mmbengwa et al, 2009).

2.2.4 Community Leadership

Nix & Seerley (1973) identified two types of relationships – reciprocal and conjunctive. They recognised human communities to be particularly unique social systems and distinguished them from special interest groups and companies. They said that in companies and special interest group, reciprocal relationship exists where everyone works together for a common shared purpose; but in community groups conjunctive relationship exists where differing outcomes are expected by various parties which can lead to disputes and competition (Nix & Seerley, 1973). In a study conducted in the hospital industry, it was found that by adopting a community orientation approach one could achieve a socially responsible result in hospitals to better financial performance and community health simultaneously (Jennings, Landry, Hearld, Snyder, Maldonado, & Patrician, 2017). One could apply this to smallholder farming whereby the farming community by being socially responsible could also become more profitable.

2.2.5 Shared Value mindset

Burns (1978) brought forward the theory of transactional leadership. Burns' framework of transactional leadership puts the leader at the top of the hierarchy, managing daily tasks on hand and by either rewarding or punishing the subordinates based on their performance. In contrast, Burns talks about transformational leadership which involved engaging followers, understanding their intrinsic needs, and somehow linking the organisation's goals with individual motivations to achieve a common purpose (Odumeru, & Ogbonna, 2013). Both transactional and transformational leadership styles can be likened to the shared value concept is not found easily in the leadership theories, however, Burns (1978) in his seminal work stated that (transformational) leadership occurs when leaders engage with one or more people in a manner that it uplifts the motivation and ethical standards of everyone involved, learning and collaboration happens at both levels (Allen, Moore, Moser, Neill, Sambamoorthi, & Bell, 2016). Burns was of the belief that leadership takes place when the followers act motivated by the creation of shared values, as outlined by their leaders.

In North America, farmers' markets were successfully established to encourage information-sharing and good practices to develop local farmers. In one study conducted in New Zealand of smallholder farmers and farmers markets it was found that one reason for the survival of these markets was due to a strong cooperation among growers (Giner, 2009).

2.2.6 Vision

A vision can be defined as an illustration of the potential future in a society, organisation or a unit. It is normally the leader who communicates a coherent vision which is usually a synthesis of ideas that have been put together and is shared and accepted by a collective. It is the leadership that creates the excitement about this vision and then embraced by the targeted group and eventually takes its own form – a shared vision. A successful vision is inspiring, unifying and brings a sense of kinship. As the circumstances and possibilities change, so does the vision; as it incorporates new expectations and adventures. Creating a vision is one of the key characteristics of a successful leader (Pielstick, 2003). Many a times good leaders piggyback on 'vision' to improve organisational communication (Kelly, 2000).

A leader's ability to communicate a vision successfully is because they have this innate capability to persuade and influence people into believing in the efficacy of the vision. Leaders are considered successful because they are able to get other people to 'buy-in' to their vision and simultaneously themselves 'buy-in' to other people's vision (Farmer, Slater, & Wright, 1998).

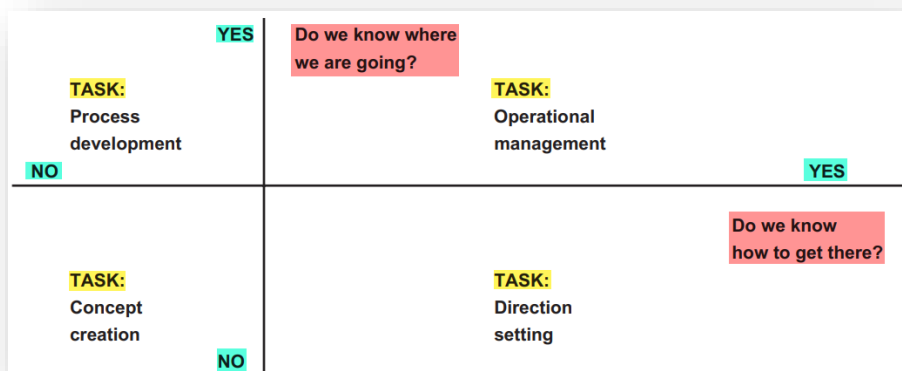
Olsson (1988) purported farmers as leaders must continuously adjust their own vision, plans, ideas for the future by being cognisant of the following external factors:

- increasing unpredictability.
- the increasing interdependence between the society, the economy and the world in general
- changing views of consumers regarding the environment and sustainability
- changing patterns in terms of levels of food quality importance of agriculture
- stay abreast with a continuous stream of new knowledge and other information that impacts agriculture and the environment

Farmers are also continuously streamlining their processes to increase the production on their farms, to grow more from less. Yapp (2005) divides the process problem into two by asking two key questions, (see Figure 2):

- Whether one knows where one is going?
- Whether one knows how to get there?

Figure 2: Problem Types (Yapp, 2005)



Farmers as leaders need to keep their vision intact and continuously ask these questions to themselves, have a clear understanding of the direction they are taking and the tools and means they will need to reach there. The farmers need to have a clear understanding to effectively apply it to dynamic and complex situations on their farms.

2.3 Entrepreneurship

2.3.1 Farming as an entrepreneurial activity

Bjørnskov & Nicolai (2016) cite Israel Kirzner (1980) who declared that an entrepreneur is primarily responsible for 'progress' in a country. Kirzner (1980) defined 'progress' as a creation of a new venture, industrial rejuvenation and vitality, this is all whilst creating competitive advantages, growth in the economy and adopting technological advancements. The authors go on and argue that due to the fundamental importance of 'progress' it is key to understand entrepreneurial intention, this is because collectively entrepreneurial firms have the capability of adding a myriad of economic benefits to any economy. Stewart, Carland, & Carland (1998) discuss the significance of entrepreneurial activity and its risk-taking propensity when they discuss the significant contributions entrepreneurship brings to further resource distribution, social transformation and economic growth. Rosairo & Potts (2016) liken farming as an entrepreneurial activity whereby farmer cultivate soil or rear livestock to make a living, especially where other people find it difficult to eke out a living. Farm management is similar to entrepreneurship where the manager/owner has to make choices from limited resources with the aim to make profit (Rosairo & Potts 2016).

Economic growth is key to the creation of sustainable jobs in any country and leads to the reduction and alleviation of poverty and inequality. South Africa is considered as one of the "most unequal society in the world". This inequality when combined with a high unemployment rate increases the constraints on entrepreneurs and the country in general. In South Africa, the agricultural sector is one of the main contributors to the economy in terms of Gross Domestic Product (GDP) and in providing much needed employment to the population (Taljaard, & van der Walt, 2018). Furthermore, the importance of the agricultural sector is

highlighted in the fact that it has the capability to create additional one million jobs by 2030 and by providing priority to “small scale agriculture”, NDP acknowledges the importance of agriculture in achieving agricultural employment targets, especially in the rural areas (NDP 2011).

2.3.2 Role and Meaning of Entrepreneurship

For many years, entrepreneurship was viewed only as a small part of economic activity. In 1800s the Austrian School of Economics for the first time gave recognition to an entrepreneurial personality as someone who provides unique value in economic terms. (Kaburi, Mobegi, Kombo, Omari & Sewe, 2012). Since then, an entrepreneur has been considered an important, independent-minded economic entity that utilises and combines factors of production with the sole purpose of achieving profit for business entity. One can liken this to Schumpeter's *Unternehmer* (creative) and *Wirt* (non-creative) and divide entrepreneurship into two basic types - the innovator and the imitator. Functionally, one can define an entrepreneur as an actor who whilst making economic decisions concurrently makes choices from the various available alternatives. This is achieved through the experiences and lessons learnt in the past and then applied by using certain norms, without seemingly taking any decisions Entrepreneurship is also considered to be hereditary in nature and acquired through environmental factors and therefore is very much part of a farmer's personality (Sachs, 1973). Kuratako (2009) famously defines entrepreneurs as people who seek and optimise opportunities particularly where others fail to notice anything advantageous (Rosairo & Potts 2016).

In the past decade or so, entrepreneurship has begun being widely defined as a creative and alert process, where an entrepreneur proactively identifies opportunities by utilising their intellectual faculties and networking capabilities. Entrepreneurship in agriculture however has been generally likened to a business undertaken solely for profit, efficiency, specialisation and optimisation of assets and therefore agricultural entrepreneurs are perceived as money and efficiency driven managers. This narrow view does not reflect the full essence of entrepreneurship in agriculture. In keeping to the true essence of entrepreneurship, farmers must be alert and agile in response to the changing markets, policies, competition, technology, society and environmental sustainability (Lans, Van Galen, Versteegen, Biemans, & Mulder, 2014; Dias, Rodrigues, & Ferreira, 2018).

2.3.3 Importance of Entrepreneurship

People with an entrepreneurial bent of mind prefer to work alone (as found in the United States of America) as opposed to Europeans who, mainly due to fear of failure, prefer to work as an employee for an organisation. There is a general consensus amongst researchers regarding the importance of the role of entrepreneurship in both developed and developing economies. In advanced economies, such as in North America, entrepreneurship has been promoted to encourage innovation in technology and varied industries, promote competition, and create employment, which has brought about economic prosperity and growth. Increasingly more and more developing economies are also trying to utilise entrepreneurship to stimulate economic growth, reduce poverty and social inequalities (Ozaralli, & Rivenburgh, 2016).

In developing economies, there are various challenges that the entrepreneurs face, these include lack of infrastructure, law enforcement, energy and transportation facilities and institutional transformations. Paradoxically, these multifaceted institutional transformations lead to both opportunities and threats for entrepreneurs whilst attempting to grow their businesses. The developing economies are also adopting market-based policies to help stimulate growth and to reduce poverty in their economies. This is leading to structural changes, uncertainty and unbalanced growth. This in turn is challenging the assumptions the managers have been using during decision-making processes which includes the decisions on how to identify and convert opportunities into success; and decisions on how to create and deliver customer value profitably (Boso, Story, & Cadogan, 2013). To develop entrepreneurial culture and support a variety of entrepreneurs is the best option for creating job opportunities and the agricultural sector is most suited to fulfil this task (Khayri, Yaghoubi, & Yazdanpanah, 2011). One can clearly notice the dominance of self-employment in the labour markets of developing economies, this ranges from smallholder farmers to retail businesses to simple manufacturing set ups and even petty traders. This is confirmed in the household data which shows an upward trend in self-employment, especially in urban areas (Falco, & Haywood, 2016).

South Africa being a developing country, has a host of third world challenges such as high Gini coefficient of around 0.69, is ranked one of the highest in terms of income inequality, about 60 percent of all South Africans live in poverty and the

unemployment as of 2019 is sitting at 29.1%. Of the 60% of the ZA population, mostly belong to the previously disadvantaged black population of which most live in rural areas. The ZA government has been unsuccessful in alleviating poverty despite increasing social grants, providing small-unit houses through its programmes such as Reconstruction and Development (RDP) and Accelerated and Shared Growth Initiative for South Africa (ASGISA). Social grants and free housing units do not help in poverty alleviation in the long term. Providing quality education, training in entrepreneurship to be able to support themselves is most viable. Social grants contradictorily deny poor people a chance to learn to look after themselves permanently. The ZA government should rather provide entrepreneurial training to the poor people as a lifelong poverty alleviation strategy (Balunywa, Hatem, Noble, Fierro, & Cornelius, 2017; Stats SA, 2019).

For the reasons mentioned above, the ZA government is particularly interested in agriculture, as agriculture can help alleviate poverty and to increase household food security. Within the agricultural sector the ZA government wants to develop smallholder farmers who can farm for both self-sustenance and for the sustenance of the surrounding community (Thamaga-Chitja, & Morojele, 2014). However, agricultural entrepreneurship is a little different compared to other mainstream businesses as it involves even more complexity especially when it comes to the farmer and the relationship between his business. This is because a farmer could either own, lease, manage, subcontract or a combination, which implies that one cannot easily transfer mainstream business analyses to the agricultural sector (Dias, et al, 2018).

2.3.4 Challenges faced by Agricultural Entrepreneurs

Korsgaard, Muller & Tanvig (2015) have found that agricultural entrepreneurship is specifically involved with “rural-natural environment”, this involves a lot of challenges. This is because in rural-natural environment one has low levels of human and financial capital, markets are small, and communication cannot be easily disseminated. For this specific reason, agriculture is commonly associated with social entrepreneurship and not something that has the potential to become commercial (Sanyé-Mengual, Oliver-Solà, Montero & Rieradevall, 2015).

Gaffney, Challenger, Califf & Harden (2019) list the following common challenges faced by smallholder farmers:

- Access to land, capital, and latest agricultural technologies.
- Access to shared knowledge and information and thus decline in productivity
- Access to markets
- Access to agricultural innovation

2.3.5 The role of Profit and Success in Entrepreneurial Terms

In almost all definitions of entrepreneurship, self-interest along with profit-seeking are intertwined with success and competition and are the main driving force (Bucktowar, Kocak, & Padachi, 2015; Carland, et al., 2015; Yan, Cao, Dong, & Han, 2018). The seminal paper from Baumol (1990), provided critical insights regarding decisions made on allocating entrepreneurial talents, which for example could be either in innovation or rent seeking but eventually all is driven by profits as the end goal (Padilla & Cachanosky, 2016).

Success orientation, profit motive and productive entrepreneurship have been proven to be interrelated and countries whose policies and procedures support and reward productive entrepreneurship experience higher economic growth compared to countries who reward unproductive entrepreneurship (Allen and Robinson, 2012; Padilla & Cachanosky, 2016). The reasons provided by Eastern Free State Farmers (see Figure 3) shed some light on the viewpoints of entrepreneurs as they aim to lead their businesses in a profitable manner. Evidence pointed towards growth also being the other key motivation and is defined as an individual's desire to expand their business, which is an important component of the entrepreneurial mindset (Balunywa, et al, 2017).

Figure 3: View on factors that promote growth (Balunywa, et al, 2017)

Growth promoting factors	Strongly agree (%)	Agree (%)	Unsure (%)	Disagree (%)	Strongly disagree (%)
Adequate finance	42	53	4	0	1
Favourable government policy	29	45	19	6	1
Government support	35	52	9	0	4
Financial control	46	48	6	0	0
Entrepreneurial mindset	68	27	5	0	0
Entrepreneurship training	37	47	8	5	3
Business management skills	72	24	4	0	0
Managerial training	47	46	4	3	0
Improved marketing	46	45	6	0	3
Mentorship programmes	11	26	39	10	14
Infrastructure and premises	61	36	3	0	0
Appropriate technology	54	16	10	17	3

2.3.6 Entrepreneurship in Risk-taking Terms

Sachs (1973) found that risk was an integral part of an entrepreneurial decision-making process which could be another way of resolving the conflict between security and success and keeping them balanced in the business context. This is one of the reasons the entrepreneurial element, in terms of creativity, is looked upon as “independent of social systems and professions”, and therefore a personality trait. (Sachs, 1973). In line with previous works, Ozaralli, & Rivenburgh (2016) statistically proved a remarkable connection between personality attributes of risk-taking inclination, optimism, innovativeness and entrepreneurial objective.

Agriculture is associated with risk as it is difficult to predict the output of a farm. This risk is influenced by a host of unpredictable factors such as changing weather patterns, natural disasters, imperfect markets, personal risks, etc (Table 1). Developing countries and especially smallholder farmers are most exposed to certain risks that can drive these “resource-limited smallholder farmers into deeper poverty” (Cervantes-Godoy, Kimura & Antón, 2013).

Table 1: Risks in developing countries (Louw & Jordaan, 2016)

Risks	Examples
Weather-related risks	Periodic deficit and/or excess rainfall or temperature, hail, storms, strong winds
Natural disasters (including extreme weather events)	Major floods and droughts, hurricanes, cyclones, typhoons, earthquakes, volcanic activity
Biological and environmental risks	Crop and livestock pests and diseases; contamination related to poor sanitation, human contamination and illnesses; contamination affecting food safety; contamination and degradation of natural resources and processes contamination and degradation of production and processing environment
Market-related risks	Changes in supply and/or demand that impact domestic and/or international prices of inputs and/or outputs; changes in market demands for quantity and/or quality attributes, market demands for quantity and/or quality attributes; changes in food safety requirements, changes in market demands for timing of product delivery; changes in enterprise/supply chain reputation and dependability
Logistical and infrastructural risks	Changes in transport, communication, energy costs, degraded and/ or undependable transport, communication, energy infrastructure, physical destruction, conflicts, labour disputes affecting transport, communications, energy infrastructure and services
Management and operational risks	Poor management decisions in asset allocation and livelihood/enterprise selection; poor decision making in use of inputs; poor quality control; forecast and planning errors; breakdowns in farm or firm equipment; use of outdated seeds; lack of in-farm or firm equipment; lack of preparation to change product, process, markets; inability to adapt to changes in cash and labour flows
Public policy and institutional risks	Changing and/or uncertain monetary, fiscal and tax policies; changing and/or uncertain financial (credit, savings, insurance) policies; changing and/or uncertain regulatory and legal policies and enforcement; changing corruption); weak institutional capacity to implement tenure system; governance-related uncertainty (e.g., market policies; changing and/ or uncertain land policies and and/or uncertain trade and regulatory mandates
Political risks	Security-related risks and uncertainty (e.g., threats to property and/ or life) associated with politico-social instability within a country or in neighbouring countries, interruption of trade due to disputes with other countries, nationalization/ confiscation of assets, especially for foreign investors

2.3.7 Strategy and Collaboration

Ge, Sun, Chen, & Gao, (2016) in their study explain their model of 'entrepreneurial orientation', which is integrated with strategy and organisational behaviour. Strategy is also interconnected with other diverse viewpoints, such as orientation of opportunity identification, resource utilisation, culture, learning mindset, and networking; most of these characteristics are unique to entrepreneurs. A set of ZA entrepreneurs in Eastern Free State mentioned that due to being unemployed or retrenched was one of the main reasons for starting their own business, the other reasons mentioned were being naturally talented in business, converting their passions or hobbies into a business ventures, being able to spot a gap in the market coupled with the motivation to increase their incomes (Balunywa, et al, 2017). Unfortunately, in this study there were zero respondents in the farming/agricultural sector.

Lohrke, Carson & Lockamy (2018) define successful entrepreneurs as people who in a dynamic environment must first detect opportunities, assess the viability of these opportunities, and then organise resources to be able to exploit to achieve financial gain. The organisation of resources is synonymous to networking and collaboration.

Olsson (1988) proclaims that in their efforts to be entrepreneurial, the farmers must continuously:

- adjust their production and technology to the changes in market demand and prices
- allocate their limited resources in the most efficient manner
- upgrade and organise their farm setup and production
- find and create non-traditional uses of their produce e.g. combining aquaculture and fish farming; finding other uses for their crops

2.3.8 Independence of thought

Ryan & Desi (1985) proposed 'Self Determination Theory' which acknowledges that people are naturally motivated and actively look for growth and fulfilment and are inclined towards transforming social norms and rules and convert them into personal values to be able to self-regulate. 'Self Determination Theory' also perceives individuals to be naturally curious and interested in learning with the sole

aim to internalise the gathered knowledge. This growth is purely psychological and fulfils a person's internal desire to be (1) competent (to gain skills and mastery), (2) achieve connection (sense of belonging) and (3) achieve autonomy (to feel in control of their own destiny or goals). (Triste, Vandenabeele, Van Winsen, Debruyne, Lauwers, & Marchand, 2018; Broaddus, Przygocki, & Winch, 2015).

Broaddus, Przygocki, & Winch (2015) find 'autonomy' to be particularly interesting behaviour as people whose motivations are autonomous are actively involved with tasks and concepts which enhances learning and growth. Autonomy also gives an individual a feeling of being in control of their actions and targets whilst simultaneously being in full control of the choices they make – "the experience of autonomy facilitates internalization". Interestingly, contextual factors in the social environment can help promote or thwart the learning process and therefore can be explored to find the links between farmer motivation to participate in farming initiatives (Triste, et al, 2015).

2.4 Unique characteristics of an entrepreneurial leader

A few activities that uniquely defines entrepreneurs is their ability to recognise, analyse, exploit opportunities which lead to industry creation and cumulatively economic growth (Lohrke, et al, 2018). Ge, et al (2016) discuss that to explore the unique characteristics of entrepreneurial activities, researchers have explored the early stages of an organisation's life cycle, with the hope of identifying the intentions of entrepreneurial decision-making from the cognition perspective (Tversky & Kahneman, 1974); new concepts such as entrepreneurial orientation are extracted from such studies to get an understanding of an entrepreneur's enterprising spirit and orientation.

Interestingly, education has also been considered to uplift entrepreneurial intention. Lack of education which results in reduced knowledge in management, business, accountancy and other administrative topics is the main barriers for successful entrepreneurship. By providing entrepreneurial education one can increase an individual's capacity to be creative, flexible and to respond successfully to the surrounding dynamic business environment i.e. be innovative (Ozaralli, & Rivenburgh, 2016). A Global Entrepreneurship Monitor (GEM) study revealed a

strong correlation between higher level of education and entrepreneurial activities. It was established that people with tertiary qualifications are 2.5 times more likely to create employment than those with secondary education and had 11 times more possibility than those who could not complete secondary school (Balunywa, et al, 2017).

Ismail & Kollamparambil (2015) discuss the inverse relationship between having a spouse and/or child to taking risks in entrepreneurial terms, especially when leaving one's job to start a new business; this pressure to provide for the family was more on men and negligible on women. Interestingly women who have children are not able to invest in their own and education. One research conducted with smallholder farmers in Mali confirmed that entrepreneurial behaviour promoted innovativeness and farm performance increased due to reduction in post-harvest losses. By having accessibility to land, higher value of farm assets and exposure to the workings of model farms helped in improving farm sales and profitability (Konte, Ayuya, & Gathungu, 2018).

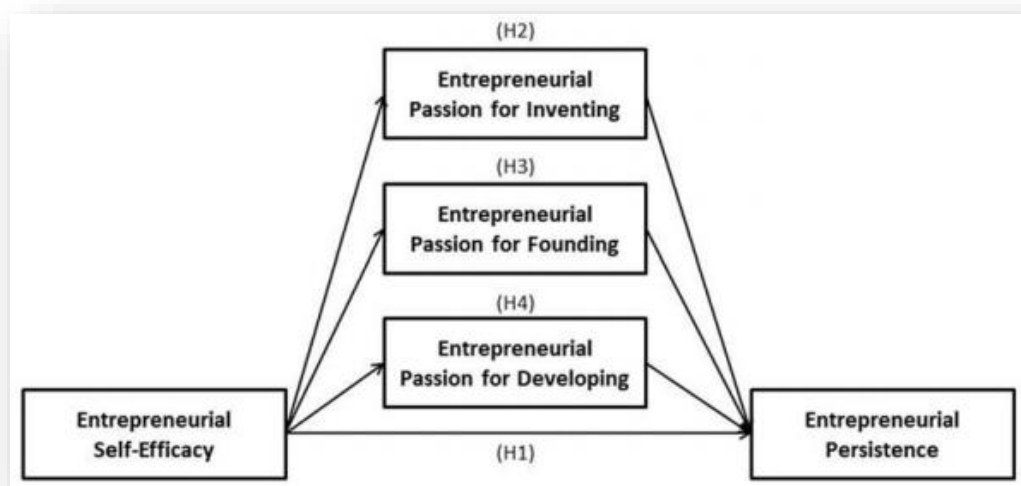
2.4.1 Hard work and taking pride in one's work

Van Beek, Hu, Schaufeli, Taris, & Schreurs (2012) have discussed workaholism, work engagement, and burnout as job related outcomes of hard work. Workaholism is a negative aspect where people work excessively hard and are so obsessed with work that it results in interpersonal conflicts both at work and home. On the other hand, work engagement is a positive work experience characterised by. "vigour, dedication and absorption". Vigour refers to having the energy and mental resilience to persist. Dedication refers to finding one's work significant enough to be inspired to perform it with enthusiasm and pride. Finally, absorption refers to finding one's work so engrossing that one cannot detach oneself from work.

Hockerts (2015) makes use of Bandura's (1977) revolutionary research to describe self-efficacy, which is people's perception of their own ability to be able to perform an intended high-performance outcome successfully. In an entrepreneurial context, levels of high self-efficacy help a person to perceive a project as feasible, this has an optimistic effect on the subsequent intention. Entrialgo, & Iglesias (2016) utilised the seminal research of Ajzen's (1991, 2002) theory of planned behaviour which

sheds light on entrepreneurial intentions and actions. People’s behaviour is influenced by their intentions and intentions are plans that people make which results in a specific action; the greater the motivation to ‘perform a behaviour’, the more likelihood that a resultant action will take place. Cardon & Kirk (2015) found persistence to be a key element in entrepreneurial behaviour because the ambitious process of creating and growing a business encounters numerous hurdles – persistence is “continuation of effortful action despite failures, impediments, or threats, either real or imagined”. In entrepreneurship, self-efficacy has been found to be key in driving persistence, but recently entrepreneurial passion has also been found to enhance persistence (Cardon & Kirk, 2015). In the following Figure 4 a conceptual model, Cardon & Kirk (2015) highlight the relationship between persistence and self-efficacy.

Figure 4: (Cardon & Kirk, 2015)



Unfortunately, under apartheid the Bantu education system denied equal educational opportunities to black South Africans and therefore most of the black South Africans do not have the confidence to start and run their own businesses, they do not believe that they have entrepreneurial talent and prefer to work as an employee, and therefore fail to spot start-up opportunities. Entrepreneurial training will help build entrepreneurial talents and provide confidence to individuals who have latent entrepreneurial talents (Balunywa, et al, 2017).

2.5 Conclusion

As provided in the following Table 2, various theories of leadership and entrepreneurship were explored.

Table 2: Summary of literature review

Themes	Categories	Literature	Concept
Leadership	Learning Mindset	Dweck (2006)	Fixed and Growth Mindset
		Buchanan & Kern (2017)	Leadership maturity framework
		Heifetz & Linsky (2009)	Adaptive Mindset
		Klapper and Farber (2016)	Experiential Learning
		Hermes, & Rimanoczy (2018)	Sustainability Mindset
		Politis (2015)	Self-Leadership
	Importance of mentors	Golele, Mautjana, & Makombe, (2018)	Knowledge transfer
		Rosch (2013)	Extension services
	Community orientation	Nix & Seerley (1973)	Reciprocal & conjunctive relationships
	Shared Value	Burns (1978)	Transactional and Transformational
	Having a vision	Kelly, 2000	Vision and communication
		Farmer, Slater, & Wright, (1998)	Communicate vision
		Olsson (1988)	Adjustment of vision
		Yapp (2005)	Streamlining processes
Entrepreneurial Mindset	Profit & Success	Bucktowar, Kocak, & Padachi (2015)	Self-interest and profit seeking
		Baumol (1990)	Innovation or rent-

			seeking
		Padilla & Cachanosky (2016)	Entrepreneurship & economic growth
	Risk taking	Sachs (1973)	Risk & creativity
		Ozaralli, & Rivenburgh (2016)	Risk-taking, optimism & innovation
	Strategy and Collaboration	Ge, Sun, Chen, & Gao, (2016)	Entrepreneurial orientation
		Lohrke, Carson & Lockamy (2018)	Opportunistic behaviour
Unique Characteristics	Opportunity detection	Lohrke, et al, (2018)	Recognise & exploit opportunities
		Ge, et al (2016)	Enterprising spirit
	Education	Ozaralli, & Rivenburgh, (2016) (Balunywa, et al, 2017)	Education & entrepreneurial activities and intentions
	Independence of thought	Bandura's (1977)	Self-Efficacy
		Ajzen's (1991, 2002)	Theory of planned behaviour
Challenges Faced	Various challenges	Korsgaard, et al. (2015) Gaffney, Challenger, Califf & Harden (2019)	List of challenges in agriculture

This study aimed to explore and better understand leadership and entrepreneurial qualities in smallholder farmers and how these qualities can help in the progression of smallholder farmers into successful commercial farmers. The study then goes on to explore the complexity of these factors and the possible influences they wield in the farming environment and the individuals who run smallholder farms. We discussed various peer reviewed theories about leadership and entrepreneurship and how they can be utilised in a farming environment, especially a farming enterprise that needs developmental support i.e. smallholder farming. With the inductive approach of the methodology applied in chapter four, various

characteristics of leadership and entrepreneurial traits emerged during the face to face interviews.

These characteristics and traits were then further explored and compared with the leadership qualities that were discovered. Focus was directed towards the leadership traits of a learning mindset, visionary thinking, community orientation, need for mentorship and the concept of shared value. The transactional and transformational leadership qualities and the adaptability quality of leaders are most influential and can be adapted and applied to various aspects of leadership (Longo, 2017; Heifetz & Linsky, 2009). In terms of entrepreneurial qualities, attention was directed towards traits such as profit and success orientation, risk taking behaviour, strategic thought, collaboration and independence of both thought and action.

3. Chapter 3 – Research Questions

This research aims to establish the level of current leadership and entrepreneurial skills prevalent amongst smallholder farmers that farm in Gauteng, South Africa. Following this, the research aims to identify leadership and entrepreneurial factors that can be provided through government and private sector policies, for smallholder farmers, to be successful so they are able to progress into managing and owning larger commercial farm structures.

3.1 Research questions

Research Question One: What is the current level of leadership and entrepreneurship present amongst smallholder farmers?

The aim of research question one is to identify the leadership and entrepreneurial skills that are present in smallholder farmers. The aspect of this question is to understand if smallholder farmers utilise these skills in their daily work lives.

Research Question Two: From leadership and entrepreneurship perspective, what are the various 'key' factors that affect smallholder farmers?

The aim of this question is to gather the key factors that emerge within the leadership and entrepreneurial behaviour.

Research Question Three: Of the identified factors, how do these factors affect success and failure of a smallholder farming business?

With the help of this question, the researcher aims to find the interconnectedness of these factors and if these factors help or thwart smallholder farmers' efforts to make their farms grow.

Research Question Four: Can these factors be monitored, controlled and stimulated or removed, in the case of the factors being barriers, to achieve success for the smallholder farmers consistently?

The idea behind this question is to establish if one can inculcate behaviours of leadership and entrepreneurial skills in smallholder farmers. In contrast, the research also aims to understand if one could possibly remove the pain points of smallholder farmers and guide them out of 'incorrect' leadership and entrepreneurial habits that they might have acquired.

The basis of this exploratory research is to discover whether leadership and entrepreneurship inherently exist amongst smallholder farmers and what are the specific traits that make up these skills.

3.2 Conclusion

These entrepreneurial and leadership characteristics that this research has undertaken to identify is to guide policy makers and the private sector to target their efforts and investments to support smallholder farmers. This could lead to creation of employment, food security for the country and new market opportunities for agricultural products and in turn lead to a general growth in the economy.

4. Chapter 4 – Research Methodology

4.1 Introduction

The motivations for the choices made for research methodology are covered in this section and defines the specific measurement instruments and the identified population. This section also discusses the approaches to the way the data was gathered and processed. A qualitative approach was utilised to study the smallholder farmers in Gauteng, an urban area, as the intention was to discover the thought processes and approaches the farmers apply to solve their problems in their daily lives. Data collection was done through semi-structured interviews conducted with eleven smallholder farmers living and working within the city of Gauteng. In the analysis and categorisation of data, emergent themes were created. During the study, potential concerns related to ethics, data validity and data reliability were kept in cognisance by the researcher. The limitations of this study are discussed at the very end of this section.

The research methodology that was utilised in this study are made up of the following components:

- Research design
- Data collection
- Data analysis
- Report creation

4.2 The rationale behind the method of research chosen:

The aim of this research was to explore the leadership and entrepreneurial skills of smallholder farmers to be able to understand their decision-making capabilities. Qualitative research is applicable when one is searching for meanings, reasons, expectations, beliefs, values and approaches, which in turn is correlated with interactions, processes and experiences that cannot be reduced or divided any further, nor can they be express in numerical terms (Queirós, Faria & Almeida (2017). Therefore, the approach taken in this research was specifically chosen to identify and collate various viewpoints which are concerned with an individual's

thought processes and decisions made whilst operating their farms daily from a leadership perspective. An understanding of the approach taken by an entrepreneurial mindset was also explored. The various attributes that were discovered along the way such as passion, dedication, hard work, persistence and commitment whilst devoting their time to farming activities were in conjunction to a keen interest in gathering knowledge to help them become successful farmers and expand their business.

This study could be relevant to any budding farmer looking for leadership and entrepreneurial context in the short-term survival in their farming business. This study could also be relevant to Non-Governmental Organisations (NGOs), public and private institutions with the aim of assisting and supporting new farmers related to leadership and entrepreneurial activity and even to inculcate related attitudes and habits.

4.3 Personal values of the researcher

Queirós, Faria & Almeida (2017) discuss that the researcher is “both the subject and the object of his research”. Saunders & Lewis (2012, p.107) recommend that the researchers might find it useful to pen down their personal values as it increases the understanding of one’s own “awareness of value judgements” being made; this would also help the assessors to understand the reason the researcher chose this research path.

The researcher comes from a Hindu family and therefore the researcher’s upbringing is based on the Hindu tenets of being a giver and being pure in heart and mind. The researcher’s personal values are: (1) Do not exploit people without power or status; look after the weak and mild; (2) Decisions must be based on logic; (3) In the long run, hard work always pays off; (4) Justice should be for all, not only a few.

The researcher’s organisational values are very much influenced by the personal values, which are: (1) It is people who make an organisation, not rules and regulations or the organisation itself; (2) A constructive dialogue is the best way to resolve issues and not a top-down hierarchical approach; (3) Look after all your people, so together the team can succeed.

Furthermore, the researcher's personal moral philosophy is not defined by religious ceremonies but rather by a philosophy or approach based on Hindu values. It is to be kind, fair, systematic, work hard and lead by example. This is so that the people in a team or an organisation can move in tandem. The researcher strongly believes in contextualizing issues, training and mentoring. In today's multiracial environment where diverse people with different values, languages, religions and gender are thrust together, whether it be in the confines of an office or a farm, an inclusive approach through dialogue and 'personal interaction' works best. Finally, the researcher is a strong believer that people's actions can be motivated not only based on pure economic gain but can also be guided by a caring approach. It is important for a person, team, company or even a country to adopt a caring attitude towards people around them, as it is not always possible because of reasons such as market forces and prevailing economic conditions to meet financial expectations of everyone all the time.

4.4 Research Design

It is recognised that quantitative approaches for certain studies or questions have limitations. To overcome these limitations, a variety of qualitative methods have emerged over the years to compensate for shortcomings (Mayer, I., 2015). Qualitative research especially helps in the understanding of activities through exploration and discovery (Bloomberg and Volpe, 2012). This is a subjectivist epistemological study in which participants have not been treated as objects to be experimented upon but 'more as actors' who actively participate in creating a 'reality' of events (Bleiker, Morgan-Trimmer, Knapp, & Hopkins, 2018). Research methods traditionally reflect a common way of thinking about the validity of certain questions and the procedures to derive the answers. With continuous iteration the researcher develops a better understanding of methods that are acceptable and trustworthy (Davis, Golicic, Boerstler, Choi, Oh, 2013). There are three types of research: exploratory, descriptive and causal. An exploratory research specifically tries to find new insights regarding the phenomena to bring to the fore any ambiguous situations. An exploratory research does not try to gather definitive evidence but only to clear a path for further research. Causal research, also known as explanatory research is conducted to find relationships between variables,

where one or more variables develop or are caused due to the existence or action of other variable/s (Mayer, I., 2015).

An exploratory qualitative research approach was employed in this study. It is suggested by Dyer and Wilkins (1991) that qualitative research is preferable in situations where the context of the current environment is pertinent. South Africa has developing world issues it needs to take care of, apart from income inequality, high unemployment, high rural population, the country is still negatively affected by apartheid, and therefore land is a controversial issue. Agriculture has the capability to uplift its population to earn a respectful living, provide much needed employment and support the nation with food security, a qualitative method is most suited. Myers (1997) suggests that the chosen research methodology influences data collection, therefore to explore the viewpoints of individuals and to get these participants to discuss in detail their varied personal and private opinions requires a qualitative methodology i.e. the decision-making skills of smallholder farmers based on leadership and entrepreneurial mindset. Qualitative methods are preferred in an exploratory study as it can “bring richness and depth” by bringing insight into how the individuals are sensing, experiencing and interpreting their own experiences as they happen (Bleiker, et al, 2019).

Furthermore, the results of the interviews provided a certain understanding of the leadership and entrepreneurial qualities the smallholder farmers possess as well as the value that these qualities add to their business and agriculture itself. To gather the data on how these farmers comprehend and tackle their business, markets, stakeholders and the environment of agriculture itself was an interesting exploration. Based on this, the researcher employed an inductive approach by analysing one-on-one interviews conducted with smallholder farmers. Since this research is exploratory and the model that subsequently emerged is conceptual, the study was not developed with the available leadership and entrepreneurial theories that were available. Rather, the researcher analysed the findings and then tried to find the linkages with the existing theories. However, the questions that were developed were based on the existing theories which acted as foundations for the questions. This was to guide the researcher on what type of questions to ask the smallholder farmers to be able to explore how they are practicing leadership and entrepreneurship.

4.5 Population

For feasible and practical purposes, the population for this study was smallholder farmers situated in Gauteng, South Africa. According to Cousins, B. (2014), there are about 2.8 million farmers in South Africa divided into 7 categories (see Table 1). The purposive samples that can be identified are for smallholder farmers in Gauteng belong to categories 3-6 (see Table 3). From the identified population, the purposive sampling was further defined; the farmer should have been in the farming business for at least two years uninterrupted and should be farming the whole year round. This decision was purely subjective as the researcher wanted to interview farmers who had some experience in farming. There were also no definitions available in academic literature for this characteristic.

The University of Pretoria recommended that twelve is a reasonable number of interviews that should be conducted for a Master of Business Administration study. The researcher approached various agricultural organisations and found one farmer from the Farmer's Weekly magazine, thereafter snowball sampling was utilised. The researcher conducted 13 interviews, eleven of which have been included in this study. These farmers belonging to categories 3-6 (see Table 3) were interviewed using in-depth and face-to-face technique.

Table 3: Number of Farmers in South Africa (Cousins, 2015)

	Farmers	Numbers	Key features
1	Top 20 per cent of large-scale commercial farmers on private land; almost all are white	7,000	Sophisticated, specialised, capital-intensive farmers, producing for export or for agro- processing and large retailers; produce bulk of produce, perhaps as much as 80 per cent
2	Medium- to large-scale commercial farmers on private land; almost all are white	9,000	Some farmers succeed, some struggle, some are unable to earn a living from farming alone
3	Small- to medium-scale commercial farmers on private land; mostly white, some black	19,000	Many cannot survive from farming alone; includes hobby farmers

4	Small-scale black capitalist farmers in communal areas and in land reform contexts	5,000– 10,000	Many farmers earn income from off-farm incomes and businesses in addition to farming
5	Market-oriented black smallholder farmers in communal areas and land reform contexts, supplying tight value chains (e.g. under contract)	5,000– 10,000	Many grow fresh produce under irrigation, others are livestock producers, and a few engage in dryland cropping
6	Market-oriented black smallholder farmers in communal areas and land reform contexts, supplying loose value chains	200,000– 250,000	Many grow fresh produce under irrigation, and others are livestock producers. Few depend wholly on farming
7	Subsistence-oriented smallholder farmers growing food for themselves, and selling occasionally	2–2.5 million	Most crop production takes place in homestead gardens, some of which are quite large. Occasional livestock sales by some

There were two farmers that were excluded from this study, even though full interviews were conducted with them. Farmer number zero, even though was a smallholder farmer, had progressed to becoming an established farmer by recently acquiring a substantial piece of land and his annual turnover was above 20 million per annum. Farmer number 12 was from Ivory Park and was recommended by an agricultural organisation as a smallholder farmer but had to be excluded from this study due to the subsistence and seasonal nature of his farming. Farmer 2 had officially been farming for three months short of 2 years, the minimum existence in farming criteria set for this research but has been included as they had started farming a few months before registering their company as a farming business (see Table 4).

Table 4: Smallholder farmer demographics

Sample	Farming Duration	Gender	Race	Age (current)	Education	Hectare	Location	Commodity
Farmer 1	5 years+	Male	Black	30	Graduate	1.3	Diepsloot	Herbs & Vegetables
Farmer 2	2 years	Female	Black	32	MBA	1	Tarlton	Herbs & Vegetables
Farmer 3	3 years	Female	Indian	32	Post Matric	1	Ivory Park	Herbs & Vegetables
Farmer 4	4 years	Male	Coloured	36	Graduate	2	Kyalami	Herbs & Vegetables
Farmer 5	20 years	Female	Black	68	Post Graduate	19	Benoni	Herbs & Vegetables
Farmer 6	3 years	Male	White	47	MBA	1.5	Glen Austin	Seeds
Farmer 7	5 years+	Male	Black	33	Post Graduate	5	Brits	Herbs & Vegetables
Farmer 8	2 years+	Male	Coloured	32	Post Matric	<1	Kyalami	Chicken
Farmer 9	4 years+	Female	Coloured	29	Graduate	65	Tarlton	Herbs & Vegetables
Farmer 10	10 years+	Female	White	45	Graduate	1	Glen Austin	Herbs & Vegetables
Farmer 11	3 years+	Male	White	36	Post Graduate	1	Glen Austin	Fish & Vegetables

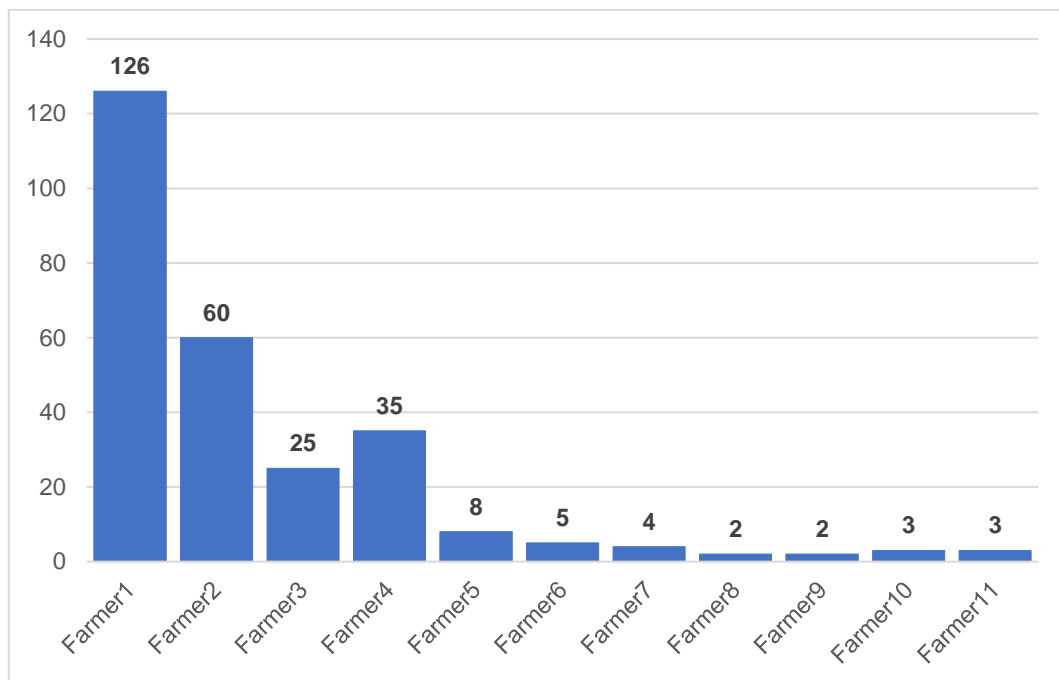
4.6 Sampling method and size

Farrugia (2019) suggests that when the researcher reaches a stage when, with the progression of research and its subsequent coding and analysis, the data does not yield any new 'ideas/themes/ideas/concepts' then 'data saturation' has been reached. One can then cease the sampling. Therefore, it is difficult to predict the sample size at the start of the research and can be logically concluded that when the research questions have been adequately answered, that is the appropriate sample size i.e. each study should reach its own sample size (Farrugia, 2019). Cresswell (2012) advocates that a qualitative study's intention is not to generalise but to explore a central theme. For this to happen, samples need to be selected

purposefully which further assist in the comprehension of the theme being researched i.e. purposeful sampling.

Hamilton & Finley (2019) found that when the research scope is not very wide and the participants are relatively homogenous, a sample size of 6-12 is enough to reach saturation i.e. there are no new insights that are coming through. Hamilton & Finley (2019) have also acknowledged the sampling concept proposed by Malterud, Siersma, & Guassora (2016) of 'information power' which proposes that the more the insight/information held by the interviewee, 'the lower the number of participants are needed'. Guest, Bunce, & Johnson (2006) propose that after each interview the researcher should make a note of new codes being created and this has been plotted in the following Figure 5. In this research, saturation approached after the 5th interview, after which not many new codes were created.

Figure 5: Saturation graph



The researcher used non-probability purposive sampling, this was because the comprehensive population was inaccessible. Therefore, the probability of selecting each participant was not known before the research commenced (Saunders & Lewis, 2012). Snowball sampling was also used to find other participants (Saunders & Lewis, 2012) from already interviewed smallholder farmers. Along with snowball sampling, judgement sampling process was also utilised where

participants were selected deliberately, in line with their specific qualities. In this research, smallholder farming experience of at least two years and the farmer had to be farming the whole year round, at the same time the willingness of the interviewee to participate was also essential (Etikan, Musa, & Alkassim, 2016).

4.7 Unit of analysis

Kirsten & van Zyl (1998) define a ZA small-scale farmer as one whose business is so small that it cannot utilise economies of scale to increase production and thereby increase profits and a chance to grow the business. These are the farmers that the government should aid, to be able to add value to the agricultural sector and thereby the whole economy. Internationally, Food and Agricultural Organisation (FAO) (1992) bemoan the fact about ambiguity in the defining a smallholder farmer. FAO confirms that often the size of the farm is the starting base of dividing farmers into small and large and two hectares or less is looked at as an ideal number. At the same time FAO has found that smallholder farmers differ in their classification in each country/region; a two-hectare farm in arid Sub Saharan Africa will not produce much compared to a two-hectare farm in the Black Sea region. It can be surmised that the definition of a smallholder farmer is relative to the specific ecological region, water availability, soil quality and could also be different within the farming industry i.e. Maize or vegetable production (Rapsomanikis, 2015).

The unit of analysis in this research is the smallholder farmer who falls in categories 3-6 in Table 1 and would like to become profitable and grow their farming enterprise. Two of the 11 interviewees were representatives of their farm and the rest were sole or part owners of their farm; they all were involved in decision making of their farms daily. Reflective insights, sentiments and approaches with an entrepreneurial bent of mind and its applicability for success will be sampled from smallholder farmers, which represent the unit of analysis for this research.

4.8 Measurement instrument

The semi-structured interview style was preferred for this study over the fully structured interviews because there is a great degree of flexibility for both the interviewer and interviewee in deciding how and when to ask each question. Semi-structured interviews also provide adaptability as themes can be recognised during an interview and additional questions can also be included in reaction to information that comes forth during the interview (Saunders & Lewis, 2012). Semi-structured interviews allow the line of questioning to be 'open-ended' which leads to an opening to ask more contextual questions pertaining to the topic being discussed such "“what do you feel when...” (Bleiker, et al, 2019).

As per Saunders & Lewis (2012), the drawback of semi-structured interviews is that they lack standardisation and may have issues in data quality related to bias, reliability, validity and generalisation. They refer to reliability as the degree of consistent findings in relation to data method used and whether other researchers will be able to come to similar conclusions when repeating the study. Reliability may also be affected by interviewer bias, where prejudice can arise based on personal beliefs, and this may elicit unintended responses or interpretations. Additionally, the respondent may even choose not to reveal certain aspects of the topic being studied. Validity refers to the degree to which the collection technique accurately measures what it proposes to measure, and the conclusions are in line with the propositions offered by the researcher (Saunders & Lewis, 2012). Golafshani (2003) however proposed that one should interpret reliability and validity more for trustworthiness, rigour and quality of data. Morse, Barrett, Mayan, Olson and Spiers (2002) argue that both reliability and validity could also be applied to qualitative research. In summary, due to the nature of a qualitative and exploratory study it is accepted that external validity and reliability should be accepted as weak.

A general consensus is that qualitative research should make all attempts to bring forth rigour, this is so the researcher's biases are minimalised. Taran, Boer & Lindgren (2015) suggest that in qualitative study one can ensure validity and reliability by either collecting additional background information or screening the participants so that that they fit the population. The screening of participants, data gathering, and analysis approach that are discussed in the following sections utilised by the researcher, provides for credibility and dependability.

4.9 Data Gathering process

In order to achieve a better understanding of the factors affecting smallholder farmers, semi-structured face-to-face interviews were conducted. This area of research is relatively unexplored and therefore a qualitative approach was utilised. Saunders & Lewis (2012) suggest that a pilot-test needs to be conducted to weed out issues such as interview technique, and if the questions are being understood. The interviewer piloted the questionnaire with colleagues and family members and the critique and feedback was utilised to refine the interview process and the questions. The interviewer conducted all the interviews in person. Seven of the eleven interviews were conducted on site so that contextual observations could be made to guide the semi-structured nature of the interview as suggested by Saunders & Lewis (2012) and the questionnaire in Appendix 2. The interviewees were assured of their anonymity and their participation was voluntary. All interviews with the smallholder farmers were recorded using an electronic device and reported in the research as Farmer 1 through to Farmer 11 for interviewee anonymity. The interviewees were also informed about how the information gathered will be utilised and a few even asked for the final report for their own interest. All the recordings were then transcribed into a text format. The shortest interview was 45'25" and the longest interview was 1'58". The average length per interview was 1'25". An interview consent form was obtained at the start of every interview and the reasoning behind it was explained to each participant (Appendix 3).

4.10 Data analysis approach

An inductive approach was utilised for this research. Written transcriptions were created for each interview conducted. Atlas.ti was recommended by the University of Pretoria as the tool for data analysis. The raw recordings were loaded into Atlas.ti to analyse the data. Atlas.ti helped in the comparison of all the interview transcripts where all the codes created could be easily tracked and in the setting of measurement parameters i.e. the category codes. This helped in the identification of common themes and across all the interview transcripts which further supported the interviewer to aggregate the findings more concisely. An analysis was performed after each interview to refine the remaining interviews so as to derive a

clearer and focused result (Merriam & Tisdell, 2016). A variety of themes started to emerge early on in the interview process and the researcher was able to make minor adjustments to the questions and schedule in the interviews that followed.

For each interview, the researcher followed the following process as summarised by Braun & Clarke (2012) in Table 5:

Table 5: The phases of Thematic Analysis (Braun & Clarke, 2006, p. 87)

	Phase	Description of the Process
1	Familiarising yourself with your data:	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
2	Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3	Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4	Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic “map” of the analysis.
5	Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6	Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back to the analysis of the research question and literature, producing a scholarly report of the analysis.

Most of the participants understood the entrepreneurial and leadership concepts but were not cognisant of the fact that they could be practically applying these concepts in their work environment on a daily basis. Since leadership and entrepreneurship are commonly understood concepts, the questionnaire was designed not to use the words ‘leadership’ and ‘entrepreneurship’ so as not to prompt the interviewees. This approach was utilised to be able to make inferences and deductions from the answers received. However, during the course of

interview, the participants were made aware that the research was about finding the lack or abundance of these skills in smallholder farmers.

4.11 Data validity and reliability

The reliability of research depends on the replication, repetition and reproducibility of the study results. This is because qualitative research is subjective in nature and therefore there is a need to confirm that the results obtained were neutral, unbiased and trustworthy (Golafshani, 2003). This research was conducted in a limited timeframe and therefore the researcher could not gather data using various methodologies or even data processing. The researcher was able to make use of the observations made during the interviews that were conducted on site, the interview text transcriptions and their audio recordings.

Utmost care has been taken to collect and interpret the data as impartially as could be possible by being as consistent as possible, this was to avoid any potential biases. There are many biases that can come through in the data collection, analysis and processing of interviews, these can be during conducting the interview by the interviewer itself, during the interpretation of the interviews and even come through in the responses received (Saunders & Lewis, 2012; Zikmund, Carr, Babin, & Griffin, 2013). To overcome these biases the researcher followed a semi-structured interview pattern where all the questions were standardised and only used as a guide during each interview conducted. The interviewees and even the interviewer were able to explore the topics in depth to develop an understanding of the issue on hand. Understanding the biases that can influence the process, the researcher was able to focus solely on the participants' perceptions, understanding and opinions. Wherever possible, the specified criteria was applied during sample selection. Any flaws that have been identified during data collection have been discussed within this research.

4.12 Ethical considerations

The GIBS MBA 'green pages' and its recommended ethical guidelines were considered during the research process. Starting with the participants' rights and

anonymity, each participant was explained the purpose of the research and written permission was obtained at the start of the interview. GIBS research ethics committee granted the ethical clearance on 11 July 2019 and is provided in Appendix 4. The researcher did not commence any data collection prior to the granting of ethical clearance.

4.13 Research Limitations

Since the research is qualitative in nature with a small sample size, limited generalisations can be achieved from data analysis (Taran et al., 2015) Saunders and Lewis (2012) suggest that the drawback of qualitative research is due to the subjective nature of the research findings amplified by the inherent biases of the researcher, for this reason the personal values of the researcher have been discussed in section 4.3 above. Nevertheless, the common goal of qualitative research is to be able to apply the knowledge gained to similar situations (Taran et al., 2015).

As has been mentioned earlier, due to the subjective nature of qualitative research, there can be number of biases that could have come through in this study (Saunders & Lewis, 2012; Zikmund et al., 2013). The other limitations that can be identified with this study are:

- The literature relating to entrepreneurship and leadership is vast and this research has not been able to consider all information. There is a possibility that some seminal research has been overlooked which could have rendered this study either feasible or viable, thus making this research redundant.
- The interviewer had not conducted any professional interviews prior to this study, and this could have had an impact on the results due to the quality of data collection.
- Since non- probability, purposive sampling was used, and judgement was engaged to select appropriate interviewees, there could be discrepancies within the interviewees' views and answers. Therefore, a thorough understanding of the subject matter would be necessary to make sound generalisations (Saunders & Lewis, 2012).

4.14 Conclusion

The details of the methodology used to collect data has been discussed in this chapter. The researcher used qualitative research methodology to explore the questions raised in chapter 3 – whether leadership and entrepreneurial skills exist in smallholder farmers in Gauteng and the interconnectedness between the two skills. The next chapter gives the results of the qualitative analysis.

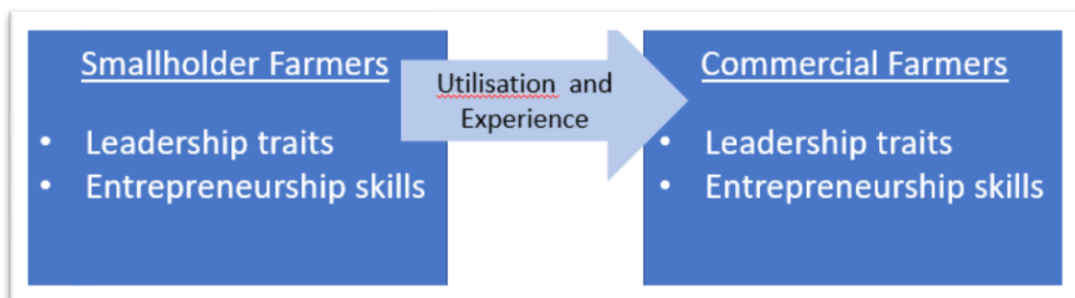
5. Chapter 5 – Results

5.1 Introduction

In the previous chapter the research design and the methodology was presented. This is an exploratory, qualitative project that seeks to find entrepreneurial and leadership skills in smallholder farmers in Gauteng, South Africa. This chapter will focus on the description of the sample, put forward the coding themes and thereafter discuss the results of the interviews that were conducted. Most of the farmers are younger than 36 years of age and have a university degree or higher. The four main themes that clearly emerged from the face to face interviews were: leadership, entrepreneurship, unique characteristics and challenges.

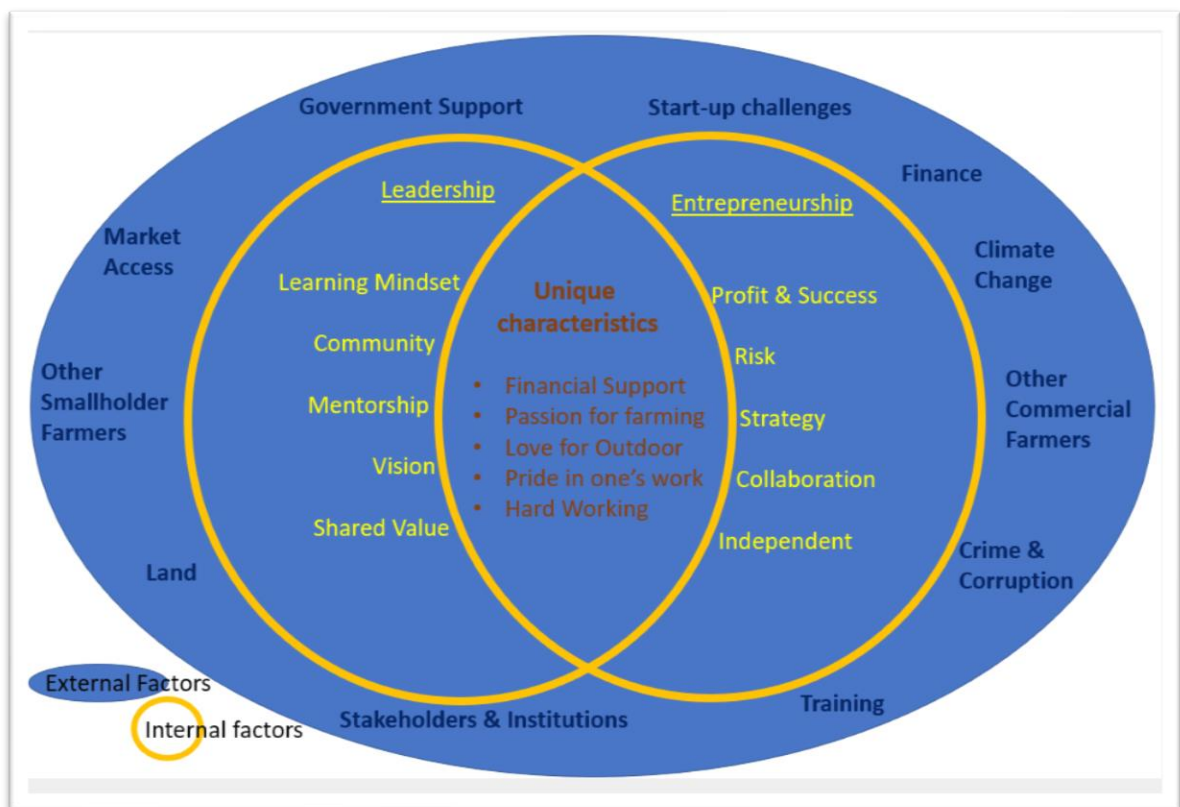
The research started with the assumption that smallholder farmers possess certain leadership and entrepreneurial skills which they utilise in their work environment and which helps them thrive. Figure 6 provides a depiction of the initial assumption.

Figure 6: Initial assumption of progression from smallholder to commercial farming



However, as this research progressed, various other characteristics of smallholder farmers emerged, along with the external factors that have direct and indirect influence also emerged, as depicted in Figure 7. All these factors will be discussed in detail later in chapter six.

Figure 7: Conceptual model of this study

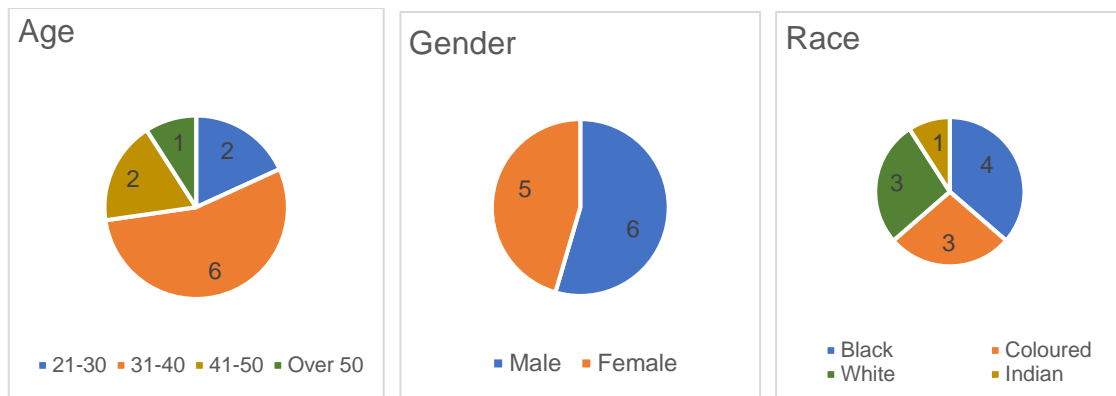


5.2 Sample description

As has been discussed in section 4.5, the researcher conducted 13 interviews, 11 of which were utilised for this study. The demographic details of the farmers that were interviewed are presented in Table 4. All the interviews were conducted face to face, six of these interviews were conducted on the farms. Of the 11 smallholder farmers, only one farmer was a Zimbabwean (Farmer Seven), the rest were all South Africans. Of the 11 farmers ten farmers were either sole or part owners of their businesses, except Farmer 9 who was an employee. As depicted in the following Figure 8 there was a good combination of farmers in terms of their:

- Age – a majority (eight) of smallholder farmers were between the ages of 29 to 36
- Gender – there were six male and five female farmers
- Race – a good representation of the population of South Africa, four black, three coloured, three white and one Indian farmer

Figure 8: Age, Gender and Race of respondents



5.3 General findings

One interesting factor to note is that most of these smallholder farmers are well educated, they hold either a bachelor or a post graduate degree, only two farmers did not have a university degree (Farmer three and Farmer eight) even though post matric they have completed industry related diplomas. All farmers, except one (Farmer one), have never been through any formal farming training but peculiarly all the farmers prefer being outdoors and are actively involved in their farm. Not surprisingly though, all the farmers, except Farmer five, are farming because they have always loved farming and have been exposed to farming at some point in their lives, especially during their childhood; farmer five saw an opportunity in agriculture and left a well-paid job to become an equal partner in a farming business. Another interesting factor to note is that ten of these 11 farmers, when they started their business, had no children and some of them did not even have partners at that period.

As has been discussed in section 4.7 (see Table 4), it is very difficult to define a smallholder farmer in terms of the acreage they utilise, this is dependent on the natural environment, soil quality, amongst other things. The set of smallholder farmers that were interviewed are well educated, farm primarily on less than two hectares (eight farmers). Nine of the 11 farmers are growing herbs and vegetables (see Figure 9) and only two farmers in total have access to a few tunnels, the rest of the farmers farm in open fields. Tunnels are strips of land covered with plastic, which resembles a tunnel, and is therefore protected from extreme weather conditions and provides a greenhouse effect. Tunnel farming is most suited for high

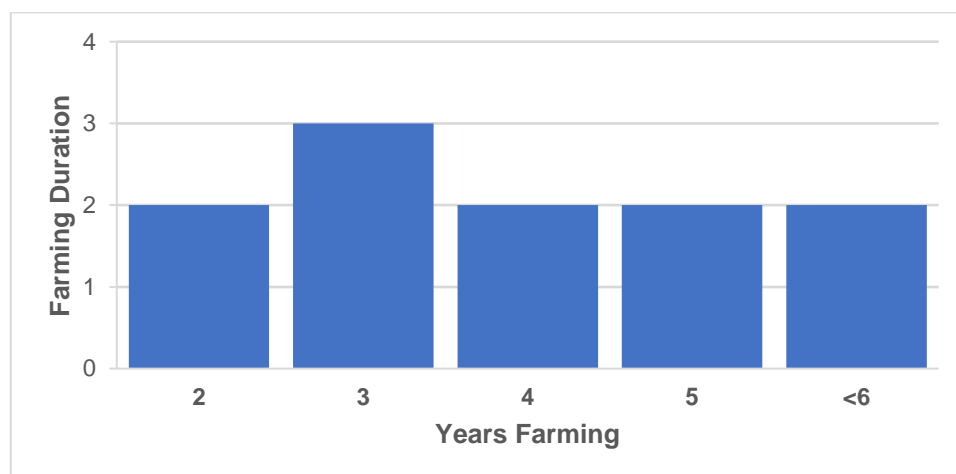
value vegetable crops such as tomatoes, lettuce, cucumber and other small fruits as they help farmer achieve higher and better-quality yields and due to the greenhouse effect a longer harvest season (Lei, & McDonald (2019). However, tunnel farming requires extra capital, which the smallholder farmers do not have access to. Most of these farmers, due the urban nature of their farming, farm organically, only two farmers (Farmer two and Farmer seven) that use pesticides on their crops.

Figure 9: Education Level, Acreage and Commodity



One of the requirements of the farmer selection criterion was that they should have been farming for more than two years. There were a good mix of the duration that these farmers had been farming (see Figure 10). The range of years that the farmers that were interviewed had been farming for was mostly between two to five years.

Figure 10: Farming duration in years



5.3.1 Coding Themes

The coding themes were generated based on the research questions as presented in Chapter Three. There were four distinct themes that emerged during the analysis of the results. The farmers possess certain leadership and entrepreneurial traits that can be clearly identified. As presented in the following Table 6, the coding themes have been categorised as follows:

Table 6: Coding themes

Themes	Categories
Theme One: Leadership Traits	<ol style="list-style-type: none"> 1. Learning mindset 2. Community oriented 3. Importance of mentors 4. Having a vision for their farm 5. Shared-Value mindset
Theme Two: Entrepreneurial mindset	<ol style="list-style-type: none"> 6. Profit and success oriented 7. Risk takers 8. Strategic thinking 9. Collaborative approach 10. Independence of thought
Theme Three: Unique characteristics	<ol style="list-style-type: none"> 11. Has financial support for day to day existence 12. Is Hard working 13. Pride in one's work 14. Love for the outdoors 15. Passion for farming
Theme Four: Challenges faced	<ol style="list-style-type: none"> 16. General challenges 17. Market Access 18. Government support

5.4 Results

The results have been set out under the topics below and will follow the responses that were received during the interview sessions. The quotations that have been provided here are quoted verbatim and have not been corrected for grammar and language errors.

5.4.1 Theme One: Leadership

Table 7: Theme One

Theme One: Leadership Traits	<ol style="list-style-type: none">1. Learning mindset2. Community oriented3. Importance of mentors4. Having a vision for their farm5. Shared-Value mindset
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As has been discussed above in section 5.3, all the farmers are very educated and even though they do not come from wealthy backgrounds, they know how to network and bring things together. They collaborate and are resourceful, have patience and perseverance, and at the same time are opportunistic and since they are learning continuously, they are keen to experiment and try new things. They are aware of their surroundings and have willingly gotten into farming as they see a potential in farming. They can see the problems in the current structures that affect them and continuously improvise to make more profits so that they can plough those profits back into their business and grow even bigger. **Category One: A learning mindset**

The questions that were asked to the respondents were open ended to be able to elicit and thereby understand leadership and entrepreneurial traits in smallholder farmers. The following are the leadership traits that were noticed in regard to a 'Learning mindset':

1.1 "This one lady posts a lot about Krishna and I ask her when she sends these pictures, what does it mean. The more I know the more I will be able to interact with them. Because sometimes out of ignorance I might do something that might offend them, but once I know that Muslim people do not

want alcohol nearby, so when I know they are coming I will make sure that I clean everything. No beer bottles because I know.”

1.7 “The plants that are planted here is just a testing ground to check if what my mentor taught me is doable, and it is indeed it is doable. This experience is then taken and applied to the 1.3ha farm to produce on a larger scale.”

2.6 “This also school fees that we have paid. We had 6 employees full time before. Because I have 13 tunnels, I do not plant every day, I do not weed every day, but I need someone to water my crops daily. I would rather have a person to water on a daily basis and then have people come and plant when I need planting.”

4.1 “Organic is more difficult, your yields are lower, your options are fewer. If I have a disease, I cannot just phone a company and ask them for help as I have not used any pesticide and I cannot spray either. I have to research the life cycle of the pest and how does it live, and I should stop it at the egg stage. It is a whole thing that I have learn. The pest control, fertilisers, even the seed.”

4.3 “The first year and a half was particularly difficult because we were learning so much. The next one and half years was easier as we were implementing those lessons that we learnt. We are now into a new phase where we now have to upscale and our problem is capacity. More land to grow on.”

Category Two – Community Oriented

Community upliftment was very important to most of the interviewees. Adding value to the surrounding community was very important to these farmers. One of the reasons for this could be because they can see the results of their efforts in the people and the surroundings immediately. The other reason could be because they are building capacity for labour within the local community which will be mutually beneficial. The following quotes highlight the leadership traits that were noticed regarding ‘Community orientees’:

2.6 “I have seen how agriculture changes people's lives because we employ a lot of people. In summer we get a lot of casual employees coming in. This

woman is having trouble, she has travelled 15 kilometres to be at your gate at 6am to get casual work and for her getting that employment for just one day means that she will have food for her and her family. This makes my heart swell and warm up.”

4.4 “I think that we can make a serious difference here. We have helped a lot of farmers, we work with about 30 farmers at the moment. All of them are making more money than they did 3 years ago, which means that they can send their kids to school, or they can buy better clothes, or they can eat better food. This is fantastic. That is why I farm.”

7.8 “there are a lot of young people who are looking for a job. the government should send them to the farm, and they can also earn more money.”

Category Three: Importance of Mentors

The other factor related to Leadership was about the importance of mentors and mentoring. Having a mentor was believed to be key to their success, discussing problems and finding solutions was part of mentorship and an essential aspect of their growth. The levels of leadership that can be seen in these farmers can be quoted as following:

1.1 “Late in 2015 I was then introduced to two people who are also into organic farming. Those two people are my mentors. They are very hands on in guiding me as far as crop protection is concerned. They have also taught me that in winter, ...”

5.1 “We need mentors, we need guidance from people who have done it before.”

7.4 “The man who taught me was white Dutch, straight from Holland. tough as nails. I managed his farm for about 4.5 years. it was not the best time of my life but when I look back, I would not change it for anything else. Everything I learned there is what I am currently using. I thought he was tough and harsh but when you get into the business space, you realise it was not for soft people, it was tough. it was very annoying working in that environment, and you wonder why this guy is so tough and hard. Now when you are managing

your own operations, looking at things going in and coming out, you realise that no, you have to be tough.”

Category Four: Having a Vision

The other factor that came out quite clearly was that these farmers have a long-term plan, they have a clear vision for their farming enterprise, and they are continuously working towards this vision.

4.1 “I see us having a very large distribution centre. A 1000 m²; a fleet of vehicles 10-20, plus an outsource vehicles with a logistics company, a crew of our own extension officers who inspect farms and advise them for our requirements. I will be just one level below retail companies because I don't want to have much brick and mortar structure. I want to retail houses like Woolworths to be our clients, we supply and pack the vegetables for them in their packaging. We are going to be the BEE players in farming, have factories. That is the dream.”

5.1 “You will read about us on international news. We will be far.”

11.4 “Our farm will become a hub, supporting other smaller farms like what we have now. We try and support other people who want to get into this business. We provide training to these people. We do not want them to make the same mistakes that we have made because it costs a lot of money. Our farm will become a hub. We will become a megafarm by operating on the principles that we have developed. I do see as growing and perhaps even going into a franchise type farming network which I think is a big solution to bringing economies of scale. Create a market for these new farmers. Create 100 farms of one hectare each and be able to supply and source together and save money on inputs and be able to sell easily. You will find that that is more profitable because of the focus and the attention, similar to a massive farm.”

Category Five: Shared Value Mindset

Within the leadership traits, shared value mindset was also a very interesting factor that stood out with smallholder farmers. These farmers understand that by helping each other they can grow together. It seemed as if there was a silent agreement

amongst these farmers, that they will support each other to 'grow good food' but compete on all other aspects of business. One of the reasons that was mentioned was that if they run short of supply for their clients, they can source it from their fellow farmers and vice versa.

2.4 "A lot of the bigger farmers, who have inherited the land, all they need to do is invest in the business only. When winter comes, they transfer their production to warmer areas. I cannot do that, I do not have the luxury. How do you compete with farmers like that? So, you form your own relationships, this other farmer who farms in Brits where it is warmer, when I am short of stock, I know he can supply to me. I know his growing principles are similar to mine and when he is short, he can get from me. It is called Co-opetition, when you collaborate with your competition."

3.4 "One farmer is short of a few crops and if I have them, I will supply them and vice versa. Have to make a plan and work together, you have to stick with it."

4.1 "Emerging farmers do not have money to buy fertilisers and pesticides to spray, so they cannot do that as it is expensive. They will use what they have at the moment, if it is garlic spray, then they will spray it, if they have some cypermethrin, then they will spray that. We help them understand the using pesticide responsibly. For example, we help these farmers in Eikenhof and the government supplies them pesticides, tractors, etc. These farmers do not know that once they spray, they must wait so many days before they can harvest their produce. Then I do not have to worry about what I buy from them. I know this because I went to pick up some tomatoes and I was told that they do not have stock, but I could see tomatoes growing, then I was told that those tomatoes have been sprayed. That was the right answer"

9.1 "There are a few big veg farmers who are helping us. The fish mentors are there, a couple of them. It has taken a while to get their support, because we support them, they also try and support us. We buy our inputs from their farm. For example, I need baby fish so I will find the farmer who has them and he will help me grow those fish into bigger fish because he knows that if I am successful, then I will buy more fish from him. We will continue that

relationship and carry on buying from him because he is supporting us. We will not look for other farmers to supply to us or we will not make our own baby fish.”

5.4.2 Theme Two: Entrepreneurship

Table 8: Theme Two

Theme Two: Entrepreneurial mindset	6. Profit and success oriented 7. Risk takers 8. Strategic thinking 9. Collaborative approach 10. Independence of thought
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In terms of entrepreneurship, the factors that stood out were success orientation, risk taking, strategic thinking, collaboration and independence of thought.

Category Six: Profit and success oriented

Success was one of the main drivers of these farmers, it was also very personal:

1.5 “The way I am running things I think I am slightly profitable. But I want to be even more profitable because it is possible. It is very important to be profitable. Once I put my emotions and ego aside, I will be much more profitable.”

4.9 “Here is profit enough for me to pursue the business but I need to do much more. We definitely have targets as to where we want to be. The business has grown definitely. The first year and a half was particularly difficult because we were learning so much. The next one and half years was easier as we were implementing those lessons that we learnt.”

7.1 “Look, the goal is not just to farm. when you look at farming, the model that I have seen. The money is not in the farming, the money is in processing. if you can farm and you can process it for yourself, then your profit margins can increase drastically. we are looking at a stage whereby the farm should stay the same size, where it is. We want to open a processing place. where all the money gets lost is in the middleman.”

Category Seven: Risk takers

Most of these farmers were 36 years old or younger. When they started their business, they did not have any personal and family responsibility and therefore risk taking came easily to them. In the literature review we discussed that individuals who did not have any family responsibility could take entrepreneurial risks, this was because there was not pressure to provide for the family. (Ismail & Kollamparambil, 2015).

2.7 “I was a corporate girl, I was in business development for a logistic company, Supergroup. I left that nice paying job. My parents could not understand, they were so worried about me. I told them that I will make it work.”

8.4 “I was fortunate that I was working and had my pension to utilise. Someone else would not even have that pension money.”

11.1 “Before I started farming, I was working in corporates and banks. I took a huge cut in salary. This farming is a lot more satisfying to work for yourself and to be in this industry.”

Category Eight: Strategic Thinking

Strategic thinking and finding solutions to problems also comes easily to these farmers. They are in this business to not just find employment, but to ‘grow good food’ and therefore they need to work around problems, find solutions and thereby grow their business. This means that they take pride in what they are doing and knows that should they not produce outstanding quality produce, it might be detrimental to their business and ultimately livelihood.

1.1 “The crime does hold me back, but I can plan and strategise about it. It does feature but, in my planning, I have already taken care of it.”

4.4 “We have overcome a lot of challenges, not be knowing people or getting support but by doing things right. We do have a network of people, but we do not speak to them for our daily work, you will find me here every day, farming or selling vegetables. We have to make decisions to overcome problems.”

7.3 “You have to sit down and find out what was the problem. Emotionally you have to be a stable individual, otherwise you can die. as it is easy to get agitated if the things don't go the way you want. so obviously you have to plan well and do the foundation well and if it does not go well then it can kill you.”

|Category Nine: Collaborative Approach

When it comes to growing business, the farmers end up collaborating to achieve an outcome that works for them and the surrounding farming community.

5.5 “One person has money; other person has business skills and we get together to make the business prosper.”

6.6 “There is one thing about farming, everyone shares ideas and trade secrets with each other. No one hides anything from each other, a farmer to farmer, people are open and share ideas with each other. I love sharing ideas and I also learn in the process a lot. If somebody is in trouble, I do not have water, I will extend our pipes to them and let us make a plan to share. I never sell to other farmers, I give it to them for free and let them try it out.”

11.4 “There are a number of farms that we already support. We have a schedule, we send them what they need for the month, the spray schedule, the dosing, fish food and the programme of what to follow. It helps them because they do not have to go through the pain like we did, we are giving away a lot of the IP but we are also trying to hold on to the small scale, like that give and take. So if they continue to source from us, it helps us to keep our costs down because we can have access to much larger volumes which allows us to...”

|Category Ten: Independence of Thought

3.3 “I am an independent person. I have been working to earn my own pocket money since I was 13. It was circumstances and upbringing. I learn either make it or do not make it. I paid for my own learners' licence when I was 17 years old and then for my own licence. I paid for it over 6 months because that is how the cash was coming in. I bought my own car when I was 19. I saved my own money. I went to get my own ID and passport

myself. I did not have parents to drive me around. I got into the taxi got the papers, got my parents to sign, go back the next day to deposit the papers. I have always 'never given up'. I had other family conflicts, but I was not going to sit back and not let the world hold me back. I moved out when I was 19, I got my own place. I bought my own house when I was 24. Those are things that you achieve because you want to achieve.”

8.7 “If we go to war with Europe, we will not get the genetics and broiler eggs, etc. Being in the truck industry it happened as people invested in the trucking business, but the truck manufacturers stopped supplying trucks due to apartheid sanctions. There were no parts, no back up service.”

9.2 “I had to motivate a lot of people to help me complete the global gap requirement. I had fill out a lot of forms and I was able to get the certification so that we can start exporting. File for every crop, planting, fertigation, irrigation.”

5.4.3 Theme Three: Unique Characteristics

Table 9: Theme Four

Theme Three: Unique characteristics	11. Has financial support for day to day existence 12. Is Hard working 13. Pride in one’s work 14. Love for the outdoors 15. Passion for farming
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During the interview process various unique characteristics that were common amongst these farmers was easily noticeable. The researcher found these characteristics interesting because almost all smallholder farmers had a bit of these in them. These characteristics could possibly be combined with the factors that the researcher tried to seek in question four in Chapter three i.e. ‘Can these factors be monitored, controlled and stimulated or removed, in the case of the factors being barriers, to achieve success for the smallholder farmers consistently?’

Category Eleven: Has financial support for day to day existence

It was interesting to note that these educated urban smallholder farmers had financial support, they were not 'starving' and therefore could take certain risks.

7.3 "yes I have access to finance"

10.2 "Yes for finance. I have used my own personal credit card and access bond as cushion. When I needed some support, I use it instead of borrowing from a bank for specifically farming."

11.2 "We are getting credit. We have access to finance and credit. We also got a government grant. That helped pay for a portion of the expansion of the 2nd hectare."

Category Twelve: Is hard working

Apart from having grit, perseverance, patience and a positive outlook towards life, the smallholder farmers are also extremely hardworking. Most of them start their day very early in the morning and work till late at night. The business of farming is almost an obsession with them as they are continuously thinking of the problems that they come across in their daily work routine, be it farming related or business related.

1.2 "Those two people are my mentors. They are very hands on in guiding me as far as crop protection is concerned. They have also taught me that in winter, if one waters the plants between 3-6am is crucial, the way the soil chemistry works, it actually prevents the plants from getting cold and therefore the plants can survive even in winter."

2.7 "we drove around looking for land to purchase."

3.1 "I am exhausted at all times"

8.1 "I already do weekend trainings, but I need to get more professional and get experience."

9.1 "I am the type of person who finds work. I do not sit around looking for work. Whatever needs to be sorted, I will get it done. Handle one thing and

move on to the next one. I also want to understand irrigation, never mind the role in the company. The more knowledge I gather the better for me.”

Category Thirteen: Pride in one’s work

Most of the respondents had a smile on their face when they spoke about their produce. There was a sense of achievement, satisfaction with the status quo, at peace with the surrounding could also be felt. If the interview was not conducted at the farm, then photos of their farms were shown, and an invitation was extended to the researcher to come visit the farm to experience the fruits of their labour. When on the farm, a tour of the farm was given without even being asked and the researcher could feel the pride brimming. The researcher did not feel as if an interview was being conducted, it was as if the farmers were discussing their wonderful experiences with a friend.

2.1 “Seeing your products on the shelf. I take selfies with my product on the shelves (laughs loudly and shows me a picture). The pride is super.”

8.8 “My chicken is better than the free-range chicken that you get at woollies [Woolworths].”

10.3 “Supplying vegetables to customers and then they look at it and say it is so fresh. The joy that you see, the human connection that happens and builds.”

7.3 “when you walk on your farm and you see everything looking nice and green and you know you are responsible for it (laughs), it is heartening. it is the pride to see things.”

Category Fourteen: Love for the outdoors

Of the seven interviews that were conducted face to face, most of them were conducted outside, close to the farm and the crops. These farmers wanted to be close to their crops and watch them grow, in the literal sense.

3.7 “I feel peaceful and happy. I am in a different environment which is much better than sitting in an office.”

5.1 “I love beautiful plants, beautiful product. I just love it.”

7.2 “I feel very liberated when I am out there on the land and the soil. something nice happens.”

11.1 “No. I do not miss my past life. As humans we are not designed to be indoors all the time.”

Category Fifteen: Passion for farming

Initially, ‘passion for farming’ was identified as an independent theme, this was because a lot of farmers expressed their passion for farming, but after consideration it was decided to make this a category within ‘Theme Four’. Even though this category is similar to category 4 of this theme, the passion for farming was expressed in a unique manner by the farmers. The way in which the respondents described their farming experience was different to their expressions for the ‘love of outdoors’. If they had an unsuccessful produce or the produce was damaged by pests or hail, one could feel the sadness that these farmers felt. The following expressions bring forth their passion:

2.1 “When my employees are harvesting, I am there, early in the morning”

4.2 “It was definitely a passion, not sure if I have it in my genes or because I grew up on a farm. I have always had this passion for farming. I tried it a few times before, but it was not the right time. I 2015 when I was running another business, we got investors and I then decided to quit that business and I started this business.”

5.1 “something that is beautiful. When there is a storm or hail, I do not go to the field. I want it removed as it gives me a heartache to see them damaged.”

8.1 “Watching chicks hatch. I am the father of these chicks and their happiness is in my hands.”

5.4.4 Theme Four: Challenges faced

Table 10: Theme Four

Theme Four: Challenges faced	16. General challenges 17. Market Access 18. Government support
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Respondents were asked to express the challenges that they face firstly from a perspective of what they can find a solution to and secondly on the challenges that they need support with. As has been discussed above, the smallholder farmers are fast learners and are continuously looking for solutions to their problems but there are certain challenges that they face, which they are hesitant to discuss, but do need support with. They had to think about why government, or any other institution should help them. This is one of the main reasons that these farmers find time in their busy schedules to give to researchers. There is a hope that these studies might be able to help them find solutions and perhaps the government and other institutions will notice these studies and thus create policies and procedures that are favourable to their business sector.

Category Sixteen: General challenges

It is very important to discuss this theme because the reason this research was conducted was to find the factors that can help smallholder farmers grow their smallholder farms into commercial units, especially previously disadvantaged farmers. By identifying and discussing the factors that are challenging to these farmers, one can get closer to finding solutions for them. There are the regular challenges that all farmers face, no matter how small or large their farming businesses are; all these challenges also came through in the discussions i.e. climate change, water shortage, land availability, access to finance, lack of infrastructure, political instability, crime; but there were other factors that are normally not discussed which are as follows:

2.9 “In my farming business, I am not in control of the market, my margins are not where they are. I have to submit this information to prospective funders, to make it look attractive. It is a catch 22. I am now thinking, do I sell my property, to buy this land. But I think I am in a better situation than most people.”

4.9 “The government does not have well trained extension officers, for example, agriculture department sits at city level in the department of social development. So, you find that a lot of the people who are working in the department are professionally trained as social workers. Food is seen as a resilience issue. It has changed a bit where agriculture and economic development work very closely together, but still at this level it is targeting much larger farmers, not for small holder urban farmers. So, the urban farmers fall in to the city's catchment. In the city level, these government extension officers are not trained enough because the city does not have the skills to train the farmers themselves. There are maybe one or two extension officers and hundreds and hundreds of farmers.”

5.8 “Also corruption. For example, the last year of our contract with the government. I think everybody in the government department wanted something for themselves. people are scared to speak out as then you can disappear. There is also lack of good communication and understanding. The health and agriculture divisions should work together but they do not communicate with each other. There are so many directorates and divisions within divisions, they all come to us independently without any communication amongst themselves. We look at them as one entity and therefore we are confused as we get mixed signals from the same division.”

8.1 “ARC will only come to inspect your farm if you have more than 5000 chickens otherwise, they see it as a waste of their time.”

Category Seventeen: Market Access

The lack of market access for smallholder farmers is frighteningly absent. If there is one aspect that the government must prioritise, it should be to provide market access, especially in the early stages of their farming business. The smallholder farmers battle to sell their produce in the open markets, this is one the main reasons these farmers struggle to take their businesses to the next level. Almost all the respondents complained about the fact that all the current institutions, organisations, even conferences, gatherings, etc. are focused towards commercial or bigger farmers.

1.7 “There were a lot of constraints. I was given the land, I have the patience to farm but there was no market to supply to. I learnt the hard way. I planted more than 15 thousand cabbages, but over 90% of these cabbages rotted because I could not sell them to anyone. Everyone in my community loves cabbages, so I thought I would produce them and present them, and people will buy. That was not the case. Also, the pricing was out. When I look at the pricing at the Joburg Fresh produce market, it is not smallholder farmer friendly. In Tshwane, City Deep, Joburg and elsewhere, all of them.”

7.4 “Especially when it comes to market. I believe the current market is a little bit flawed. there are a lot of barriers of entry to get into any market system. if you want to supply to a local pick n pay, you need so many things, global-gap, farming for the future audit (sustainable farming), which a small farmer cannot afford. Global gap costs about 50k. no one can afford this kind of money when they are starting out. I don't know what the government can do to help but as it stands right now, if you are a small farmer, your risk stays small. if you do not have access to finance you are going to stay small because the government will take long obviously to give you money. the market and the government kills us. when you are just starting off, how will you get money? if you go to the offices of the processing companies that are supplying Woolworths. it does not matter if you have nice produce. the first question they ask is, do you have global gap. they do not want to talk to you otherwise”

10.2 “They could help me find a market and develop other farmers around me to source from, perhaps. Other farmers do get support from the government where the government comes and gives them seeds, fertilisers and pesticides. These farmers could easily be organic farmers, but the government does not help them being organic or give them the organic inputs. They inculcate these farmers to become anti-organic.”

11.2 “The government should help in softening the blow on inputs and then the second one providing the market. The government has hospitals, schools, feeding schemes, clinics, restaurants, etc. but they are not pulling from the smaller farmers. Provide the market space where the smallholder farmers can easily sell their produce. The government should be buying from

smaller farmers and this way they will be able to help the farmers become profitable. The government is already spending the money in grants and spending the money in buying the produce, they should give preference to smallholder farmers. Government should enforce that government related purchases of food have to be sourced first and foremost from smallholder farmers.”

11.3 “in order for us to go directly to customer there are a lot of legislations, a lot of compliance and certification that is required. As a small-scale farmer is prohibitively expensive. We are also working towards Global Gap and it is very costly. It is ridiculously expensive, it is all geared towards largescale farming. They should find a way to certify the smallholder farmers because most often the small-scale farmers are the most compliant ones. The government leaves the smaller farmer to compete against the bigger farmers.”

Category Eighteen: Government support

The importance of the role the government can play also was one of the categories that was highlighted throughout the interview process. Most of the respondents are frustrated with the inefficiencies of the government, including the Land Bank, National Empowerment Fund (NEF), Agricultural Research Council (ARC) and even included established agricultural organisations in this list. They do acknowledge that the government is working towards helping the smallholder farmers, but the support is either ill-timed or inadequate. Another gripe that these farmers have with the government is that these farmers are being looked at only as subsistence farmers, not as farmers that can be nurtured and grown into successful commercial farmers. These farmers identify themselves as upcoming farmers who have the capability of providing fresh produce for the burgeoning urban population. They also understand that by using new technological tools, they have the capability of producing more with less land, but they do need continuous support from the government.

1.7 “When they actually end up helping, it comes at the wrong time. For example, in the middle of winter they will say that they will give us seedlings, then they bring green pepper seedlings, in the middle of winter. Technically they have done nothing. The farmers around this are asking for tractors so

that they can plough the land now so that the land is ready for planting next month. But the tractors still have not come and most probably they will be here only at the end of November. By that time the plants are already growing, that is not the time to use the tractors. That sense of urgency for the right time/ occasion is lacking. There is either no planning or otherwise they have hired the wrong people who do not have a clue of agriculture or farming. It is a no brainer that these crops do not grow during this period. That means you do not have any idea of what is happening.”

2.1 “I wish they could work faster. We are trying to change the landscape and for black farmers it is going to take time. Most of the white farmers inherited the land, they are not paying for any bonds or anything else. When a black farmer needs a tractor or a deliver vehicle, you do not get assistance. We are told to go to Land Bank, Land Bank asks for assets, how are we going to repay. We do not have anything to our name, how do we get assets and loans and start farming. Yet you say that you are going to empower these farmers?”

5.6 “Government has no plan, they do not ask the farmers what their needs are and where they want to go and what do you need to go there. the government then should make a plan and help the farmers plan what the farmer can grow and when and how and plan the year for them.”

8.1 “I remember going to the government, these 3 ladies, to whom I was presenting the benefits of hemp and growing it. and they were laughing at me that I want to get high and make dagga. This was in 2014/15. They had no idea, these were supposed to be industry specialists.”

5.5 Conclusion

The summary of this chapter is presented in the following Table 11. The results from the eleven interviews were presented in this chapter. There were four clear themes that emerged by examining and analysing the data collected and this is supported by the vast literature that is available on leadership and entrepreneurship. Furthermore, the other themes that emerged provided different

insights in finding different ways to approach smallholder farmer problems and how the policy makers and stakeholders can approach solving these problems for them. This exploratory process can contribute to the understanding of the factors that influence the success and failure of smallholder farmers in the long run. The following chapter will discuss these results and findings in detail and propose a framework to understand these factors and how these factors interact with each other will also be presented.

Table 11: Summary of responses

Research Question	Summary of responses	
Question 1 - What is the current level of entrepreneurship and leadership present amongst smallholder farmers?	The level of leadership and entrepreneurship is medium to high in smallholder farmers	
Question 2 - From an entrepreneurial and leadership perspective, what are the various factors that affect smallholder farmers?	<u>Leadership factors:</u> <ol style="list-style-type: none"> 1. Learning mindset 2. Community Oriented 3. Importance given to mentors 4. Visionary 5. Shared Value mindset 	<u>Entrepreneurial factors:</u> <ol style="list-style-type: none"> 1. Success and growth oriented 2. Risk taker 3. Strategic 4. Collaborative 5. Challenges faced
Question 3 - Of the identified factors, how do these factors affect success of a smallholder farming business?	All the above factors help in the success of smallholder farming business, but they also need to be in combination with the unique characteristics that have been identified. The characteristics that are unique to these farmers can be considered as the ones that support the leadership and entrepreneurial factors towards their success.	
Question 4 - Can these factors be monitored, controlled and	The smallholder farmers need all the above leadership, entrepreneurship and unique	

<p>stimulated or removed, in the case of the factors being barriers, to achieve success for the smallholder farmers consistently? In other words, how can the factors be manipulated to change failure into success?</p>	<p>characteristics to help them become successful.</p>
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6. Chapter 6 – Discussion of results

6.1 Introduction

This chapter follows the previous one in that it will discuss the research finding in more detail the results obtained from the semi-structured interviews that were conducted with eleven smallholder farmers. In this chapter, the results of this research will be discussed, compared with, and distinguished from the extant literature that was presented in chapter two. The aim is to build on the body of knowledge available on smallholder famers with respect to leadership and entrepreneurial characteristics.

This exploratory research started with a hypothesis that smallholder farmers possess and utilise leadership and entrepreneurial skills in their daily lives. Andersen (2016) speaks about personality traits that influence leadership which also incorporates entrepreneurial behaviour and these traits are meshed together in such a way that it is difficult to isolate them from one another. This chapter is divided into four sections in line with the questions that were raised in chapter three.

Most of the participants understood the entrepreneurial and leadership concepts but were not cognisant of the fact that they could be practically applying these concepts in their work environment daily. Because leadership and entrepreneurship are concepts that are easily understood, the researcher tried not to use the words 'leadership' and 'entrepreneurship' in the questionnaire, so as not to prompt the interviewees towards common answers. This approach was utilised to be able to make inferences and deductions from the answers received. However, during interviews, the participants were made aware that the research was about finding the lack or abundance of these skills in smallholder farmers.

6.2 Research Questions One and Two

- What is the current level of leadership and entrepreneurship present amongst smallholder farmers?

- From leadership and entrepreneurship perspective, what are the various 'key' factors that affect smallholder farmers?

The aim of research question one was to identify the leadership and entrepreneurial skills that are present in smallholder farmers, to understand if smallholder farmers utilise these skills in their daily work lives.

The aim of research question two was to gather the key factors that emerge within the leadership and entrepreneurial behaviour.

6.2.1 Leadership

The following Table 11 provides the total codes and categories that were created for Leadership theme.

Table 12: Leadership Codes

Count	Total Codes	Leadership Categories	Theme
1	86	Learning mindset	Key
2	70	Community oriented	Key
3	51	Finds mentors valuable	Key
4	41	Visionary	Key
5	19	Shared Value mindset	Key
6	16	Persistent	
7	15	Appreciates work Ethic	
8	13	Networker	
9	13	Self-Assurance	
10	11	Positive thinking	
11	6	Patient	
	341	Leadership Total Codes	

The literature review found leadership to be a complex and multifaceted phenomenon which can be passive or active, be applied to a group or an individual, persuasive or directive, directed towards small or large setups speak about (Garfield, von Rueden & Hagen, 2019). During the interviews the complexities of smallholder farming also were brought to light, to lead and manage a small operation which has as many complexities as a large farm or an organisation, as

many inputs and relationships that need to be managed actively and passively, once one gets experience in tackling such situations and problems, it is very easy to scale these experiences gradually into a larger setup.

As discussed above that leadership and personality traits are intertwined and cannot be distinguished, and that they influence each other; similarly, farmers also have certain leadership and personality traits which other non-farmers do not possess (discussed below in unique characteristics). Lonati (2019) in his research found that only after the adoption of agriculture, more conflicts surfaced in the society which required directive leadership, prior to this in the hunter-gatherer stage humans led a collaborative life where they needed each other for food and security and therefore needed only participative leaders. Buggle (2019) found that it was after the utilisation of irrigation that the societies developed adherence to rules and regulations as people had to coordinate with each other to direct water into their fields for growing crops. The smallholder farmers' leadership role also tends to be more directive and they must adhere to rules due as they need to produce more from a small area and at the same time be collaborative with each other so that they can serve their clients so as not to let them down. Smallholder farming comes with its own challenges, the reason for this is that the requirement and availability of infrastructure and resource is not the same when compared to other small organisations in other industries.

The literature points towards leadership, especially good leadership, as being the main driver in running a successful organisation (Newstead, et al., 2019). A farming enterprise is no less than an organisation. Most of the participants were leaders in their own rights, they were in control of their farms and knew the workings of their farms, how many employees were needed, were empathetic towards their employees and at the same time were tough with their employees. They were collaborative in the sense that they sought the opinions of their employees whilst making important production decisions and consulted with their mentors and fellow smallholder farmers in regards with sourcing of seeds and other inputs. They spoke about the problems that they faced and the thinking that they had already done about the problem and how they were going to tackle these problems, in a way it seemed as if they were asking the researcher for new ideas.

Learning mindset

Dweck (2006) likens a 'growth mindset' to a leader's ability to acknowledge and absorb new ideas with an open mind, to be able to learn and make it part of their own way of working, to achieve even better results for themselves and their organisations. Buchanan & Kern (2017) have discussed a 'growth mindset' which focuses on the task and how one should go about completing the tasks, a leader also needs to focus on the reasons why one should be performing the task one has taken the responsibility for. As per the Figure 1 (Achiever and Expert level) a leader with the help of self-reflection, would be able to reach a higher potential by questioning their own assumptions and beliefs and eventually develop a lifetime purpose which will be to the benefit of the greater society (Buchanan & Kern, 2017).

In the interviews conducted, the farmers are continuously testing and absorbing knowledge by reading and learning from others, applying it to their working environment to scale-up production. They don't just want to know about the crops, they want to learn about people and to develop relationships. They understand that gathering knowledge is a continuous process and is a costly exercise not just in terms of money but also time, they must work hard to find the knowledge and information, practice it and sometimes even discard it, if it does not add any value to their farms. For convenience, the quotations below have been restated:

Farmer 1: "The plants that are planted here is just a testing ground to check if what my mentor taught me is doable, and it is indeed it is doable. This experience is then taken and applied to the 1.3ha farm to produce on a larger scale."

Farmer 4: "Organic is more difficult, your yields are lower, your options are fewer. If I have a disease, I cannot just phone a company and ask them for help as I have not used any pesticide and I cannot spray either. I have to research the life cycle of the pest and how does it live, and I should stop it at the egg stage. It is a whole thing that I have learn. The pest control, fertilisers, even the seed."

Bligh, Kohles & Yan (2018) discussed the danger of holding on to previous successes and/or punishments and thus not giving oneself a chance to progress, in contrast a learning mindset would learn from the experience and approach

problems with a fresh set of eyes. In a similar manner, the smallholder farmers also cannot rely on the past year's successes and failures to guide them into the future, they must learn from it and either replicate or discard it and then start the new year afresh. In the farming environment which is very intense and demanding, it is even more important to apply these principles. Heifetz & Linsky (2009) discuss the theory of adaptive leadership. In the farming environment, sometimes the knowledge regarding certain pests and diseases is unavailable; the farmers must be adaptive and source this knowledge from fellow farmers, technical experts or agencies. Most of the urban smallholder farmers that were interviewed practiced organic farming and when there is an outbreak of a pest or disease, one cannot apply chemicals, one must somehow find solutions that are sustainable and natural. One of the farmers, who practiced organic farming, seemed distressed whilst speaking about their experience in trying to get rid of a pest and finally when nothing else worked, they had to request the government to come and destroy the pests with chemicals, that was a moment of defeat for them. Subsequent to this, the field had to be left fallow for a season as organic crops could not be cultivated in this field.

Hermes & Rimanoczy (2018) discuss entrepreneurial courses that expose students to unpredictability and ambiguity to encourage self-reflection, self-efficacy and tolerance during tougher/leaner times. Farmers experience similar situation almost every day, especially smallholder farmers who do not have the same support structures that commercial farmers have. Politis (2015) discusses self-leadership whereby leaders must learn to influence and develop themselves towards positive outcomes which can help them become more creative and productive. Self-leadership also support leaders in self-regulation and finding joy or satisfaction in small successes. Most of the respondents shared their experience in the 'satisfaction' they achieve, they find joy in watching their plants grow healthy and strong, when it rains or when the sun shines, in finding the perfect employee who shares the same passion for farming as themselves, and other things that makes them feel positive about future and keep working hard for even a better one.

Mentorship and Community Leadership

Golele, Mautjana, & Makombe (2018) define mentorship as a slow and gradual process of transfer of wisdom from an experienced person to a willing learner and can be a relationship which is nurtured for a long period or a short term one. It is

normally free of charge and benefits both the giver and the receiver. Eby, Evans, & Ragins, (2006) also opined that both the mentor and the protégé's aim is to develop the personal and professional growth of the protégé.

Almost all smallholder farmers that were interviewed placed a high value on mentorship and how their mentors have helped them, both personally and professionally. They acknowledged that all the mentors, present and past, have added immense value to their lives, whether it be in farming or on a personal level and refer to them with respect. This is also to do with the fact that these farmers are committed to learning and would like to gather as much knowledge as they can. Sometimes they did not even realise that they were being mentored as the experience was sometimes not pleasant but were grateful for the wisdom that was imparted to them.

The experience with government appointed extension officers though was not something these farmers could refer to as mentorship. As the literature suggests, one of the primary tasks of the extension officers is to take the leadership (Rosch, 2013) and support especially smallholder farmers, with information related to accessing of finance, infrastructure, training and other government related projects. Very few smallholder farmers that were interviewed, can utilise their help due to the fact that these extension officers are not hired based on their education and farm management experience and are not provided adequate training to impart knowledge to struggling farmers (Mmbengwa, Gundidza, Groenewald, & Van Schalkwyk, 2009). Most of the farmers that were interviewed bemoaned the fact that the extension officers were not suited for the job that they were hired to do (See sections 5.4.4.1. and 5.4.4.3.).

Nix & Seerley (1973) identified two types of relationships, one being reciprocal relationships where everyone works towards a common goal, this kind of relationship is found in an organisation or special interest groups. The other type of relationship is conjunctive where many people have differing opinions and expectations which leads to conflicts and competition. The smallholder farming community interestingly showed signs of both reciprocal and conjunctive relationships simultaneously. The farmers work together for a common purpose of producing 'good food' but at the same time they must compete for the same clients in the same market. The bonds that they form with fellow smallholder farmers is

deep as they must support each other to survive and simultaneously have an unwritten rule not poach each other's clients, yet they compete with each other to find more clients.

Most of the smallholder farmers that were interviewed are community oriented, they want to give back to the community and are firm believers that agriculture adds value not just financially but also spiritually. One study in the hospital industry concluded that a community orientation approach could help achieve better financial results (Jennings, et al., 2017).

Visionary

To be a successful leader it is very important to have a picture of the future and be able to communicate it very clearly to one's colleagues and teams. The other purpose of the vision is to inspire and unify the organisation to bring about unity and kinship within an organisation (Pielstick, 2003). Almost all the smallholder farmers that were interviewed had a vision about their farms, where they wanted to see their farms in a few years' time and had planned the steps they were going to take or how they were going to go about doing it. The picture of their farm was very lucid and one thing that was in common was that they all wanted to make their farms into bigger commercial farms.

Shared value mindset

Burns' transactional and transformational leadership framework puts a transactional leader at the top, managing the business with the help of rewards or punishment. The transformational leaders in contrast, tries to understand the needs of their employees and match that with the organisation's goals to achieve a common purpose (Longo, 2017). Allen, et al. (2016) state that shared value is created when leaders can persuade the followers to see the value of the organisation's goal to also add value to them on a personal level. In one study conducted in New Zealand of smallholder farmers and farmers markets it was found that one reason for the survival of these markets was due to a strong cooperation among growers (Giner, 2009). Similarly, many smallholder farmers that were interviewed were part of farmers markets and the success of these markets was also perceived to be their own success. They were keen to be part of these markets as they were able to network, learn from other farmers, and apply these learnings to their farms.

6.2.2 Entrepreneurship

Kuratako (2009) defined entrepreneurs as individuals who first and foremost seek and then combine opportunities to optimise profit and growth, particularly where others cannot see any opportunities (Rosairo & Potts 2016). An entrepreneur has also been defined as an individual chooses between various alternatives and concurrently makes economic decisions (Sachs, 1973). Similarly, farming has been defined to be the cultivation of soil or rearing of livestock where a farm is acknowledged as a social entity. Farmers can be described as those who engage in farming as their main source of income, this could be either part-time or full-time. Farm management has been likened to a science and art form where full optimisation of resources takes place with a profit seeking goal. Farm management can also be defined as a cumulative utilisation of strategies and processes to make a farm productive and profitable and is considered very similar to non-farm entities as both these structures employ indistinguishable management processes like “planning, organising, leading and controlling” (Rosairo & Potts 2016). The National Development Plan (2011) has acknowledged the importance of agriculture in the creation of jobs and have therefore provided priority to “small scale agriculture”.

In their entrepreneurial spirit, the smallholder farmers that were interviewed were all in this business, not only because they enjoyed being outdoors and farming itself but also because they have identified an opportunity in farming, their goal is not short-term survival but to make sustainable profit in the long term. Almost all of them see themselves as future commercial farmers who can add value to the society and their country's economy. Developing economies (like South Africa) have identified the importance of entrepreneurship in the stimulation of economic growth and its key role in the reduction of poverty and social inequalities (Ozaralli, & Rivenburgh, 2016).

Table 13 provides the total codes and categories that were created for Entrepreneurship theme.

Table 13: Entrepreneurship Codes

Count	Total Codes	Entrepreneurial Categories	Theme
1	82	Profit and success oriented	Key
2	41	Risk taker	Key
3	28	Strategic	Key
4	24	Collaborative	Key
5	22	Looks for growth	Key
6	14	Farming for income	
7	13	Success oriented	
8	10	Business minded	
9	9	Understands Customers	
10	8	market oriented	
11	7	Finances growth from profit retention	
	258	Entrepreneurial Total Codes	

|Profit and success orientation

As discussed in the literature review in chapter two, the motivation to make profit and to make a success out of one's business is key to any entrepreneurial venture (Bucktowar, Kocak, & Padachi, 2015; Carland, et al., 2015; Yan, Cao, Dong, & Han, 2018; Padilla & Cachanosky, 2016).

The main driving force behind the agricultural setup of all the smallholder farmers that were interviewed was to make profit and experience success in their enterprise. There is a constant hunger for success to prove to oneself that one can do better than the previous year. The smallholder farmers also were able to identify the farming aspect that makes them profit and it is not growing more crops, it is specialising in sought after exotic crops and to invest in packhouses. Packhouses are important as they help to store and keep the produce fresh for a longer period and therefore be able to dispatch orders quickly and efficiently to clients.

|Risk taking

Risk is an integral part of an entrepreneurial decision-making process which could be another way of resolving the conflict between security and success and keeping them balanced in the business context (Sachs, 1973). Ozaralli, & Rivenburgh

(2016) statistically proved a remarkable connection between personality attributes of risk-taking inclination, optimism, innovativeness and entrepreneurial objective.

Cervantes-Godoy, Kimura & Antón (2013) associate agriculture, especially smallholder farmers, with risk as it is difficult to predict the output of a farm. Due to many unpredictable factors such as changing weather patterns, natural disasters, imperfect markets, personal risks, etc. developing countries and especially smallholder farmers are most exposed to certain risks that can drive these “resource-limited smallholder farmers into deeper poverty”.

The highly educated farmers that were interviewed do not want to work in a comfortable office for a company but would rather get into a business venture in farming, they have taken great risks. In spite of the known and unknown risks, these farmers have identified farming as a lucrative opportunity and an investment into their and their country's future. Some farmers have even given up well paid jobs, invested their own pension money into the business, just for the sake of starting their own business in something that they love to do – farming.

Strategic thinking and collaboration

Ge, Sun, Chen, & Gao, (2016) have provided a framework for ‘entrepreneurial orientation’, which they have integrated with strategic thinking and organisational behaviour. Ge, et al. (2016) also found interconnectedness between strategy identification of opportunity, resource utilisation, culture, learning mindset, and networking; and proved that these characteristics are unique to entrepreneurs.

In line with the literature review, the respondents clearly portray strategic thinking and collaboration. They are continuously planning around their farms, their direct environment, increasing production, finding more clients, taking care of pests and diseases and collaborating with other farmers. Even regarding crime and corruption, which is rampant in the country, they have planned for and put strategies in place.

Independent thinking

As per Ryan and Deci's (1985) ‘Self Determination Theory’, which purports that people are naturally curious beings and continuously strive to make themselves

better, therefore they actively look for knowledge and norms to internalise them and achieve growth and fulfilment. An individual's desire to achieve growth is psychological and one of the important aspects it aims to achieve is 'autonomy', which is a feeling of being in control of your own decisions and thereby destiny.

Several participants that were interviewed showed a keen desire for 'autonomy'. They have this innate need to make themselves better and gather information that will make them better farmers in their attempts to make more profit. They are keen to listen to others in the hope to find more information to add to their knowledge. They have independence of thought and yet through continuous learning internalise those learnings and make them their own and apply it to real life situations whether it be on their farm or at home. Ozaralli & Rivenburgh (2016) found that entrepreneurs preferred to work alone and did not want to work for another person, most of the smallholder farmers also wanted to run their own farms as opposed to working for someone else, they wanted to be solely responsible to make the decisions regarding their farms.

6.2.3 Conclusion: Research Question One and Two

All the smallholder farmers that were interviewed portrayed strong leadership and entrepreneurial characteristics. There were eleven leadership and eleven entrepreneurial characteristics (see Table 11 and Table 12) that were observed in the all smallholder farmers. We discussed the 'key' characteristics that stood out in smallholder farmers.

The farmers are in debt, they work hard, they do not make a lot of profit; some of them are even holding two jobs and yet, they are very optimistic about their future in farming. Through hard work and grit, they are determined to make a success of their farms and will try various means to achieve this success, this is leadership and entrepreneurship.

6.3 Research Question Three

- Of the identified factors, how do these factors affect success and failure of a smallholder farming business?

With the help of this question, the researcher sought to find the interconnectedness of the leadership and entrepreneurial factors identified above. Apart from this, the researcher tried to identify and link any other factors that emerged in the interviews and if they helped or thwarted smallholder farmers' efforts to make their farms more successful.

In the literature review of leadership and entrepreneurship, there are various qualities that have surfaced that are interconnected. Gibb (1969) concluded that personality traits cannot be isolated from leadership and they influence a person's leadership style. Hermes & Rimanoczy (2018) speak about entrepreneurial students, who are the future leaders of a country or an industry, are exposed to instances where unpredictability and ambiguity is present so that these students can practice self-efficacy and tolerance which encourages an entrepreneurial mindset. Buchanan & Kern (2017) build upon Dweck's (2006) growth mindset and add 'strategist' at an even higher level of 'leadership maturity framework' (Figure 1), strategy is one of the key traits of an entrepreneurial mindset (Ge, et al, 2016).

The other trait of leadership is that of a learning mindset (Buchanan & Kern, 2017) where a leader is continuously looking for solutions, an entrepreneur too is continuously learning by looking for opportunities, assessing their viability to gain financial success (Lohrke, et al, 2018).

To be in a leadership position one needs to continuously feeds one's thoughts with knowledge and information (Buchanan & Kern, 2017), similarly, entrepreneurs' capabilities are enhanced through education and continuous learning (Ozaralli & Rivenburgh, 2016). The participants that were interviewed were always on the lookout to gather more knowledge and information to improve the productivity on their farms.

A shared value mindset of leaders which is discussed in Burns' (1978) seminal work where he discusses the leaders' capability of motivating followers into action by creating a sense of common purpose and achievement. Similarly, an entrepreneur is able to utilise their networking and collaborative skills to organise resources for financial gain (Lohrke, et al, 2018). The participants, as presented in section 5.4.2.4., showed both these qualities:

Farmer 6: “There is one thing about farming, everyone shares ideas and trade secrets with each other... I love sharing ideas and I also learn in the process a lot.”

Farmer 11: “There are a number of farms that we already support. We have a schedule, we send them what they need for the month, the spray schedule...”

Heifetz & Linsky (2009) discuss the adaptive nature of leaders where they must find solutions by being adaptive, where no known solutions exist. Olsson (1988) also discusses entrepreneurial farmers’ adaptability since they must adjust their production with the changes in demand, maximise the value of limited resources, find other uses of their produce so it does not go waste. During the interviews conducted, the smallholder farmers also showed adaptive qualities as they changed their crop production to suit the market demand, one farmer even started making homecooked meals to reduce wastage, sell seedlings to earn extra income.

6.3.1 Unique characteristics

Over and above the leadership and entrepreneurial traits, the research highlighted other unique characteristics of smallholder farmers. The following Table 13 provides the total codes and categories that were created for the Unique Characteristics’ theme.

Table 14: Unique Characteristics Codes

Count	Total Codes	Unique Characteristics Categories	Theme
1	18	Hard working	Key
2	18	Has financial support	Key
3	18	Pride in one's work	Key
4	16	Lack of job alternatives	Key
5	13	Loves to be outdoors	Key
6	9	no direct responsibilities	
7	8	farming on less than 2 hectares	
8	8	Post Matric Qualification	
9	8	Vegetable & Herb Farming	
10	7	Grew up farming	
	123	Unique Characteristics Total Codes	

Bandura's (1977) revolutionary research defines 'self-efficacy' as an individual's great confidence in themselves to be successful in any project or task they undertake. This confidence helps a person to undertake and complete any project with passion and motivation (Hockerts, 2015). Ajzen's (1991, 2002) theory of 'planned behaviour' speaks about the more motivated a person is to act upon an intention, the more likelihood of that intention will result in an action (Entrialgo & Iglesias, 2016). All the smallholder farmers depicted this quality whereby they showed confidence in their farming ventures and therefore worked hard to bring it to fruition – a self-fulfilling prophecy. Cardon & Kirk (2015) have identified persistence as one of the key elements of entrepreneurship, where entrepreneurs keep pursuing their goals despite encountering innumerable hurdles, failures and impediments and importantly entrepreneurial behaviour or passion increases persistent efforts.

Despite the challenges they faced (as discussed later in this chapter), all the farmers are extremely hard working, they get up early in the morning and work late till night. Some even give back to the community and help other smallholder farmers by giving them their time and help with inputs, for example seeds. One of the farmers was even being visited by students from universities such as Harvard and Bentley to discuss his farming operation and techniques. The natural progression of the motivation described above is pride in one's work, when they see the fruits of their labour, their hearts swell with pride, this is one feeling that is akin to receiving a standing ovation. The following quotations of the interviewees provides expressions such as:

Farmer 1: "Those two people are my mentors. They are very hands on in guiding me as far as crop protection is concerned. They have also taught me that in winter, if one waters the plants between 3-6am is crucial, the way the soil chemistry works, it actually prevents the plants from getting cold and therefore the plants can survive even in winter."

Farmer 2: "Seeing your products on the shelf. I take selfies with my product on the shelves (laughs loudly and shows me a picture). The pride is super."

Farmer 8: “My chicken is better than the free-range chicken that you get at Woolies [Woolworths].”

Another unique characteristic of these farmers we should take note of was that nine out of the eleven farmers have financial support. They either have another job, a pension, a spouse or family member who can support them financially; these smallholder farmers did not have to worry about failure in terms of ‘losing everything’. The researcher believes that this had an immense effect on the risk-taking ability of these farmers, they were able to concentrate on growing the business and making decisions without fear of losing income or being ‘on the street’. One study in Mali concluded that entrepreneurial behaviour performance on the farm it recommended supporting entrepreneurial behaviour by providing training, access to land, **providing financial support** and inculcating sharing of information and farming techniques (Konte, Ayuya, & Gathungu, 2018).

One study in Eastern Free State mentioned that due to being unemployed or retrenched was one of the reasons for people to start their own business helped by the fact that they were naturally good in it as well (Balunywa, et al, 2017). Even though most of the participants are considerably well educated, the lack of job alternatives that fit their aspirations and motivations is not available and this is also one of the reasons that they have ventured into farming, compounded by the fact that they love to be outdoors and close to nature.

6.4 Research Question Four

- Can these factors be monitored, controlled and stimulated or removed, in the case of the factors being barriers, to achieve success for the smallholder farmers consistently?

The idea behind this question is to establish if one can promote and suppress behaviours of leadership and entrepreneurial skills in smallholder farmers. In addition, the research also aims to understand if one could possibly remove the pain points of smallholder farmers and guide them out of ‘incorrect’ leadership and entrepreneurial habits that they might have acquired. Furthermore, pinpoint any other factors that might emerge that can add or negate the growth possibilities of

smallholder farmers.

As identified in the above Table 11 and Table 12, almost all the smallholder farmers that were interviewed displayed 'key' leadership and entrepreneurial traits. Over and above the leadership and entrepreneurial traits that the participants displayed, other unique characteristics and circumstances also came to the fore, these were – financial support, passion for farming, love for outdoors, pride in one's work and hard working. These characteristics also seem to support these smallholder farmers in their endeavours to make their farms a success.

There were a few factors that emerged that do pose a threat to the growth and sustainability of a smallholder farm. Table 15 provides the total codes and categories that were created for Challenges theme.

Table 15: Codes for Challenges

Count	Total Codes	Challenges Categories	Themes
1	61	Government support is inadequate	Key
2	42	Faced constraint at the start of business	Key
3	33	Needs infrastructure input in farming business	Key
4	30	Government has no knowledge about farming	Key
5	20	Needs financial input in farming business	Key
6	18	Market access is not smallholder friendly	Key
7	17	Government does not provide timeous support	Key
8	16	Needs land for farming business	
9	12	Government should provide support with market access	
10	11	Farming Organisations non value adding	
11	9	Shortage of skilled labour	
12	8	Challenges - banks do not support smallholder farmers	
13	8	Challenges - no farming training	
14	7	Government should provide land	
15	5	Challenges - crime and corruption	
16	5	Challenges - natural pests	
	302	Challenges Total Codes	

Gaffney, Challender, Califf, Harden (2019) discussed the challenges faced by smallholder farmers to be – access to land, capital and latest agricultural technologies, knowledge and information, access to markets and agricultural

innovation. Korsgaard, et al. (2015) have discussed the challenges in agricultural entrepreneurship, due to the rural-natural environment it operates in, these entrepreneurs encounter challenges such as low levels of human and financial capital, much smaller markets and lack of timeous information.

The quotations, as provided in section 5.4.4. are in line with the challenges that the smallholder farmers face in their business. The farmers display extreme frustration with the efforts the government has undertaken to provide, these efforts are slow, not timeous and not well thought through. The two other key challenges were accessibility to markets, especially for smallholders and support in the first few years of starting a farming business. Accessibility to land came up in two codes, number eight and fourteen. These farmers are hungry to make a success out of their farms and therefore perhaps a bit impatient. The following quotations have been restated for convenience:

Farmer 4: “The government does not have well trained extension officers, for example, agriculture department sits at city level in the department of social development. So, you find that a lot of the people who are working in the department are professionally trained as social workers. Food is seen as a resilience issue. It has changed a bit where agriculture and economic development work very closely together, but still at this level it is targeting much larger farmers, not for small holder urban farmers. So, the urban farmers fall in to the city's catchment. In the city level, these government extension officers are not trained enough because the city does not have the skills to train the farmers themselves. There are maybe one or two extension officers and hundreds and hundreds of farmers.”

Farmer 4: “The first year and a half was particularly difficult because we were learning so much. The next one and half years was easier as we were implementing those lessons that we learnt. We are now into a new phase where we now have to upscale and our problem is capacity. More land to grow on.”

6.5 Conclusion

What has emerged from these interviews is that the smallholder farmers need a combination of the traits and skills of leadership, entrepreneurship and unique characteristics. If these characteristics can be supported by institutions and the government and the challenges smoothed out or even removed, the smallholder farmers will be able to help these farmers grow and become successful commercial businesses.

7. Chapter 7 – Conclusion

7.1 Introduction

This chapter will discuss the principle findings along with the various leadership and entrepreneurial theories. It emerged that apart from ‘key’ leadership and entrepreneurial traits, there are other ‘unique characteristics’ that help the smallholder farmers’ businesses, there are also ‘key’ challenges that withhold the success of their farms. This exploratory research could bring value to academia as well as for policy makers and stakeholders in the farming industry. In this chapter, implications for policy holders will be discussed in the context of the various ‘key’ traits that came to the fore. Based on the findings and the conceptual model that was developed (see Figure 7), recommendations for policy makers are also presented. Limitations of the study and possible direction for future research is also discussed.

7.2 Principle findings

The initial framework that is depicted in Figure 6 was an attempt to understand the existence of leadership and entrepreneurial skills that smallholder farmers possess and apply on their farms, the reason for this was to identify ‘key’ traits which will help smallholder farmers advance into becoming commercial farmers. Throughout the process of conducting the interviews, transcribing them, then analysing them and the subsequent review of available literature, a new conceptual model emerged (see Figure 7). It emerged that there are not just ‘key’ leadership and entrepreneurial traits which are important but there are also certain unique characteristics that help the smallholder farmers advance their businesses and certain distinct challenges that restrain the success of their farms and these are all interlinked.

In terms of leadership, the smallholder farmers show strong disposition towards having a keen learning mindset, actively seek mentorship, having a clear vision for their farms and a shared-value mindset. Buchanan & Kern (2017) discuss the growth mindset of a leader who apart from focusing on the what and the how is

also concerned with the 'why' of the action being performed. Politis (2015) discusses 'self-leadership' which is when leaders motivate themselves to achieve fulfilment and positive outcomes and links it to self-learning. Within the shared-value concept, these smallholder farmers are acutely aware that the knowledge and wisdom that they have acquired must be shared with the community which in turn will find a way back to them and help them become even more successful. A successful leader can describe the future of the organisation which inspires and unifies followers towards a common goal which will be for the benefit of everyone (Pielstick, 2003; Allen, et al., 2016).

When it comes to entrepreneurial skills, these smallholder farmers exhibited acute drive towards profit and success, risk-taking behaviour, a strategic mindset, independence of thought and collaboration with fellow farmers and the farming community. Self-interest is universally considered to be a vibrant part of entrepreneurship and is linked with profit-seeking which is in turn is related to success and competition and all together are the main driving force in any economy (Bucktowar, Kocak, & Padachi, 2015; Carland, et al., 2015; Yan, Cao, Dong, & Han, 2018). Padilla & Cachanosky (2016) acknowledge innovation and rent seeking to be the two sides of one coin with profit being the common goal. The smallholder farmers that were interviewed all considered profit to be the main driver of their business and will eventually add to the country's economy. Growth, defined as desire for expansion, is also synonymous with success and an important component of the entrepreneurial mindset (Balunywa, et al, 2017).

Sachs (1973) found that risk and entrepreneurial decision-making go hand in hand and even considered entrepreneurial element to be a personality trait. Ozaralli, & Rivenburgh (2016) statistically proved a remarkable connection between personality attributes of risk-taking inclination, optimism, innovativeness and entrepreneurial objective. Hockerts (2015) describes self-efficacy as the perception and confidence people have of their ability to be able to complete any task successfully.

7.3 Implications for relevant stakeholders

Farmers manage almost 40% of land in this world not only to support themselves and their families but also to sustain the current world population of 7.2 billion people by producing food, fibre and fuel. To efficiently utilise the available natural resources to increase crop production whilst simultaneously preserving natural resources for the current and future generations puts an enormous responsibility on the farmers. Smallholder farmers do the same in the community or city level, they sustain the communities around them for easy access to 'good food' and preserving the surrounding environment. Therefore, by understanding farmers and particularly smallholder farmers, their perception of themselves and of the agricultural environment, policy makers will be able to create "laws, tools, markets and incentives" to help maximise food production and simultaneously preserve the environment (McGuire, Morton, Arbuckle Jr & Cast, 2015).

Besides adding to an academic understanding, this study could have implications for policy holders and agricultural businesses. These stakeholders can increase their understanding of smallholder farmers and evaluate the usefulness of their policies and procedures that are introduced or available to the agricultural community, after all in the success of smallholder farmers lies the success of the community at large. Furthermore, these findings can be replicated in a rural setting where the government is keen to promote agriculture due to its important role in providing food security and much needed employment (Satgar, 2011). VKB, an agribusiness in South Africa's province of Free State agribusiness has been successful in creating a viable downstream market which also includes smallholder farmers. This has created demand for locally produced crops and thus a consistent market where the smallholder farmers can sell their products and has also exposed them to the workings of a market and planning (Coleman 2016). Another initiative that has recently been started by a ZA mining magnate Mr. P. Motsepe, is setting up of a fund to help black smallholder businesses to become "sustainable, commercially viable and profitable enterprises" (Mketane 2019).

This research can also help the government to nurture key leadership talents and provide entrepreneurial training, especially in the previously disadvantaged population, who were denied proper education in the apartheid regime and are not confident in their ability to start their own business (Balunywa, et al, 2017). The

policy holders could also support youth (Metelerkamp, 2019), especially the ones that do not have any family responsibilities as it will be easier for them to take risks in terms of leaving a job and starting a new business in farming (Ismail & Kollamparambil, 2015).

Whilst conducting this research, one initiative that the researcher came across was Izindaba Zokudla (an isiZulu phrase for 'Conversations about food') (Malan, 2019) which is actively mentoring and supporting urban smallholder farmers in Gauteng to find markets and source information and expertise in the farming industry. It is affiliated to The University of Johannesburg (UJ) and is actively managed by Dr. N. Malan in affiliation with the city of Johannesburg in the implementation of urban agriculture policy, as part of a "food resilience" strategy (Malan, 2015). The researcher attended one lively session at UJ in Soweto, in the hope of finding more farmers to interview. Four farmers that were interviewed belong to this group, and because Izindaba Zokudla adds tremendous value to their business, the urban smallholder farmers prefer to be part of this group rather than any other established agricultural organisations. This study recommends that the policy makers study such initiatives and replicate or create similar ones all over the country.

In this 21st century there are a host of information and technology related innovations that smallholder farmers can be exposed to, especially techniques that can help them optimise crop production. These technologies can have multiple purposes of alleviating environmental concerns, increasing profits and at the same time reducing production costs, for example precision agriculture, satellite data to increase yields and determining exact dosage of pesticides and fertilisers (Giner, 2009).

Since most of the smallholder farmers that were interviewed were looking for growth, success and had a clear vision for their farms, the policy makers need to identify these smallholder farmers who are keen to expand their farms and thus help them become successful commercial farmers by directing infrastructural resources to them. For the reasons above, smallholder farmers who are content with the status quo and do not have a clear goal for their farms, will not be able to expand their farms, no matter how much extra input they are provided. As a side note, the farmers that had family support for daily sustenance were more open to risks and therefore were more community oriented.

This research also points towards a few challenges that all smallholder farmers need support because it is of national interest to make smallholder farming profession attractive for people seeking employment. The main challenge that was identified to ease pressure, especially in the early stages of the business, was providing access to markets where smallholder farmers can sell their produce and where they can easily buy their inputs as well. For this the researcher recommends that the government should create new or support existing local farmers' market within a 25-kilometer radius of every city. It should be made one of the key tasks of extension service delivery to expand and support these markets.

The other challenge was having access to finance, the stakeholders, especially the government, need to provide timeous support in terms of availability of land with access to water, agricultural equipments, entrepreneurial training and mentorship to smallholder farmers. This will help farmers and encourage them to take more risks, a key entrepreneurial trait. A study in Mali on entrepreneurial behaviour established that the size of land, value of assets on farm and exposure to other successful farms had a positive effect on farms' sales and profitability and reduced post-harvest losses. The study recommends that entrepreneurial behaviour must be encouraged to provide greater environment of business to motivate farming businesses to progress towards commercial-oriented farming. The study recommends that to improve entrepreneurial behaviour among farmers one should provide training, access to land, access to finance and information, farming techniques and new technologies (Konte, Ayuya, & Gathungu, 2018).

The policy makers need to identify farmers who show signs of these 'key' traits of leadership (see Table 11), entrepreneurship (see Table 12) and unique characteristics (see Table 13), in conjunction with eliminating 'key' challenges (see Table 14).

The government also needs to be very particular whilst selecting extension officers, who should have, not just have leadership and mentoring skills, but also be empathetic towards smallholder farmers' needs. The researcher recommends that a similar study be conducted with extension officers to explore their challenges and the skills they need to be successful in their profession.

7.4 Limitations of the research

Qualitative research is based on the respondents' and researchers' personal views and therefore there is a possibility that the results might not be objective (Saunders & Lewis, 2012; Queirós, Faria & Almeida, 2017). Apart from the limitations that have been discussed in section 4.13, the following limitations should also apply to this research:

- The population is defined as smallholder farmers in Gauteng and only 11 valid interviews were conducted therefore, the results may not be applicable to other ZA provinces or other countries i.e. geographical bias could have come through in the interviews.
- The long-term effects of successful implementation of leadership and entrepreneurial traits cannot be established as these farms have been in business for a short period only. One needs to have a follow-up research with the same farmers in a few years' time to test the theory.
- Due to the limited time frame and samples, the developed framework may not be applicable to all smallholder farmers as the population of smallholder farmer varies in sizes, approach and crop practices.

7.5 Suggestions for future research

The researcher could not find much empirical evidence on the leadership and entrepreneurial traits that support smallholder farmers to advance them into commercial farming. The following are a few potential approaches for future research:

- It would be useful to follow the same farmers in a longitudinal study if they will become successful, if they do become successful then this methodology could be used to identify farmers with these skills and traits so that infrastructure investments could be better targeted.
- A comparative research of urban smallholder farmers in other countries to compare their leadership and entrepreneurial skill sets would help policy holders to pinpoint certain traits that are crucial for their success.

- A study of smallholder farmers' upbringing and cultural background on their perceptions regarding managing and leading is an area that could be further explored.
- A study of farmers who have progressed from smallholder to commercial farming could add significant value in creating policies and procedures to support smallholder farmers.
- A similar study which will incorporate the understandings of smallholder farmers, agricultural organisations, extension officers and other key stakeholders will add considerable value in the upliftment of smallholder farmers.
- Understanding the qualities, experience and training that is needed by extension officers, specifically in their role as mentors to smallholder could add value to the smallholder farming community.

7.6 Conclusion

Smallholder agriculture, especially urban agriculture, has the potential to offer sustainable solutions to enhance food security in cities, and simultaneously ease environmental challenges (Cilliers, 2019). With the help of new technologies cities can grow food closer to the population and in places where it was previously difficult to grow fresh food. Urban farming also has the potential to provide affordable food to a city's poor inhabitants and due to proximity to the consumer reduce food wastage (Cilliers, 2019). As suggested in this article, the government should look at formalising urban agriculture as it can add significant value to the agricultural sector.

The responses that were obtained from smallholder farmers highlighted the fact that these farmers are aware that the profession that they have chosen is not just difficult for themselves but also requires them to think of the natural resources that they utilise, the immediate society that they are part of, that the challenges that are inflicting pain or pleasure in the society around them, it is their natural duty to take care of or promote. Knowing this, they still want to be in this profession. This is good leadership (Newstead et al. 2019). They work with soil and mud, tattered clothes and shoes, whether their staff will be able to come to work that day

motivated or not, whether the 'good food' they are growing will be able find a buyer or a market, they worry about the environment, weather, weeds, pests, water and their plants, their worries are noble. Newstead et al. (2019) have explained the aspirational role of good leadership, where leaders follow their own ethical motivations and through continuous practice hone their skills and this has a compounding positive effect on the society at large. We need more farmers in our society.

8. References

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9. Appendices

9.1 Appendix A: Semi-structured Interview Questionnaire

1. Demographical information
 - 1.1. Please indicate your age group and gender.
 - 1.2. What are your educational/technical qualifications?
 - 1.3. When did you start your farming business (registration date)?
 - 1.4. When did you achieve your first profit/ income?
 - 1.5. Are you the sole owner of your farm or there are other investors?
 - 1.6. What do you farm in?
 - 1.7. What was your initial investment?
 - 1.8. Explain the constraints you faced in starting your business

2. Contextual Questions
 - 2.1. What type of farming are you in?
 - 2.2. What is the nature of your farming (seasonal or regular)?
 - 2.3. Why are you farming?
 - 2.4. What are reasons for farming – income, sustenance, both, expansion?
 - 2.5. How many people do you employ full time?
 - 2.6. In the past 5 years have you increased or decreased the number of employees? Why?
 - 2.7. How many hectares do you farm on?
 - 2.8. How were you earning an income before you started farming?
 - 2.9. Do you hold another job? Why?
 - 2.10. Do you consider yourself to be profitable? Is this important to you? Why?

3. Entrepreneurial Questions
 - 3.1. Why do you farm?
 - 3.2. Can you think of doing anything else except farming?
 - 3.3. Did you have any other alternatives before deciding on farming?
 - 3.4. Do you have access to finance and credit?
 - 3.5. Do you need access to finance and credit?
 - 3.6. Why do you need access to finance and credit?
 - 3.7. What sort of support do you receive from the government? Is it adequate?
 - 3.8. What other role can the government play in your day to day operations?

3.9. Do you receive help from any other organisation?

3.10. Do you belong to any agricultural organisations/associations? Why?

4. Question for Leadership traits:

4.1. What are the challenges that you face in your day to day operations?

4.1.1. Factors inhibiting growth (order of priority)

4.1.2. Factors inhibiting profitability (order of priority)

4.1.3. Factors that help in growth of your company (order of priority)

4.1.4. Factors that help in profitability of your company (order of priority)

4.2. What would help you grow, what you had more of? (Can you name two each that affect you the most?)

4.3. Do you have a mentor that you can go to for guidance and support?

4.4. How do you see the farm in 5-10 years' time?

4.5. Are you helping other farmers like you in your community?

9.2 Appendix B: Consent Form

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA.

I am conducting research on entrepreneurial skills prevalent in smallholder farmers. Our interview is expected to last about an hour and will help us understand smallholder farmers use their entrepreneurial skills to advance their business.

Your participation is voluntary, and you can withdraw at any time without penalty.

All data will be reported without identifiers. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name: Manjula Mangalmurti
Researcher email: 18361448@mygibs.co.za
Researcher phone: 072 299 8090
Research Supervisor Name: Dr. Richard Meissner
Research Supervisor Email: rmeissner@csir.co.za
Research Supervisor phone: 071 677 6262

Signature of participant: _____ Date: _____

Signature of researcher: _____ Date: _____

9.3 Appendix C: Ethical Clearance Letter

**Gordon
Institute
of Business
Science**
University
of Pretoria

11 July 2019

Mangalmurti Manjula

Dear Manjula

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

9.4 Appendix D: List of Codes

Code	Grounded	Code Groups	Themes
appreciates work ethic	10	Appreciates work Ethic	leadership
believes ownership is one trait that a person should possess	1	Appreciates work Ethic	leadership
Is Ethical	4	Appreciates work Ethic	leadership
	15	Appreciates work Ethic Total	
is business orientated	7	Business minded	entrepreneurial
understands various aspects of farming as a business	3	Business minded	entrepreneurial
	10	Business minded Total	
Banks do not support smallholder farmers	5	Challenges - banks do not support smallholder farmers	challenges
debt collection is problematic	1	Challenges - banks do not support smallholder farmers	challenges
getting finance from banks is hard work	2	Challenges - banks do not support smallholder farmers	challenges
	8	Challenges - banks do not support smallholder farmers Total	
Climate Change is a challenge	3	challenges - climate change	Rest
	3	challenges - climate change Total	
Crime & corruption is a challenge	5	Challenges - crime and corruption	challenges
	5	Challenges - crime and corruption Total	
birds & pests are a challenge	5	Challenges - natural pests	challenges
	5	Challenges - natural pests Total	
Learnt the hard way about farming	8	Challenges - no farming training	challenges
	8	Challenges - no farming training Total	
smallholder farmers are looked at as sustainable farmers	2	challenges - not looked at as future commercial farmers	Rest
	2	challenges - not looked at as future commercial farmers Total	
Yields are not guaranteed in organic farming	2	Challenges - organic yields are not guaranteed	Rest
	2	Challenges - organic yields are not guaranteed Total	
Farming is a personal choice	4	Chose farming willingly	interest in farming
Finds farming rewarding	1	Chose farming willingly	interest in farming
	5	Chose farming willingly Total	
collaborates with other farmers	10	Collaborative	entrepreneurial
wants to collaborate for growth	14	Collaborative	entrepreneurial
	24	Collaborative Total	
is a great communicator	3	Communication	Rest
	3	Communication Total	
believes farming can reduce hunger/ community	4	Community oriented	leadership

believes farming provides Food Security/ community	7	Community oriented	leadership
believes farming will lead to a better society/ community	2	Community oriented	leadership
believes farming will lead to poverty & crime reduction/ community	4	Community oriented	leadership
Contributes to the community	7	Community oriented	leadership
farming to give back to community	4	Community oriented	leadership
gives back to farming community	11	Community oriented	leadership
helps others in community	5	Community oriented	leadership
is interested in child development	1	Community oriented	leadership
keen interest in child welfare/community development	1	Community oriented	leadership
kind and generous person	4	Community oriented	leadership
provides free food to children	1	Community oriented	leadership
wants to make a contribution to the society/ community	5	Community oriented	leadership
wants to teach to farm for sustenance/ community	14	Community oriented	leadership
	70	Community oriented Total	
is competitive	5	Competitive	Rest
	5	Competitive Total	
contributes to employment creation	3	Creates employment	Rest
provides employment	10	Creates employment	Rest
provides semi-permanent employment	2	Creates employment	Rest
	15	Creates employment Total	
had own business before	2	Experience in owning own business	Rest
	2	Experience in owning own business Total	
initial constraint was day to day decision making process	1	Faced constraint at the start of business	challenges
initial constraint was finding out where to sell produce	2	Faced constraint at the start of business	challenges
initial constraint was finding people willing to work	4	Faced constraint at the start of business	challenges
initial constraint was finding skilled labour	5	Faced constraint at the start of business	challenges
initial constraint was information is not in English	1	Faced constraint at the start of business	challenges
initial constraint was sourcing infrastructure	3	Faced constraint at the start of business	challenges
initial constraint was sourcing land	4	Faced constraint at the start of business	challenges

initial constraint was sourcing market knowledge	8	Faced constraint at the start of business	challenges
initial constraint was there is not compendium on how to run a farm	2	Faced constraint at the start of business	challenges
initial constraint was sourcing finance	4	Faced constraint at the start of business	challenges
initial constraint was sourcing knowledge on farming	6	Faced constraint at the start of business	challenges
initial constraint was sourcing other organic farmers	2	Faced constraint at the start of business	challenges
	42	Faced constraint at the start of business Total	
farming for income generation	10	Farming for income	entrepreneurial
income is less in winter season	4	Farming for income	entrepreneurial
	14	Farming for income Total	
farming is part of retirement plan	3	Farming for long term	interest in farming
is in farming for long term	11	Farming for long term	interest in farming
keeps investing own money in farming	2	Farming for long term	interest in farming
Sees future in farming	7	Farming for long term	interest in farming
	23	Farming for long term Total	
business is sustainable	2	Farming is the only job	Rest
full time farming	4	Farming is the only job	Rest
fully involved in the business	6	Farming is the only job	Rest
hands on in farming	1	Farming is the only job	Rest
	13	Farming is the only job Total	
farming on less than 2 hectares	8	farming on less than 2 hectares	Characteristics - other
	8	farming on less than 2 hectares Total	
Farms organically	10	Farming organically	interest in farming
	10	Farming organically Total	
Farming organisations do not add any value	7	Farming Organisations non value adding	challenges
not part of other organisations	4	Farming Organisations non value adding	challenges
	11	Farming Organisations non value adding Total	
farming income is reinvested	7	Finances growth from profit retention	entrepreneurial
	7	Finances growth from profit retention Total	
family believed in education	1	Finds education valuable	Rest
wanted to be highly educated	2	Finds education valuable	Rest
	3	Finds education valuable Total	
acknowledges value of mentors	15	Finds mentors valuable	leadership
Black farmers are patronised rather than coached	1	Finds mentors valuable	leadership

difficult to find mentors	2	Finds mentors valuable	leadership
gouvernement needs to hire mentors	3	Finds mentors valuable	leadership
interacts with mentors regularly	5	Finds mentors valuable	leadership
receives good advice from mentors	11	Finds mentors valuable	leadership
sought mentors to learn	10	Finds mentors valuable	leadership
thankful for mentors	4	Finds mentors valuable	leadership
	51	Finds mentors valuable Total	
gouvernement does not keep promises	3	gouvernement does not provide timeous support	challenges
does not have government support	4	gouvernement does not provide timeous support	challenges
gouvernement does not give support at the right time	9	gouvernement does not provide timeous support	challenges
gouvernement has no sense of urgency	1	gouvernement does not provide timeous support	challenges
	17	gouvernement does not provide timeous support Total	
gouvernement needs to be knowledgeable about farming	1	gouvernement has no knowledge about farming	challenges
gouvernement does not deploy funds correctly	7	gouvernement has no knowledge about farming	challenges
gouvernement employees lack agricultural experience	10	gouvernement has no knowledge about farming	challenges
gouvernement should hire technical experts	12	gouvernement has no knowledge about farming	challenges
	30	gouvernement has no knowledge about farming Total	
Government department of Agriculture & Health should work together	2	Government needs to collaborate with other stakeholders	Government
Government does not collaborate with farming organisations	1	Government needs to collaborate with other stakeholders	Government
	3	Government needs to collaborate with other stakeholders Total	
gouvernement gave land for farming	3	Government provides support	Government
in a government partnership programme	1	Government provides support	Government
received a grant from the government	1	Government provides support	Government
	5	Government provides support Total	
gouvernement should provide land	5	gouvernement should provide land	challenges
They had to find the land themselves	2	gouvernement should provide land	challenges
	7	gouvernement should provide land Total	

government should provide support with infrastructure	3	government should provide support with infrastructure	Government
	3	government should provide support with infrastructure Total	
government should provide support with inputs	4	government should provide support with inputs	Government
	4	government should provide support with inputs Total	
government should provide support with market access	12	government should provide support with market access	challenges
	12	government should provide support with market access Total	
government should provide support with mechanisation	3	government should provide support with mechanisation	Government
	3	government should provide support with mechanisation Total	
government gives very little support	9	government support is inadequate	challenges
government has no long-term plans for smallholder farmers	7	government support is inadequate	challenges
government is not successful in helping smallholder farmers	9	government support is inadequate	challenges
government should be aware of farmers' challenges	5	government support is inadequate	challenges
government should find solutions for farmers' challenges	3	government support is inadequate	challenges
government should give full support in the early phase to smallholder farmers	3	government support is inadequate	challenges
government should provide consistent & regular support	7	government support is inadequate	challenges
government should provide feedback to farmers	1	government support is inadequate	challenges
government support not adequate	11	government support is inadequate	challenges
Help is to give what the farmer wants, not what you can give	2	government support is inadequate	challenges
NGOs add more value than the government	1	government support is inadequate	challenges
	58	government support is inadequate Total	
farming is part of upbringing	7	Grew up farming	Characteristics - other
	7	Grew up farming Total	
is hard working	12	Hard working	Characteristics - other
prepared to work hard	5	Hard working	Characteristics - other
received a prize to start a farm	1	Hard working	Characteristics - other

	18	Hard working Total	
has another job for income	3	Has another job to support farming	Rest
	3	Has another job to support farming Total	
Had backup plan for income	5	Has financial support	Characteristics - other
Has access to finance	8	Has financial support	Characteristics - other
Has other support, has backup	5	Has financial support	Characteristics - other
	18	Has financial support Total	
Being humble	1	Humility	Rest
	1	Humility Total	
is innovative	4	Innovative	Rest
	4	Innovative Total	
farming business is the only job	2	Lack of job alternatives	Characteristics - other
farming does not pay bills	1	Lack of job alternatives	Characteristics - other
farming was plan B	2	Lack of job alternatives	Characteristics - other
had a low paying job prior to farming	1	Lack of job alternatives	Characteristics - other
Had no backup plan for income	3	Lack of job alternatives	Characteristics - other
Has no support, no backup	6	Lack of job alternatives	Characteristics - other
was retrenched	1	Lack of job alternatives	Characteristics - other
	16	Lack of job alternatives Total	
applies learnings to scale production	9	Learning mindset	leadership
does trial farming to learn more	6	Learning mindset	leadership
Government should regularly evaluate farms	4	Learning mindset	leadership
government should upskill smallholder farmers	5	Learning mindset	leadership
grows own seeds as well	2	Learning mindset	leadership
has understanding of one's business	13	Learning mindset	leadership
is observant of their surroundings	3	Learning mindset	leadership
Keen learner	11	Learning mindset	leadership
keen to learn about others	1	Learning mindset	leadership
Learns fast	5	Learning mindset	leadership
needs sales & marketing skills	2	Learning mindset	leadership
open to new suggestions/ideas	1	Learning mindset	leadership
prepared to grow personally	2	Learning mindset	leadership
received bursary for furthering	1	Learning mindset	leadership

education			
stays abreast with farming news	3	Learning mindset	leadership
Stays updated with industry and regulations	6	Learning mindset	leadership
understands the value of digitalisation	5	Learning mindset	leadership
understands the value of mechanisation	5	Learning mindset	leadership
willing to try new things	1	Learning mindset	leadership
believes in teaching & training staff for growth	1	Learning mindset	leadership
	86	Learning mindset Total	
believes finance promotes growth	6	Looks for growth	entrepreneurial
believes investing in niche markets is advantageous	5	Looks for growth	entrepreneurial
business is growing	2	Looks for growth	entrepreneurial
wants to grow business	9	Looks for growth	entrepreneurial
	22	Looks for growth Total	
loves to be outdoors	13	Loves to be outdoors	Characteristics - other
	13	Loves to be outdoors Total	
changing market patterns is a challenge	1	Market access is not smallholder friendly	challenges
Fresh produce markets do not support smallholder farmers	6	Market access is not smallholder friendly	challenges
finding regular clients is difficult	1	Market access is not smallholder friendly	challenges
lacks access to market	10	Market access is not smallholder friendly	challenges
	18	Market access is not smallholder friendly Total	
understands the market	8	market oriented	entrepreneurial
	8	market oriented Total	
does not have access to finance	4	needs financial input in farming business	challenges
has to make choices due to lack of finance	2	needs financial input in farming business	challenges
input costs are high	3	needs financial input in farming business	challenges
needs financial input	7	needs financial input in farming business	challenges
Needs help with cashflow	3	needs financial input in farming business	challenges
pricing of product is tricky	1	needs financial input in farming business	challenges
	20	needs financial input in farming business Total	
lacks a workstation	1	needs infrastructure input in farming business	challenges
lacks infrastructure	4	needs infrastructure input in	challenges

		farming business	
lacks safety for tools and inputs	1	needs infrastructure input in farming business	challenges
lacks storage facility	1	needs infrastructure input in farming business	challenges
lacks water storage facility	1	needs infrastructure input in farming business	challenges
needs finance for growth	16	needs infrastructure input in farming business	challenges
needs greenhouse tunnel	1	needs infrastructure input in farming business	challenges
needs infrastructure input	7	needs infrastructure input in farming business	challenges
unreliable service providers	1	needs infrastructure input in farming business	challenges
	33	needs infrastructure input in farming business Total	
Does not own land	7	needs land for farming business	challenges
lack of availability of land	9	needs land for farming business	challenges
	16	needs land for farming business Total	
Negotiating Skills	3	Negotiator	Rest
	3	Negotiator Total	
is a story teller	2	Networker	leadership
is keen to work with NGOs	3	Networker	leadership
meets people from all walks of life	1	Networker	leadership
part of food value chain of big businesses	1	Networker	leadership
received grants for children development	1	Networker	leadership
works with various NGOs	5	Networker	leadership
	13	Networker Total	
no direct family responsibilities	4	no direct responsibilities	Characteristics - other
Not married and no children	5	no direct responsibilities	Characteristics - other
	9	no direct responsibilities Total	
farms non-organically	2	Non-Organic Farmer	Rest
	2	Non-Organic Farmer Total	
Customers do not understand the value of vegetables	3	Other	Rest
interested in plant science	1	Other	Rest
labour still feel they are oppressed (no rights)	3	Other	Rest
logistics problems	1	Other	Rest
Never farmed before	1	Other	Rest
rules and regulations are expensive	3	Other	Rest
started farming recently	1	Other	Rest
To be organic is a business	1	Other	Rest

decision			
wants to understand people	1	Other	Rest
We then forget about it as well	1	Other	Rest
business partner is not adding value at all	1	Other	Rest
Faced hardship whilst growing up	2	Other	Rest
Hard taskmaster	3	Other	Rest
Farms in tunnel structures	2	Other	Rest
	24	Other Total	
Part owner of business	4	Owner - part or sole	Rest
sole owner of their business	5	Owner - part or sole	Rest
	9	Owner - part or sole Total	
Committed to Farming	5	Passion for farming	interest in farming
enjoys farming	2	Passion for farming	interest in farming
interested in farming	2	Passion for farming	interest in farming
Loves farming	12	Passion for farming	interest in farming
passion for farming	13	Passion for farming	interest in farming
	34	Passion for farming Total	
is patient	6	Patient	leadership
	6	Patient Total	
determined to farm	2	Persistent	leadership
Does not give up	3	Persistent	leadership
has grit	2	Persistent	leadership
has tenacity	2	Persistent	leadership
persistent, did not give up	7	Persistent	leadership
	16	Persistent Total	
is persuasive	5	Persuasive	Rest
	5	Persuasive Total	
positive outlook in life	11	Positive thinking	leadership
	11	Positive thinking Total	
Education - graduate	4	Post Matric Qualification	Characteristics - other
Post Graduate Degree	4	Post Matric Qualification	Characteristics - other
	8	Post Matric Qualification Total	
is practical	3	Practical	Rest
	3	Practical Total	
I take selfies with my product on the sh	1	Pride in one's work	Characteristics - other
proud of one's work	6	Pride in one's work	Characteristics - other
takes pride in own work	11	Pride in one's work	Characteristics - other
	18	Pride in one's work Total	

belief in networking for profitability	4	Profit and success oriented	entrepreneurial
believes being profitable is important	7	Profit and success oriented	entrepreneurial
believes customers bring in profit	9	Profit and success oriented	entrepreneurial
Believes in recycling to save costs	2	Profit and success oriented	entrepreneurial
believes networking is advantageous	5	Profit and success oriented	entrepreneurial
Fuel & Energy costs bring down profitability	2	Profit and success oriented	entrepreneurial
is cost conscious	1	Profit and success oriented	entrepreneurial
is frugal	3	Profit and success oriented	entrepreneurial
is profitable	7	Profit and success oriented	entrepreneurial
looking for higher value crops	1	Profit and success oriented	entrepreneurial
looking to reduce costs	2	Profit and success oriented	entrepreneurial
margins are low in vegetable farming	2	Profit and success oriented	entrepreneurial
middlemen reduce profit margins	3	Profit and success oriented	entrepreneurial
understands link between learning and profitability	11	Profit and success oriented	entrepreneurial
wants to be more profitable	8	Profit and success oriented	entrepreneurial
wants to expand business	1	Profit and success oriented	entrepreneurial
wants to increase production	1	Profit and success oriented	entrepreneurial
farming for achieving success	2	Profit and success oriented	entrepreneurial
is resourceful	11	Profit and success oriented	entrepreneurial
	82	Profit and success-oriented Total	
religion is very important	2	Religious	Rest
	2	Religious Total	
brave	1	Risk taker	entrepreneurial
Farms in Open Field	1	Risk taker	entrepreneurial
had a high paying job prior to farming	6	Risk taker	entrepreneurial
invested own money in farming	8	Risk taker	entrepreneurial
is a risk taker	9	Risk taker	entrepreneurial
Not afraid to ask for help	5	Risk taker	entrepreneurial
ready to voice opinions for better good	1	Risk taker	entrepreneurial
Younger than 35 when started farming	10	Risk taker	entrepreneurial
	41	Risk taker Total	
wants to be recognised	5	Seeks recognition	Rest
	5	Seeks recognition Total	
Belief in oneself	8	Self-Assurance	leadership
Does not want to rely on others & wants to be self sufficient	2	Self-Assurance	leadership
is independent	3	Self-Assurance	leadership

	13	Self-Assurance Total	
self reflection	3	Self-Reflecting	Rest
	3	Self-Reflecting Total	
believes in barter system	1	Shared Value mindset	leadership
believes in knowledge sharing	4	Shared Value mindset	leadership
develops other farmers around for own benefit	5	Shared Value mindset	leadership
engages with different stakeholders	1	Shared Value mindset	leadership
happy to share knowledge	7	Shared Value mindset	leadership
The commercial farmers need to share much more	1	Shared Value mindset	leadership
	19	Shared Value mindset Total	
lack of availability of skilled labour	9	Shortage of skilled labour	challenges
	9	Shortage of skilled labour Total	
farms organic due to high pesticide costs	2	Strategic	entrepreneurial
is strategic	8	Strategic	entrepreneurial
looks for solutions	10	Strategic	entrepreneurial
outsourcing due to lack of infrastructure	1	Strategic	entrepreneurial
saw potential in farming	1	Strategic	entrepreneurial
Saw the opportunity for black & female farmers	4	Strategic	entrepreneurial
strategises around crime	2	Strategic	entrepreneurial
	28	Strategic Total	
believes organic farming helps the environment	5	Sustainable Farming	Sustainability
believes organic farming promotes good health	6	Sustainable Farming	Sustainability
farming to produce good food	10	Sustainable Farming	Sustainability
follows best farming practices	6	Sustainable Farming	Sustainability
	27	Sustainable Farming Total	
customer centric	8	Understands Customers	entrepreneurial
customers not aware of exotic crops	1	Understands Customers	entrepreneurial
	9	Understands Customers Total	
farming in vegetables & herbs	8	Vegetable & Herb Farming	Characteristics - other
	8	Vegetable & Herb Farming Total	
has big dreams for their farm	13	Visionary	leadership
has vision	12	Visionary	leadership
Keeps looking at the bigger picture	2	Visionary	leadership
wants to leave a legacy	2	Visionary	leadership
wants to make a difference	7	Visionary	leadership
wants to make an impact	5	Visionary	leadership
	41	Visionary Total	
	1237	Grand Total	

9.5 Appendix E: Acronyms and Abbreviations

ASGISA – Accelerated and Shared Growth Initiative for South Africa

DAFF – Department of Agriculture, Forestry and Fisheries

EO – Extension Officers

FGM – Fixed and Growth Mindset

GDP – Gross Domestic Product

NDP – The National Development Plan 2013

NGO – Non-Governmental Organisations

SPSS – The Strategic Plan for Smallholder Support

UJ – The University of Johannesburg

ZA – South African

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Manjula Mangalmurti

Manjula Mangalmurti

11 November 2019

19.1 COPYRIGHT DECLARATION FORM

Student details			
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Title of research:	Entrepreneurial and Leadership skills prevalent in smallholder farmers in Gauteng: an exploratory study		
Supervisor:	Dr. Richard Meissner		
Supervisor email:	rmeissner@csir.co.za		
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I hereby assign, transfer and make over to the University of Pretoria my rights of copyright in the submitted work to the extent that it has not already been affected in terms of the contract I entered into at registration. I understand that all rights with regard to the intellectual property of my research, vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.			
Signature: <i>Chinyula Mangalmurti</i>		Date: <i>11/11/2019</i>	
		Date: 24 October 2019	

Supervisor signature:

A handwritten signature in black ink, appearing to be "H. J. ...", written over a horizontal line.

15. APPENDIX 6 CERTIFICATION OF ADDITIONAL SUPPORT
(Additional support retained or not - to be completed by all students)

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

I DID NOT RECEIVE any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:

.....

~~**I RECEIVED** additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report~~

.....

If any additional services were retained— **please indicate below which:**

- Statistician**
- Transcriber**
- Editor**
- Other (please specify:.....)**

I hereby declare that all statistical write-ups and thematic interpretations of the results for my study were completed by myself without outside assistance

NAME OF STUDENT: **Manjula Mangalmurti**

.....

SIGNATURE:

Manjula Mangalmurti

.....

STUDENT NUMBER: **18361448**

.....

STUDENT EMAIL ADDRESS: **18361448@mygibs.co.za**

.....