

UNIVERSITY OF KWAZULU-NATAL

**FACTORS THAT ACCOUNT FOR SURVIVABILITY OF BLACK SMALL-SCALE
SUGARCANE GROWERS IN UGU DISTRICT MUNICIPALITY**

BY

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ABSTRACT

This research sought to determine survivability of Black Small-Scale Sugarcane Growers (BSSSGs) in Ugu District Municipality amid the severe decline in the sugarcane industry using two Sugarcane Growers Associations existing within the District Municipality namely, Qhubekani Farmers Association and Umnini-Mfume Farmers Sugarcane Farmers Association, designated by the researcher as streams A and B respectively, as a case study. The objectives of the study were to ascertain BSSSGs' perception of the overall sugarcane industry, to ascertain BSSSGs' perception of farm specific/micro-economic attributes that make them susceptible to failure, to ascertain whether they employ deliberate strategies to mitigate the causes and or effects of the decline and to ascertain BSSSGs' perception of land tenure and farm size effects on their survivability.

The sampling procedure employed in the study was a convenience sampling technique for the first two respondents from Streams A and B respectively, followed by a snowballing sample until the total target respondents of 15 are reached. The study revealed among other things that the majority of respondents were optimistic about the future of the industry and as such, were planning to add to the existing hectares of sugarcane planted. Notwithstanding evidence of the decline in profitability, which is advanced as the driver of the industry decline, most BSSSGs stated profit as the motive for the planned increase in hectares.

In terms of adoption of agronomic practices, the majority of BSSSGs appeared to be implementing these measures and in some instances attributed these to the survival of their business or alternatively attributing these as underlying reasons for tangible improvements to farming operations e.g. improved yields and profitability. Regarding major changes that BSSSGs had introduced in the 10 years prior to the study, which is considered the most difficult period during which the sugarcane industry decline started to manifest, the research didn't reveal any implementation of any groundbreaking changes by BSSSGs.

On the causes for the industry decline, only a handful of farmers linked this to international competitiveness, while others indicated transport costs as one of the drivers of the decline. A significant number of respondents blamed the

Recapitalization Program and its sponsors as having contributed to the decline. Furthermore, the RDP Housing Scheme and the Land Restitution Programme were also mentioned by farmers as contributing significantly to loss of productive cane land to competing uses for reasons discussed in detail in the study.

In general, the key findings of the research highlighted two categories of BSSSGs, namely those that were fairly successful and belonged to a small percentage of a relatively high income bracket, and these BSSSGs' farm operations tended to have relatively high capitalization and they generally exhibited better knowledge of farming, had forged relationships with White commercial farmers and in some instances had taken it upon themselves to assist other fellow BSSSGS, hence some of them were participating in the Recapitalization Program as contractors. Overall, these farmers were generally more aware of the industry situation and their survivability was judged to be at a high level.

On the other extreme, the study elicited a group of farmers who were engaged in passive farming, which was an unintended consequence of the Recapitalization Program, which was exacerbated by contract farming. Contract farming and to a lesser degree passive farming were severely criticised by some respondents during the research and findings show that, the contrary to the original noble intentions of the program sponsors, this may be causing further discontentment among its intended recipients and also inadvertently promoted a culture of hand-outs.

The fairly successful group as identified by the study is deemed by the researcher as more survivable compared to the other, and farmers constituting this group can serve as a model of successful farming, and more importantly that key lessons can be learned from this group and replicated to enhance survivability within the industry. Another important aspect elicited by the research is BSSSGs comprise mainly farmers who are beyond the age of 60 which is a cause for concern.

LIST OF ABBREVIATIONS AND ACRONYMS

BBBEE	:	Broad Based Black Economic Empowerment
BCEA 75 of 1997 Number 75 of 1997	:	Basic Conditions of Employment Act
BEE	:	Black Economic Empowerment
BSSSG	:	Black Small-Scale Sugarcane Grower
CIS	:	Cooperative Incentive Scheme
DRLR	:	Department of Rural Development and Land Reform
DTI	:	Department of Trade & Industries
EDTEA	:	Department of Economic Development and Tourism and Environment Affairs
ESE	:	Entrepreneurial Skills Efficacy
FET	:	Further Education and Training
HRD	:	Human Resources Development
IR	:	Inverse Relationship
ITB	:	Ingonyama Trust Board
KZN	:	KwaZulu-Natal
KZNDARD	:	KwaZulu-Natal Department of Agriculture and Rural Development
KZNP GDP	:	KwaZulu-Natal Growth and Development Plan
LED	:	Local Economic Development
<i>NAch</i>	:	Need for Achievement
NCA 34 of 2005	:	National Credit Act Number 34 of 2005

NRTS	:	National Rural Tourism Strategy
PDI	:	Previously Disenfranchised Individual
RDP	:	Reconstruction and Development Program
SAP	:	Structural Adjustment Program
SASA	:	South African Sugar Association
SASRI	:	South African Sugar Research Industry
SEDA	:	Skills Enterprise Development Agency
SMME	:	Small, Medium and Micro Enterprises
SONA	:	State of the Nation Address
UGDS	:	Ugu District Municipality Growth and Development Strategy
USIR 2010	:	Ugu Sugar Industry Report, 2010

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CHAPTER 1

1.1 INTRODUCTION

The purpose of this study is to determine the factors that are necessary for the survival of BSSSGs within Ugu District Municipality, against the backdrop of a chronic decline in the sugarcane industry that has been documented within the district since the second half of 2010 (Ugu Sugar Industry Report (USIR), 2010; Kaye, 2013). Umzimkhulu Sugar Mill in Ugu has experienced intermittent closures due to drastic decline in sugarcane output in the district as a whole, which manifests in chronic shortages of feedstock. While on the surface the issue of concern is the decline in feedstock to the mill, the underlying reason is key, i.e. a drastic decline in profitability. An industry study undertaken in 2010 clearly points to this as being the first layer of causes beneath the surface (USIR, 2010). According to the same report another underlying driver of the decline is international competitiveness, while other domestic factors also left the local sugar industry in a serious state of decline. Figure 1.1 shows a graphic illustration of the decrease in sugarcane feedstock tonnage between 2002/2003 and the 2013/2014 harvesting season. According to this figure, sugarcane delivery to the mill has decreased from roughly 220,000 tons to roughly 100,000 tons. At approximately 55%, this decline has undoubtedly led to dire economic consequences for the region.

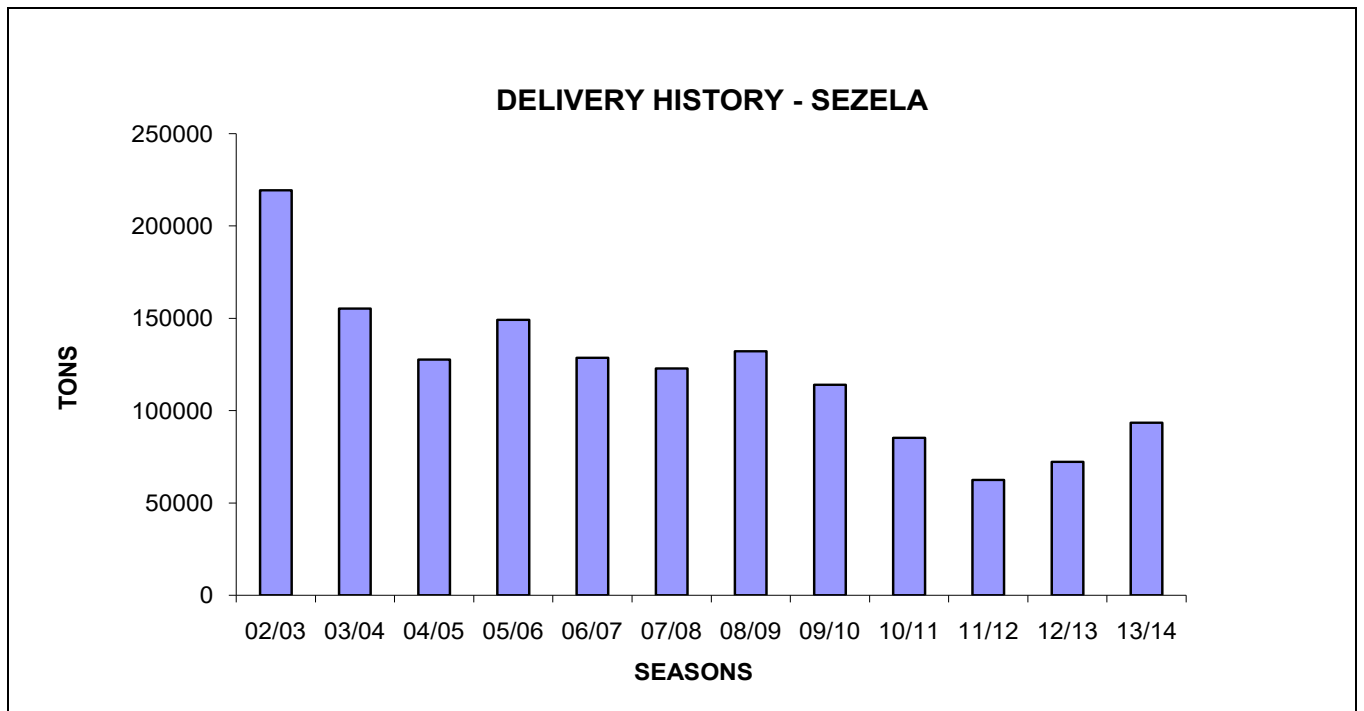


Figure 1.1: Historical delivery tonnage of feedstock from 2002/3 to 2013/14

Source: Sezela-Illovo Sugar, 2014

The Ugu Growth and Development Strategy (UGDS): 2030 Vision (n.d.) notes that the decline in sugarcane production is a manifestation of the decline in profitability. This precipitated the exit of the industry by White established commercial farmers (USIR, 2010). Evidence shows that in mid- to late-2010, agriculture, and in particular sugarcane, shed a lot of farm land to the property development sector which at the time was booming (UGDS: 2030 Vision, n.d.). Incidentally, figure 1 shows that for the first time since the 2002/2003 season, tonnage began to fall below the 100,000 mark in 2010, which seems to support the timeline of the reported period of exodus of White farmers. It appears that the drought experienced during 2010/11 exacerbated the situation (Singels, Ferrer, Leslie, McFarlane, Sithole and Van Der Laan (2011).

Interestingly, the exodus of White farmers in response to legislation and other pressures related to liberalisation is not new or unique to Ugu District Municipality (Hall, 2011). This behaviour was noticeable elsewhere in the country and conjectures that these farmers exited farming and sold their farms and invested in new careers or in other sectors of the economy (Hall, 2011).

Meanwhile, in the case of Ugu, the property development sector was not the only beneficiary, as high value crops such as macadamia nuts and essential oils are among the sectors that gained from this switch in investment (USIR, 2010). Further aiding the decline of the sugarcane industry was the negative effect of legislation (UGDS: 2030 Vision, n.d.). In this regard, three pieces of legislation in particular increased the burden on farmers. Lamenting the challenges associated with the contemporary operating environment facing South African farmers in general, Ortmann (2005) surmised that the farmers face, among others, problems with Agri-BEE, new labour legislation and minimum wages. Ortmann (2000) also noted that the challenges of globalisation and increasing competition are not only confined to farmers, but extend to agricultural economists who needed to constantly upgrade their skills to offer superior services to their clients.

Seemingly, these new laws are the Sectoral Wage Determination 13 of the BCEA Number 75 of 1997, Restitution of Land Rights Act Number 22 of 1994 and the NCA Number 34 of 2005, and this is further confirmed in the UGDS: 2030 Vision (n.d.). Whilst the land restitution legislation created an immediate atmosphere of uncertainty and an investment disincentive for existing farmers, Sectoral Wage Determination increased the cost of labour (and further reduced profit margins), which exacerbated the already adverse industry situation and drove the industry even closer to the precipice. This resonates with MacNicol, Ortmann and Ferrer's (2008) findings, who proposed the following:

- Government should review restrictive labour legislation such as minimum wages to reduce the costs associated with permanent labour and slow the casualisation process, thereby promoting permanent employment.
- Government should indicate the maximum annual increase in wages that farmers may expect to pay in order to alleviate some of the uncertainty surrounding minimum wage legislation.
- Government should provide detailed and relevant information on land valuation and inform farmers whose farms are subject to restitution to decrease any uncertainty (MacNicol et al., 2008, p. 133).

MacNicol et al(2007) also found land reform, minimum wage legislation and sugar price variability to be the most important source of business risk, in that order of priority, among large-scale sugarcane farmers in KwaZulu-Natal. It is important to note within this context that sugar is an international commodity, i.e. its price is internationally determined (Devadoss and Kropf, 1996). This renders South African cane producers price-takers, BSSSGs included price-takers rather than price-makers (Hurly, 2013). These onerous conditions outlined above bring to the fore a very pertinent question: are BSSSGs within Ugu District Municipality, given their perceived weaknesses in comparison to their white commercial counterparts, armed with the adequate knowledge and skills to survive the adverse conditions that characterise the industry? Answering this and other pertinent sub-questions is of critical importance to this study.

1.2 Background

Ugu District Municipality's sugarcane industry, which is the focal area of this study, has experienced a sharp decline in recent times (USIR Volume 2, 2010). The industry's report attributes the phenomenon largely to challenges emanating from globalisation and international competitiveness, and in part to a combination of the Restitution of Land Rights Act No 22 of 1994 and the BCEA Number 75 of 1997: Sectoral Determination 13, which came into effect in March 2006. This latter Act sets out minimum wages (at a considerably higher rate than the industry going rate at the time) and other onerous service conditions to be complied with within the agricultural sector. A further hurdle was the extensive review of lending policies by institutions following the enactment of the NCA Number 34 of 2005.

In the case of South Africa, the strain that BCEA Number 75 of 1997: Sectoral Wage Determination 13 has placed on industries across the board is evident; Ortmann (2005) observed declining unemployment in the agricultural sector caused by substitution of labour by automation, labour contractors and other labour saving technologies. Stockil and Ortmann (1997) confirmed these behaviours by farmers in their study of perceptions of risk by KwaZulu-Natal farmers within the context of a changing environment. On the other hand, Murray and van Walbeek (2007) in their study of the impact of the BCEA Number 75 of 1997: Sectoral Determination 13

among the KwaZulu-Natal North and South Coasts commercial farmers found that farmers were more prepared to replace manual weeding with chemical weeding in an effort to reduce their total wage bill as a result of the ACT, while mechanization was not necessarily seen as a feasible option. Overall these farmers had resorted to reducing the work-week by reducing the number of hours as opposed to retrenching workers (Murray and van Walbeek, 2007). The effect of this change in work hours reduces the total wage bill and the share of income attributable to farm workers which is a concern. However, notwithstanding the gains for the individual farmer, this phenomenon may, in the absence of an alternative industry being able to absorb the labour shed through mechanisation, simultaneously create high unemployment levels in the greater economy along with other socio-economic challenges.

The Restitution of Land Rights Act No 22 of 1994 has also brought about wider ranging negative implications on the Ugu sugarcane industry and other agricultural sectors (Ugu District Municipality Growth and Development Strategy: 2030 Vision, n.d.). This was observed by Ortmann (2005) in KwaZulu Natal, whereby he recommended that government must relax restrictive labour laws and reduce uncertainty around land claims, among other actions, to mitigate against the competitive challenges facing the KZN sugar industry. Needless to say, there have been both negative and positive implications. On the positive side the objective of this Act is to achieve economic transformation and social justice by ensuring that previously disenfranchised individuals PDIs participate in and acquire land as an important factor of production. Within this context, Thirtle, Piesse and Gouse's (2005) assertion is clear:

“Economic Apartheid will not end until reasonable opportunities and incomes are available to the mass of the population rather than the privilege of the few”
(Thirtle et al., 2005, p. 38).

Meanwhile, Ortmann (2000) made the point that land redistribution, a highly emotive topic in Africa, is high on the South African government's agenda and correctly so, given its importance to achieve political stability which is a prerequisite for economic growth. These views are instructive for a country like South Africa which seeks to

redress imbalances caused by its apartheid history, however often trade-offs and delicate and hard choices need to be made with no clear cut directions.

Nevertheless, notwithstanding the noble intentions of land restitution legislation, within the Ugu context the negative experience stems from the fact that for farmers whose farms have been earmarked for land restitution, a high degree of uncertainty and the slow finalisation of the process created a disincentive for further investment in the sector (USIR Volume 2, 2010). For this situation to be properly managed and well mitigated, the transfer process needs to be done as quickly as possible and with precision (UGDS: 2030 Vision, n.d.). Unfortunately this has not been the case as the process tends to be protracted and take years to finalise - often with dire consequences to the industry (UGDS: 2030 Vision, n.d.).

Evidence of the adverse effects of the land restitution process is unmistakable in the following paragraph:

“The slow pace of land reform and the large number of unsettled land claims in the region are impeding development. Failed land reform projects through a lack of adequate support and mentorship, unsustainable development models and weak management have resulted in a large number of vacant and unproductive farms. In order to address these challenges the district must make sure that the National Department of Land Reform and Rural Development assists in fast-tracking the land reform process and that relevant departments (such as Agriculture) are pulled on board to ensure the transfer of skills to new recipients of land so that they can continue to maintain productive capacity” (UGDS: 2030 Vision, n.d., p.7).

The third piece of legislation that has brought about a negative impact on the sugarcane industry is the NCA Number 34 of 2005. This legislation, like its counterparts, has had a contrasting effect in the sense of having both a positive and a negative effect on the South African economy. On the positive side, apart from promoting responsible lending, the NCA Number 34 of 2005 has been widely credited for ensuring that South Africa came out of the world financial markets crash in 2007/8 relatively unscathed. While most world financial markets crashed because

of delinquent lending, (Brunnermeier, 2008; Hellwig,2009), the South African financial markets survived the resultant domino effect that reverberated throughout the world's financial sector, thanks to the restrictive lending practices visited upon the sector by the NCA Number 34 of 2005 (Sewnunan and Green, 2015).

On the other hand, the reality of this Act is that it affected many of the established commercial and emerging farmers in the sense that those who are not affected by land restitution would have invested in their farms under conditions prior to the NCA Number 34 of 2005, but have not invested, thanks to the new stringent lending conditions (UGDS: 2030 Vision, n.d.). This is due to this legislation's reduction of financial institutions' appetite for lending much needed capital for investment. This exacerbated the scarcity of capital problems and depressed investment in the industry, which precipitated the industry's decline (UGDS: 2030 Vision, n.d.).

In tandem with the adverse effects brought upon the industry by new legislation, changes in weather patterns - particularly drought - continue to plague the industry and exacerbate the situation. It must be pointed out, however, that whilst drought seems to be the current state of affairs, the extreme weather patterns which sometimes cause flooding lead to serious damage to infrastructure and generally make planning very hard. This further deepened the near crisis situation the industry is facing. Singels, et al., (2011) noted the adverse consequences of severe weather patterns to rain-fed areas:

"The 2010/11 season will be remembered for a severe drought in the rain-fed areas with devastating short and long-term consequences on productivity. Rainfall from January to September was the lowest ever recorded and resulted in very poor growth and low yields in coastal areas, poor profitability of the industry as a whole" (Singels, et al., 2011, p. 66).

Of even more concern is the observation by Reddy (2003) regarding an interesting trend in which sugar cane farming experiences its own peculiar laws of diminishing returns (over and above the normal phenomena associated with the normal production function espoused by economists), i.e. there is a natural decline in sucrose content with every cane harvest, with all other factors remaining constant.

Reddy (2003) attributes this decline in sucrose content to a natural phenomenon whereby consecutive sugarcane harvests from the portion of the same stalk left underground (ratoon) decline progressively; he referred to it an inverse relationship between the age of the ratoon and crop yield. Based on this inverse relationship, the overall supply is likely to experience a natural decline in the absence of any replenishment of new cane plantations and if the area under cultivation remains constant.

In the case of Ugu District Municipality where there is already a notable decline in sugarcane production a decrease in sucrose content would pose a concern to the level of yields even under normal conditions. Crucially, in the case of Ugu District Municipality where cane farming is already declining sharply rather than being stable, the inverse ratio could be actually exacerbating the situation.

Considering the abovementioned issues and the additional evidence demonstrated in the ensuing section, it follows that the agricultural industry of Ugu in general and its sugar industry in particular has been hit thereby rendering the local sugar industry less competitive internationally.

On this issue of industry decline, while its seriousness and the adverse impact on the economy was only documented by the Ugu District Municipality in 2010 through a study undertaken on the industry (USIR Volume 1), it is worth noting that according to Kaye (2013), the decline in the industry began manifesting as long ago as 2007/8.

In consideration of the importance of agriculture and in particular the sugarcane industry to the region's economy, a project named Small Growers Renaissance Multi-Stakeholder Project also known as the Recapitalization Program, which is a partnership between EDTEA, Illovo Sugar and Small-Scale Cane Growers from the three municipalities of Ugu District Municipality, namely Umdoni, Vulamehlo and Umzumbe, was established in 2007/8 (Kaye, 2013). This project intended to place an additional 500 hectares of land under cane production as a first step towards arresting the negative trend (Kaye, 2013). This project was a provincial government

initiative and as such enjoyed the status of being referred to as a “Flagship Project”. One of the reasons why Ugu was considered for this project, apart from the obvious serious threat to the overall economy posed by the chronic decline, was the fact that Ugu District Municipality is designated one of the Presidential Poverty Nodal Points (SONA, 2001). Describing Presidential Poverty Nodes, the NRTS (2012) pointed out that these are areas inhabited by almost 10 million people who live in extreme poverty. Among the districts designated as Presidential Poverty Nodal points in KwaZulu-Natal are Umkhanyakude, Zululand, Umzinyathi and Sisonke District Municipalities, in addition to Ugu. Consequently, such districts enjoy priority status for public sector interventions aimed at improving livelihoods for the districts’ inhabitants, which it is readily acknowledged is not easy to achieve and requires massive state allocation of resources. It is therefore not surprising that in designating these areas Presidential Nodal Points, President Thabo Mbeki (2001) made a call to government, labour and business to form strategic partnerships aimed at mitigating the scourge of poverty in these nodes by investing in projects that seek to fundamentally alter the adverse socio-economic conditions.

The Small Growers Renaissance Project has to be seen within the foregoing context and underscores the seriousness of role players to give effect and commitment to the upliftment of Presidential Nodal Areas in practical terms. Incidentally, in the most recent survey of municipalities, Vulamehlo, Eziqoleni and Umuziwabantu Municipalities (all constituent municipalities of Ugu District Municipality) achieved ranks of 1, 4 and 8 respectively in the KwaZulu Natal (KZN) Multiple Deprivation Index by the KZN Treasury for 2011 (UGDS: 2030 Vision, n.d.).

This not only means that one of Ugu Municipality’s constituent municipalities (Vulamehlo) had the worst ranking in terms of deprivation, but the district also had the most municipalities in the top 10 bracket of worst ranked jurisdictions. This confirms the severity of the limitations of economic prospects for the inhabitants (UGDS: 2030 Vision, n.d.).

Although the Small Growers Renaissance Project initially intended to place 500 additional hectares of land under cane production, the amount was later reduced to

460 hectares because of the sudden increase in fertilizer and diesel costs which occurred prior to the implementation of the project. Unfortunately this project did not achieve the success that was hoped for, thus the downward slide of the industry continued unabated.

With regard to the overall industry decline, it is highly likely that by the time Ugu District Municipality undertook its own study in 2010, this trend had already taken root (Kaye, 2013). Although Kaye's focus was to some extent limited to the Grower Renaissance project and the success recorded in terms of meeting the project objectives, the author did comment that the problems had already begun to appear by the early to mid-2000s.

Notwithstanding the above, the region only began to realise the gravity of the situation when the 2010 study was released. Through this study, alarming facts about the industry were laid bare and a call went out for drastic remedial action. The study provides ample empirical evidence regarding the decline in the sugar industry in Ugu and its dire consequences on the economic prospects of the region (USIR, 2010). Prompted by the decline of the feedstock to the two district-based mills of Sezela and Umzimkhulu, and in an attempt to understand the root causes behind this, the study exposed an industry that is under severe pressure, some of it from the international arena but also from domestic forces. The decline manifested in intermittent closures of the Umzimkhulu Mill, which resulted in simultaneous cut-backs and the transfer of labour to the Sezela Mill, with a significant number of cane-growers having to travel additional distances to get the feedstock to the mill and in the process incurring transport and time costs. This was of great concern in a region with a limited economic base.

In summary, the Sugar Industry Assessment Study Report highlighted the following alarming statistics about Ugu (USIR, 2010, p. 7).

- By 2009/10 sugarcane had lost 6.5% more hectares of land in the five years prior than other economic sectors.
- In the same period both Umzimkhulu and Sezela Sugar Mills processed less than three million tons of cane feedstock.

- By contrast the combined capacity of both mills is 3.8 million tons of cane, indicating the dire extent of underproduction.
- The report projected that the combined tonnage would further drop to 2.6 million.
- Most tellingly, the report states that over 1 000 jobs were lost during the same period.
- The same study concluded by pointing out an urgent need to plant a further 200,000 tons of sugarcane and set out various steps and supporting interventions that are critical to achieving this as a remedial intervention if drastic, adverse changes to the socio-economic prospects of the region are to be mitigated against.

This study of the Ugu sugar industry not only bears testimony to the dire situation of the industry, but it also identifies the hinterland as the future area of growth as the hinterland/areas under the Ingonyama Trust Board (ITB) as the only viable alternative to salvage the situation given the loss of cane land in traditional farming areas. Incidentally, ownership of this land, although under legal stewardship of the ITB, is assigned/reserved for BSSSGs. This means that for the first time the peripheral hinterland not only stands to offer solutions to save the ailing industry which is part of the mainstream economy, but the situation potentially provides an ideal opportunity for real Broad Based Black Economic Empowerment (BBBEE) for BSSSGs based on the prospects of commercial production located right at their doorstep. It also represents an unprecedented statement in the history of the region whereby large scale commercial production is contemplated in the hinterland and areas where PDIs stand to meaningfully participate as land owners. On both accounts, it is imperative to gain insights into the proficiency levels of BSSSGs as potential pioneers of commercial production of some scale in these areas, and to utilise insights gleaned from this to formulate a preparedness strategy in support of the imminent roll-out of commercial production as earmarked for the hinterland.

1.3 Problem Statement

The study is aimed at determining the survivability of BSSSGs within the chosen area of Ugu District Municipality against the backdrop of a chronic decline in the

sugarcane industry. In the preceding section it was shown that the sugarcane industry of Ugu District Municipality is under siege from factors that emanate mostly from the international arena, as well as to some degree domestically. It is argued that the combined effect of legislative changes alone could be devastating for BSSSGs, given that by virtue of their survivalist and novice stature in the industry, combined with other reasons that derive from the apartheid exclusionary policies, they are inherently more vulnerable than their commercial counterparts.

The researcher therefore explored to what extent BSSSGs are surviving in an industry which is under siege from international competition, and which has recorded an en masse exodus of large-scale commercial farmers (USIR; 2010).

1.4 Focus of the Study

This study seeks to investigate the chances of survival of BSSSGs within Ugu District Municipality given the drastic, chronic decline that it has experienced for almost a decade. The research sampled BSSSGs whose farmers are located along the P68 Corridor, which comprises the Umzumbe and Hibiscus Coast Municipalities, as well as Mfume BSSSGs whose farms are located in Vulamehlo Municipality.

1.5 Aims and Objectives of the Study

The main aim of the research was to explore factors that account for the survival of BSSSGs in Ugu District Municipality in the face of the serious challenges that beset the district's sugarcane industry. The study was broken down into the following objectives:

- To understand BSSSGs' perception of the overall sugarcane industry.
- To understand BSSSGs' perception of farm-specific/micro-economic attributes that make them susceptible to failure.
- To determine whether BSSSGs employ deliberate strategies to counter the causes and/or effects of the decline in the industry.

- To examine BSSSGs' perceptions of their own farm size and land tenure in terms of whether these enhance or inhibit their survival.

Alternatively, could it be that large-scale farmers are less adept at surviving than BSSSGs? Could the Inverse Relationship phenomenon be responsible for this, or is it the case that these emerging farmers are quietly perishing without much attention being paid to them? By answering the above questions the researcher surmises that insights about the overall survivability of small sugarcane farmers will be gleaned, which will assist in determining whether some corrective measures are necessary.

1.6 Research Questions

The research questions were formulated in order to gain an insight into the levels of proficiency, awareness and technical acumen across the four thematic areas that the researcher conjectured are critical for BSSSGs' survival given the current state of the industry. These thematic areas are as follows:

- What are BSSSGs' perceptions of the overall sugarcane industry?
- What are BSSSGs' perceptions of farm specific/micro-economic attributes that make them susceptible to failure?
- Do BSSSGs employ deliberate strategies to mitigate the causes and/or effects of the decline?
- Do BSSSGs perceive farm size and the land tenure system to be a factor in survivability?

1.7 Significance of the Study

This study and its relevance must be viewed within the context of the KZNPGDP. The document is a blueprint for the province which aims to turn around its socio-economic status based on a single provincial vision that stretches from now until 2030. The vision represents the first of its kind within the South African context that projects economic growth and social development across a wide spectrum of indicators on a long-term basis. This plan essentially directs the marshalling of

resources by the private, public and non-governmental sector/civil society in an LED triad. The KZNPGDP designates the province's agricultural sectors as being critical to the province's quest to turn around its economic fortunes. Under the plan's strategic objective relating to the unleashing of the province's agricultural potential, it sets various targets relating to *inter alia* emerging farmers and SMME development, turning vast hectares of virgin Ingonyama Trust (hinterland) land into large scale commercial production, value chain mainstreaming of emerging farmers, and massive employment creation arising out of projects and programmes falling under the KZNPGDP. As per the sugarcane study, the rural hinterland was identified as a potential growth point.

Taking cues from the KZNPGDP, Ugu District Municipality has developed its own version of the Growth and Development Plan. Based on its unique spatial and economic attributes (dual space economy), the district plan identifies agriculture and tourism as its leading sectors and therefore deserving of the most attention. On the other hand agriculture is facing serious problems of job losses, as discussed in the Growth and Development Strategy.

With reference to the current state of Ugu's agricultural industry and its importance to overall economic fortunes, the strategy observes that:

“One of the traditional mainstay economic sectors in the region, agriculture, has shed jobs at an alarming rate over the past decade, primarily due to restrictive legislation which has affected the agricultural investment appetite. These jobs have been lost to the local economy due to the inability of other sectors to absorb or replace them. The tourism sector, perceived by many as the lead sector within the region, has struggled to grow off a shrinking tourism season” (UGDS 2030 Vision, n.d., p. 5).

The report further alarmingly notes that:

“This situation has been further worsened since 2007 due to a number of factors, including the global economic downturn and stricter national credit control measures, resulting in a marked decline in investment across all sectors. This has generated fears that gains in poverty reduction in the Ugu

district prior to 2007 may have been reversed. While there is some indication of recovery in recent years, it is clear that without targeted and significant intervention and investment within the economy that could take advantage of its many comparative advantages, the district will continue on its path of deepening poverty, increasing joblessness, spatial fragmentation and increasing polarization between those with and without access to the formal economy. The Ugu district is clearly at a cross-road” (UGDS: 2030 Vision, n.d., p. 5).

In fact of the two sectors, i.e. tourism and agriculture, an even greater emphasis is placed on agriculture. The main reason behind this, apart from the recent shrinkages noted above, is that tourism, like other significant sectors such as manufacturing and others, has tended to only thrive in the coastal belt of the district. Whilst the importance of this growth cannot be discounted, the challenge is that the majority of the PDIs reside outside of these urban areas. The result is that traditionally PDIs have only been able to meaningfully participate in the economy through the migrant labour system, which has its own socio-economic ills. These sectors, by virtue of their skewed prevalence patterns, are ordinarily inaccessible to PDIs for economic transformation. For this reason they do not readily lend themselves to the government’s BBBEE objectives and economic transformation, since established businesses in the coastal strip offer limited, if any, opportunities for radical economic transformation. On the other hand it can be argued that new ventures with a hinterland bias, within a land tenure system that somewhat favours PDI and a proximity that is close to PDIs, not only offers greater prospects for achieving BBBEE objectives, but further addresses the problems of rural-urban migrants in search of jobs, which causes urban sprawl and other attendant socio-economic problems.

The UGDS: 2030 Vision (n.d.) confirms the notion that the hinterland, mainly through agriculture, offers improved prospects for BBBEE:

“The ailing agricultural sector offers the greatest potential for spatial integration. Whilst there is currently a stark spatial divide between commercial and subsistence farmers, opportunities for expansion in the sector lie in the

undeveloped, fertile Ingonyama Trust lands. If communities were engaged, sustainable livelihoods identified, natural resources well-managed, supporting infrastructure, such as roads and dams, were provided and market linkages were forged then the spatial landscape of economic activity could be fundamentally transformed. The Tourism Sector also has potential to integrate the region through (the) linking of coastal and hinterland tourism products” (Ugu Growth and Development Strategy: 2030 Vision, n.d., p. 29).

Confirmation of the dichotomous spatiality of the Ugu District economy is further discussed in the following statement:

“Economic Activity remains concentrated in the coastal strip. Manufacturing remains clustered close to the major nodes of Port-Shepstone and Marburg due to availability of serviced land and connectivity to the N2 (road) network. Very limited manufacturing occurs outside these key nodes. Retail, commercial activity and tourism activity is largely concentrated in the coastal towns. The main economic activities within the hinterland are: agriculture (commercial and subsistence), forestry and some mining” (Ugu Growth and Development Strategy: 2030 Vision, n.d., p. 28).

As a graphic illustration, Figure 1.2 shows the historical trends of employment per sector in Ugu from 2000 to 2009.

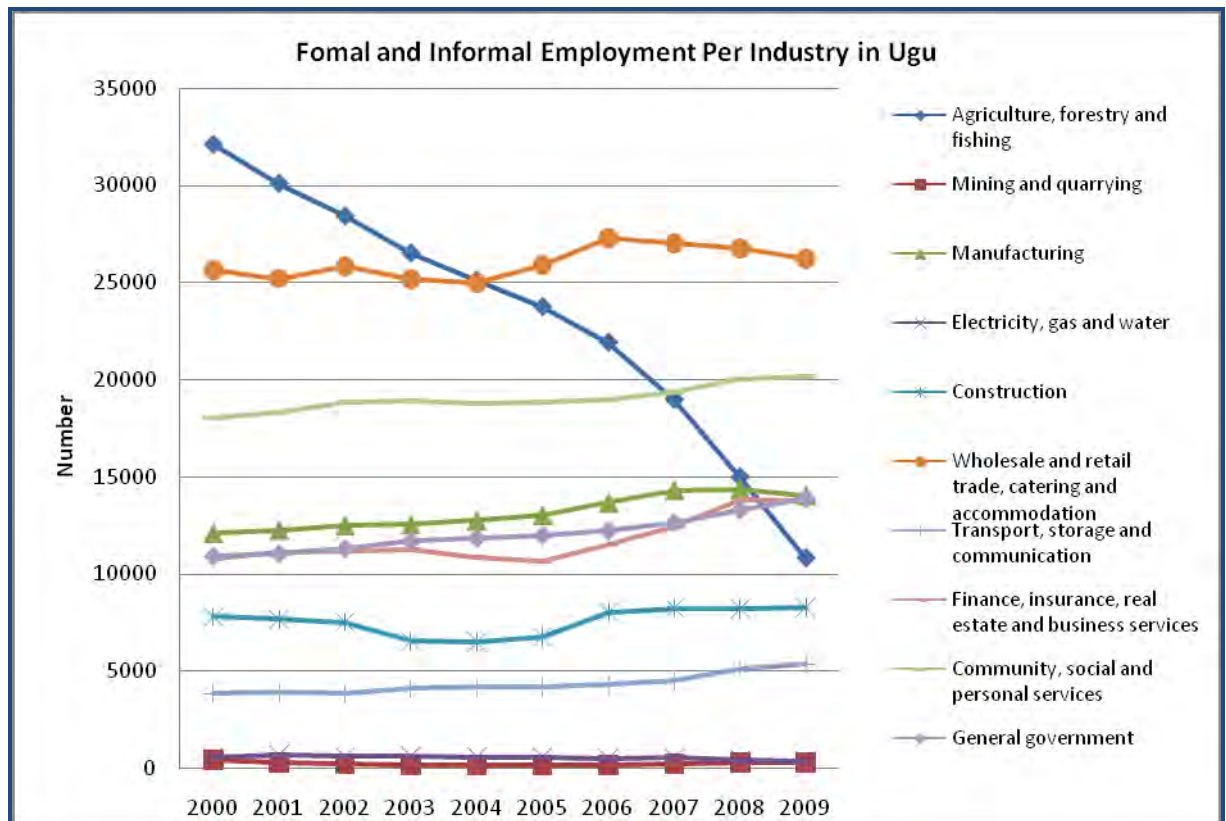


Figure 1.2: Historical employment trends in Ugu by sector since 2000

Source: UGDS: 2030 Vision (n.d., p. 23)

Figure 1.2 shows among other trends, that the combined sectors of Agriculture, Forestry and Fisheries experienced a sharp decline around 2001, which persisted through to 2009. What is worth noting is that none of the other sectors within the economy experienced the necessary growth to offset the decline in the latter sector. Evident in the same graphic is that the majority of other sectors barely experienced any meaningful growth; those that did grow only did so marginally, while the majority remained stable. This had an adverse effect on the employment situation.

Meanwhile, the UGDS: 2030 Vision (n.d.) highlights even more disconcerting figures concerning the district's fortunes relating to the agricultural sector. For example, the report indicates that a total of 21,299 jobs were lost between 2000 and 2012. Among the leading causes of these losses was the slow pace of land claim resolutions and the resultant disincentive effect it had on investment by affected existing farmers. Other reasons include the under-capacity of successful land claimants who, subsequent to restitution, being industry novices often confront massive technical,

business acumen and financial capacity challenges that render them unable to maintain pre-restitution levels of production, leading to a drastic reduction in overall farm productivity. These adverse factors have worked in tandem with a wave of diversion of land use away from sugarcane farming to other more attractive sectors, particularly the real estate/property development sector, thereby exacerbating the reported 6.5% loss of hectares away from sugarcane farming (USIR, 2010).

On the socio-economic front, the UGDS: 2030 Vision (n.d.) comprehensively delves into the prevailing socio-economic state of Ugu District Municipality and reveals a region that is gripped by extreme poverty, as attested to by the following statistics: using extreme poverty (people living under 1 US Dollar per day) as an indicator, 53,097 people of the roughly 750,000 total inhabitants are reported to be living in extreme poverty (UGDS: 2030 Vision, n.d.). Using the Minimum Living Standard Measure the situation is more severe, with the figure standing at 407,138 poor individuals. This represents approximately 58% of the total population of Ugu (UGDS: 2030 Vision, n.d.).

Ugu District Municipality is characterised by a skewed economic growth distribution pattern whereby a high density of economic activity occurs along its coastal belt. This skewed economic growth pattern underscore the need to find a way to bolster economic growth in the hinterland. It should be borne in mind that one of the direct consequences of skewed economic growth is rural-urban migration, which results in other problems associated with urban sprawl.

Given the spatial inequities, it stands to reason that given the absence of viable alternative economic options (sectors) within the hinterland, that Ugu District Municipality and its constituent municipalities' agriculture is the most likely sector to resolve the perennial problem of hinterland underdevelopment. In this regard, it should be borne in mind that unlike other districts, Ugu is not endowed with a strong manufacturing or even a mining sector of significance to drive the economy out of extreme poverty. Although there are other industries, of great concern is that their growth has been far from impressive, as illustrated in figure 1.2.

This study may be of interest to policy makers who are concerned about the economic decline in the district and are looking to revive the sugar industry to arrest the chronic decline in feedstock, and by extension the industry and overall economy's dwindling capacity to support livelihoods. Illovo Sugar may also pay special interest to the research, since by its own admission the hinterland and by definition BSSSGs will be at the forefront of this new wave of production in sugarcane to the hinterland. After all, the dire situation directly affects the organisation in the form of intermittent closures of one of its mills, while production fluctuates on the edge of break-even point.

LED practitioners, Agricultural Extension Officers and anyone who actively participates in LED will find this research of interest, as understanding the state of survivability or otherwise, including strategies where applicable, will deepen their insight and understanding of the industry and the coping strategies employed by BSSSGs. It will also help practitioners to replicate successes where such are recorded, which should ensure that best practices are shared. Likewise, information on failures will be disseminated and hopefully mistakes will not be repeated.

1.8 Limitations of the Study

This study falls within a qualitative and non-positivist paradigm which is geared towards understanding a phenomenon in greater depth with a view to eliciting context specific knowledge and insights. Therefore, unlike a quantitative design, it is neither the intention of the researcher to test hypotheses nor to generalise results from the study. In summation, the study does not intend to test relationships between any variables, since what is of primary concern to the study is to understand how BSSSGs are adapting without *a priori* assumptions.

1.9 Structure of the Dissertation

Chapter 1 provides an introduction to the research milieu and deals with all the pertinent aspects of the research, which include the economic situation and the relevance of the industry thereto, the international and domestic forces driving the

chosen industry to the brink, the importance of the study and what it needs to elicit in terms of BSSSGs survivability,

Chapter 2 provides a theoretical framework and insights into the dynamics associated with the study, leading to the research questions that underpin the study,

Chapter 3 deals with the nature of the design, sampling techniques and interview protocols.

Chapter 4 includes the results of the study in thematic areas as they emerged from the process.

Chapter 5 incorporates a discussion of the results and findings.

Chapter 6 deals with conclusions and recommendations.

CHAPTER 2-LITERATURE REVIEW

This chapter looks at farming practices to discern prevailing trends and their implications for survival in a situation of extreme global competitiveness, as well as other challenges such as severe weather patterns. The chapter further looks at technological advances, individual farmer attributes, management competencies, technical skills and entrepreneurial acumen, all of which are associated with success from studies undertaken in South Africa and elsewhere on aspects that serve as proxies for business success in general.

The following section covers aspects related to agronomic practices and related skills and knowledge, and business decision making tools which are deemed to be an imperative feature of a 21st century SMME who is acutely aware of the robust competition that he/she constantly faces.

2.1 Sound Agronomic Practices, Productivity and Globalization Effects.

It is widely acknowledged that the demands of globalisation have made it imperative for producers across the globe to stay competitive. Nowhere is this more evident than in the case of Ugu, where the overall economic performance has suffered the most adverse consequences of this phenomenon. This is most notable in the agricultural sector, which ranks among the worst casualties (UGDS, 2030 Vision, n.d.). Globalisation and allied pressures to stay internationally competitive are among the principle drivers behind the decline, with Ortmann (2005) confirming that both large-scale and small-scale farmers are exposed to the changes of the dynamic global trade environments caused by the liberalisation of international trade markets.

Of relevance to South Africa, Genis (2012:102) observed the dynamic nature of farming and relevant pressures this exposes farmers based on evidence from Limpopo, Western Cape and Northern Cape, found the following top five pressures facing the farmers in their order of importance.

- Production costs.
- Climate and weather.
- Labour matters such as productivity of farm workers and labour legislation.

- Uncertainty about the government's land and labour policies.
- The prices received for produce.

In terms of the critical role that individual farmers play as pillars of industry competitiveness, Ortmann (2005) commented that:

“The competitiveness of a whole industry, such as the beef, maize or sugar industries, depends on the competitiveness of its individual farmers...”
(Ortmann, 2005: 309).

Ortmann (2005) further posited that international competitiveness and the ongoing quest to survive also require constant technological improvements within the sector, citing the following practices and behaviours as being critical:

- Adoption of new technologies which results in production increasing with the same or fewer inputs.
- Adoption of improved technology by using new varieties of high yield crops and better livestock breeds.
- Improved methods of insect, disease and weed control regimes.
- Improved mechanisation, timeous planting and harvesting, and better tillage techniques overall.

Sumner (2011) reiterated the importance of following a strict agronomic regime as a way to enhance industry productivity, and lamented the fact that efforts in this regard exclude or seldom include root excavation as part of a diagnostic process to formulate remedial measures. He pointed out that this biased concentration surface activities rather root penetration and other ailments beneath the surface, compromises effort to improve crop yield over time (Sumner, 2011). Similarly, Shane, Locke and Collins (2003) discussed the importance of cognitive factors, including knowledge, skills and abilities (KSA), along with entrepreneurial motivation, as critical success ingredients.

Beckford, Barker and Bailey (2007, p.274), in their study of survival strategies of small-scale farmers in Jamaica, stated that this sector was lagging behind in terms of technological advancement. In this case the authors observed a pattern as these farmers were still inclined to:

“... operate under difficult circumstances, employing practices and technologies with low levels of input that have been relied upon for generations” (Beckford et al., 2007, p. 274).

Numerous other authors such as Murphy (2012), Young, Schafers and Bruwer (2012) and Aliber and Hart (2010) provided further insights into the onerous conditions facing the sector based on pressures from various origins. Murphy (2012) commented on the paucity of skills with reference to farmers, together with other endemic challenges that inhibit this sector from flourishing. He added that the challenges that are besetting the small-scale farmers include a lack of decent inputs, a lack of good quality land, insufficient smart technologies, and a lack of capital markets. All of these challenges go to the heart of the input-out/production function and ultimately affect competitiveness.

Further evidence of an absence of skills is evident in Maloa (2001), who referred to the practical steps that were undertaken to enhance the skills levels of black cane growers within the South African context. In this case the author outlined a number of steps which black growers implemented to enhance their proficiency in productivity and therefore their growth prospects. Among such steps the author listed, “dedicated economic, resource utilization (productivity and costs minimization), database information systems, and organizational management advisory service by canegrowers “(Maloa, 2001: 2). From this assertion it is evident that the author envisions a farmer who is fully conversant with micro-economic dynamics as they relate to his/her farm production function, and who are adept at leveraging information systems as an important business managerial operations tool.

The author went on to mention that training of 17,471 growers at a total cost of R5.9 billion in sugarcane husbandry and technical and business skills had already been

achieved by as far back as 31st March 2001 (Maloa, 2001, p.5) to mitigate the challenge of technical and managerial proficiency among the target farmers. This training confronted the challenge that the author mentioned of a lack of “targeted human resource development” head-on (Maloa, 2001:2). Young, Schafers and Bruwer (2012), on the other hand, argued in favour of the importance of firmly controlling the internal environment by business owners. In their research on the power of internal financial controls as a determinant of sustainability among informal sector businesses in the Cape Town Central Business District, the authors echoed its importance within the small business sector, but disappointingly they found this to be acutely lacking among the sample.

Young et al. (2012) found internal financial environment controls to be perceived to be beneficial by respondents in the following ways:

- Useful and effective for business growth.
- A preventive measure against fraud, losses and theft.

Meanwhile, Urban and Naidoo (2012) and Olawale and Garwe (2010) cited poor performance as a major shortcoming of South African SMMEs. This is cause for great concern.

Regarding the propensity by South African small businesses to perish, Urban and Naidoo (2012) observed a high failure rate among SMMEs that they attributed to deficiencies in managerial skills. Olawale and Garwe (2010) commented that the failure rate among South African SMMEs is an overwhelming 75%, which ranks amongst the worst in the world.

Olawale and Garwe (2010) ascertained that the reasons behind SME failures can be divided into two broad categories, namely internal and external environmental forces. Crucially, among internal obstacles management skills feature prominently, thus underscoring the centrality of the manager and his/her competency in ensuring SMME survival. Also notable among internal factors is the ability to invest in and to harness information technology as a critical success ingredient. This echoes the

importance of sound agronomic practices and the leveraging of technology, as alluded to previously.

Van den Berg and Smith (2005), like Maloa (2001), referred to the practical measures taken to mitigate the ongoing skills deficiency which adversely affects the emerging farming sector. They created a comprehensive plan to enhance the skills level of farmers to achieve the objectives associated with HRD with the farming sector. In this regard, Van den Berg and Smith (2005) provide a comprehensive regime for the support of sugar cane farmers based on the progress level achieved by SASRI in a crop growth modelling support decision support system. On the utility of the crop growth model the authors noted the following:

“Model output can be prescriptive, indicative for example, when to irrigate and how much. More commonly, however, output is provided as conditional; for example, what yield can be expected if certain decisions are taken (e.g. to apply x mm of irrigation water next week instead of today). Such ‘what if?’ models give the user freedom to analyze trade-offs between biophysical aspects and other dimensions of decision making which are better accounted for by mental models” (Van den Berg and Smith, 2005, p. 498).

The crop growth modelling support decision was intended to enhance productivity competitiveness, which in essence is a function of how efficiently the producer combines factors of production and how well the input-output function is leveraged relative to his/her counterpart, both domestically and internationally. As an emergent characteristic it tends to be interwoven with a web of other attributes, defining the operating context in which the sector under consideration prevails. As such, it tends to primarily centre around any or all the four factors of production in combination, namely land, labour, capital and entrepreneurship.

Thus, it is evident from the literature that the agricultural sector is exposed to many challenges, some of which emanate from international competition which appears to be the most severe, as well as changing weather patterns which cause a great deal of crop uncertainty and sometimes poor yields. It was also noted that South Africa

performs poorly when it comes to SMME failure rates, which points to a dearth of managerial acumen and technical farming proficiency (Urban et al., 2012; Olawale et al., 2010). Against this backdrop it was also highlighted that individual farmer competitiveness is the bedrock of overall industry competitiveness, which South Africa is dearly lacking.

In response to South Africa's unique circumstances, SASA and SASRI took steps to mitigate any deficiencies by introducing training (Maloa, 2001; Van den Burg et al., 2005). It is evident from the literature that this training was tailored to reinforce emerging farmers' ability to control their internal environment and to improve their agronomic proficiency overall.

It is also evident that Information Technology Systems and technology adoption would greatly enhance farming productivity. The role of a farmer as a main driver of success and his/her ability to enhance the overall survival of their business, especially in the constantly changing operating environment that typifies the 21st century, is apparent.

2.2 Psychological Attributes of SMMEs as Determinants of Business Success or Failure

2.2.1 Introduction

While section 2.1 discussed *inter alia* agronomic practices, international competitive pressures, the need to harness technological advances and Information Technology Systems, technical skills and managerial acumen as being critical in the battle of survival facing the farming sector, the following section explores the literature on psychological, cognitive and trait attributes to uncover relevant theories in this regard. Based on the views of various authors, it seems that while they may be easily cast aside as irrelevant, individual psychological attributes are among the chief determinants of SMME success. These attributes, although in certain instances having been referenced to different entrepreneurial settings, are also critical ingredients for success in the sugarcane industry. The section below refers in detail to some authoritative sources that espouse individual psychological traits as drivers of success in business.

2.2.2 Individual Motivation and Psychological Traits

Among the exponents of individual psychological attributes, Shane et al., (2003) reasoned that the importance of an entrepreneur at individual level not only in making a (conscious) decision to become entrepreneur. The authors further posited that such a decision evokes a self-evolutionary process culminating in the individual's state of mind characterised by high awareness of opportunities. According to the authors this individual evolutionary process is crucial in opportunity evaluation resulting in pursuit of those that promise the most returns and generally seeking and scanning these opportunities in order to exploit them for survival in the chosen field. Shane, et al. (2003) argued that human motivation is the critical influence behind these decisions, saying that people are differently endowed in their propensity and willingness to take these decisions, which naturally distinguishes their entrepreneurial proficiency from others.

Of further importance is that notwithstanding the primacy these authors accord to human motivation, external factors play an important role in human/entrepreneurial action (Shane, et al. 2003). Among these external factors are the status of the economy, the availability of venture capital, the actions of competitors and government regulations. The following phrase best sums up the view of the authors on the importance of human motivation, regardless of the role of external factors:

“However, environmental factors being held constant, we argue that human motivation plays a critical role in the entrepreneurial process” (Shane, et al., 2003: 2).

Meanwhile, Gartner (1989) argued that psychological approaches in the form of personality traits have not sufficiently explained the phenomena of entrepreneurial success, and instead favours behavioural approaches as being more productive in explaining them. Yet numerous other authors argue in support of the predictive power of psychological approaches concerning success in the business enterprise arena. In their study of psychology as the underpinning force behind the phenomenon of new venture creation to enhance human understanding of how entrepreneurs arrive at decisions that result in creating new businesses, Shaver and

Scott (1991) placed the person/individual at the centre of understanding the rationale behind the decision making process and shaping an enterprise's fortunes. Confirmation of the overriding role of the individual in this regard is shown in the following extract:

“Where anthropologists emphasize cultural influences on actions, and sociologists emphasize social structure and organization, psychologists concentrate on individuals. A translation of the Greek roots of the discipline’s title would be “the study of human spirit or soul.” Although there have been diverse, if not say contradictory, descriptions of human spirit, soul or mind might be like, psychology has always recognized that whatever the description, a mind exists within a single individual. Consequently, psychologists are predisposed to search for explanatory concepts that can be located within the person” (Shaver and Scott, 1991, p. 24).

Among the individual dynamics Shaver and Scott (1991) deem essential for success in new venture creation are deliberate choices that are made by individuals. In this regard they discerned two psychological states that underpin choices, which in turn influence the perception of control and the motivational process based on two critical questions related to venture creation: “Can I make a difference?” and “Do I want to?”

The authors, similar to Shane et al. (2003), argued that while the importance of economic circumstances, social networks, marketing, entrepreneurial teams, finance and even public agency are important, it is the person in whose mind all of the possibilities come together. Shaver and Scott (1991) reasoned that individual characteristics and attributes have not received due attention in venture creation, which prompted them to note that:

“Through the years, more and more personological characteristics have been discarded, debunked or at the very least, found to have been measured ineffectively. The result has been a tendency to concentrate on almost anything except the individual” (Shaver and Scott, 1991, p. 39).

They concluded by arguing that it is at the level of the individual person, process and choice that we can gain deeper psychological insights into new venture creation.

Cunningham and Lischeron (1991) similarly affirmed the role of individual psychological traits in entrepreneurship. The authors provided a detailed discussion of six different schools of thought that they believed explain entrepreneurship based on the trait approach. In their treatise on entrepreneurs and the theory of entrepreneurship, they identified the following schools of thought:

- The "Great Person" School of Entrepreneurship
- The Psychological School of Entrepreneurship
- The Classical School of Entrepreneurship
- The Management School of Entrepreneurship
- The Leadership School of Entrepreneurship
- The Intrapreneurship School of Entrepreneurship.

As can be discerned from research by these authors, depending on which school of entrepreneurship one espouses, entrepreneurship can be explained through a wide range of attributes, skills, and assumptions. Among the definitions associated with each of the preceding schools of entrepreneurship, Cunningham and Lischeron (1991) postulated that the Great Person Model corresponds with the definition of entrepreneurs as, "extraordinary achievers", the Psychological School with founder and controller over means of production, the Classical School with creating value through the recognition of business opportunities, the Management School with risk-taking through communication, the Leadership School with "social architect" through the promotion and protection of values, and the Intrapreneurial School with those who pull together to promote innovation. The authors concluded their treatise by stressing that none of these schools is superior to the others.

In a comparable study, Rauch and Frese (2000) tested for McClelland's well renowned theory of *nAch*, which refers to an individual motivational state to determine its prevalence among entrepreneurs. The concept refers to a deep seated and intrinsic drive for success that is characteristic of some individuals. This source of motivation is sometimes termed an "internal locus of control", where the "inner

self" is the driver of success rather external factors. Indeed, Rauch et al. (2000) found that entrepreneurs displayed a significant positive correlation with 'Need for Achievement'. Likewise, Johnson (1990), as cited by Shane et al. (2003), argued that there is a higher prevalence of the 'Need for Achievement' among entrepreneurs than others.

On the other hand, Baum and Locke's (2004) research findings supported specific component variables of entrepreneurs' traits, skills and motivation categories as being significant direct and indirect predictors of growth.

Baum et al. (2000) identified a collection of specific traits that enable individuals to survive challenges, including *New Resource Skill*, in combination with other personality traits such as tenacity and self-efficacy, as being direct or indirect predictors of venture growth. Shane et al. (2003) also argued that goal-directed energy sustained over time becomes persistence, and likewise self-efficacy/task specific confidence sustains effort over time.

McGee, Peterson, Mueller and Sequira (2009) further supported the notion of ESE as an explanatory motivational variable in their study which dealt with the measurement thereof. Gagoitseope and Pansiri (2012) also found motivation for starting the business to be critical and a driving force behind success. The authors noted that entrepreneurial motives had a positive effect on managers' responses to environmental phenomena. Likewise, Alam, Jani and Omar (2011) found that internal motivation significantly contributed to success among women entrepreneurs in the southern region of Malaysia.

In further support of the relevance of personality traits in this context are findings based on a study by van Gelder, de Vries, Frese and Goutbeek (2007). These authors observed both behavioural and psychological attributes of failed versus surviving businesses, which were the primary determinants of success and failure. In terms of these research findings, a higher degree of human capital correlated positively with success, while conversely, a lesser amount or lack of it was found in failed cases (Van Gelder et al., 2007).

Van Gelder et al.'s (2007) study distinguished successful from unsuccessful businesses according to their attributes. Among attributes that correlated positively with success are the following:

- Managers of failing firms were found to be more prone to denying crises than their successful counterparts.
- Human capital (measured as education and development skills) was found to encourage the development of adequate mental models, which in turn enhanced entrepreneurship.
- Failed entrepreneurs were found to adopt complete planning less frequently and relied predominantly on reactive rather than proactive planning strategies.

In general support of this hypothesis, a study by D'Aveni and MacMillan (1990) found that managers of firms who survived bankruptcy during crisis found that crisis denial resulted in maladministration. Incidentally, the same crisis denial posture was found to be correlated with business failure by van Gelder et al. (2007). Likewise, the study by D'Aveni and MacMillan (1990) distinguished surviving managers from those that failed due to the former's enhanced focus on the external environment.

In his critique of the trait approach, Gartner (1989) however noted that:

"In the trait approach the entrepreneur is assumed to be a particular personality type, a fixed state of existence, a describable species that one might find a picture of in a field, and the point of much entrepreneurship research has been to enumerate a set of characteristics describing the entity known as the entrepreneur" (Gartner, 1989, p. 48).

While this critique has some degree of truth a counter argument can be made, which is that research about traits, where it is undertaken, only seeks to ascertain/discern whatever psychological attributes tend to correlate positively/coincide with entrepreneurial success. This does not necessarily mean that without such attributes

entrepreneurial success is unattainable, and neither does it necessarily mean a causative relationship. It is thus conceivable that such observed success is underpinned by a not immediately recognisable cause or other mutually reinforcing positive interplay between those traits and other underlying behavioural or situational factors and variables in a dynamic phenomenon, which is referred to as emergence in complexity theory.

For this reason the argument is not necessarily one of causality insofar as that attribute of interest is concerned, but rather about correlation. Furthermore, these personality traits, contrary to what is alluded to in preceding the assertion, need not be fixed per se, but should rather form part of the entrepreneur's "arsenal" - a psychological and behavioural "tool-kit/tool-box" that they can rely on if the situation demands, typifying some sort of nimbleness on the part of those that exhibit such a trait as they ride the proverbial crest of the wave.

Carsrud and Brannback (2011) defined motivation as motives and instincts that underpin behaviour that seeks to achieve success, to survive or simply to avoid failure. The authors further posited that motivation can be explained either in terms of drive theories (or intrinsic motivation), sometimes referred to as "push theories", and incentive theories (externally induced motivation), sometimes referred to as "pull theories".

Supporting the relevance of individual motivational traits theory, Zahra, Korri and Yu (2005), like Locke et al. (2012), lamented the fact that research on entrepreneurial phenomena has tended to focus on the external environmental factors, whether they are macro, industry or firm specific. To correct this they postulated that the role of cognition on opportunity recognition and exploitation is an intra-personal process. Reiterating that the individual is the foundation of the phenomenon of entrepreneurship, the authors noted that:

"To be entrepreneurial, we believe an act should be preceded by sense-making that enables key organizational actors to view the external environment in a new light. In turn, this requires an environment with no

crystallized, rigid meanings and organizational actors without entrenched organizational models” (Zahra et al., 2005, p.142).

The potency of this statement insofar as it underscores the primacy of individuals in the entrepreneurial phenomenon cannot be over-emphasised. Firstly, it infers that entrepreneurs are not necessarily concerned about the complexities and ambiguities of the environment they operate in. On the contrary, they are endowed with unique sets of lenses through which they are able to define and magnify even the smallest of opportunities. This further implies that unlike ordinary people they can readily harness the inner resources, resolve, resilience and capacity necessary to face whatever challenges may otherwise cause non-entrepreneurs to succumb. These “tools” and inclinations make them gravitate towards and enjoy the challenge of entrepreneurship.

With regard to the innate ability to adapt, Cardon, Wincet and Drnovsek (2009) conducted a study on entrepreneurial passion (entrepreneurial motivation) in relation to business success. They noted that passion facilitates an entrepreneur’s effort to adapt and cope with environmental challenges. Cardon, Wincet, Singh and Drnovserk (2009), meanwhile, claimed that three entrepreneur role identities, namely inventor, founder and developer, motivate entrepreneurial action. They noted that entrepreneurs need not necessarily have a single identity disposition, but if they have more than one they would be in a hierarchical pattern whereby one predominates and others follow. In the case where one salient role identity predominates, tasks that lack in that role identity tend to elicit a strong negative passion, which is followed by strong internal resistance and rejection.

Further evidence of the importance of entrepreneurial motivation is to be found in a study by Collins, Hanges and Lock (2004). These authors found that achievement motivations are a significant predictor of both entrepreneurial choice as well as performance. As expected, the authors explained that such personality factors are not necessarily the sole predictor of success. Given the substantial support for these personality traits being present in entrepreneurial research, their presence in a case being evaluated should engender a feeling of comfort to the researcher. Conversely,

a lack of these traits among a sample should raise an alarm. It therefore stands to reason that personality traits are not to be discarded and at the very least have a complementary role (even if remote) to play in shedding light on the phenomenon of entrepreneurship. This is further supported in the following statement:

“The purpose of the first part of this research is to look at research based on the trait view of entrepreneurship and to show that this view alone is inadequate to explain the phenomenon of entrepreneurship” (Gartner, 1989, p. 48).

This statement acknowledges the relevance of the personality traits approach to explain entrepreneurship. It is thus logical to conclude that to succeed as an entrepreneur one should be endowed with different sets of mental models that enable one to encode information differently from other people.

Zhao, Seibert and Lumpkin (2010) further confirmed that personality plays a role in the emergence and success of entrepreneurs. In a somewhat different angle, Santos, Curren and Caetano (2010) explored what they referred to as cognitive maps during early entrepreneurship stages. This study yet again supported entrepreneurial motivation as the bedrock for opportunity recognition and venture establishment.

This section explored the role of motivation and individual traits as drivers of entrepreneurial behaviour. Despite some dissenting opinions, evidence from authoritative sources appears to highly favour the role of individual motivation and cognitive factors, in conjunction with skills and external factors, in enhancing the chances for entrepreneurial success. Evident among many authors is the notion of motivation combined with cognitive factors (knowledge, skills and ability - KSA) as being among the principle determinants of entrepreneurial success (Shane et al., 2003). Meanwhile, other authors espouse the role of motivation through self-efficacy and passion (McGee et al., 2009; Shane et al., 2009).

2.3 HIV AND AIDS Impact and BSSSGs' Vulnerability

2.3.1 Introduction

HIV and AIDS poses a serious socio-economic threat to Ugu District Municipality (Ugu District Growth & Development Strategy: 2030, n.d.). As a district that has a comparatively high prevalence of this disease, it is deemed that this topic merits further exploration, which will be undertaken in the section that follows.

2.3.2 HIV and AIDS Potential Impact

Apart from the general pressures facing the farming industry at large, KwaZulu Natal faces additional challenges in the form of HIV and AIDS (Northard, Ortmann and Meyer; 2004). Northard et al.'s study identified the HIV and AIDS pandemic as being one of the critical challenges facing small-scale sugarcane contractors in KwaZulu-Natal. While this alarming observation may not necessarily have been referring specifically to the current (Ugu) research setting, the statistics do show that the Ugu region and the rest of southern KwaZulu-Natal have the highest prevalence rate and are leading in the incidence of HIV and AIDS (Ugu Draft Growth and Development Strategy: 2030, n.d.).

The impact of the HIV and AIDS pandemic is devastating on the small scale farming sector (Ortmann, 2005). Among these effects are high labour turnover rates; perennial recruitment and retraining of labour (to deal with a high attrition rate); and weakened capacity of farming households as a consequence of illnesses, which reduces the ability to till the land as members' health deteriorates, ultimately leading to death.

“Agricultural productivity, labour turnover rates and production costs on commercial farms are adversely affected by HIV/AIDS. Employers also have to invest more time in recruiting and training replacement workers at considerable expense to their business. The capacity of small-scale farming household is reduced as HIV/AIDS prevents them from utilising their land effectively as infected members are too weak to perform farming tasks and

members with farmers skills become less productive or die” (Ormann, 2005, p. 294).

Based on the foregoing, it is clear that farmers within the research setting will have to contend with more than just the challenges that come with globalisation. The HIV and AIDS pandemic and the unique circumstances of KwaZulu-Natal and Ugu District Municipality in particular potentially place serious demands on the coping strategies employed by the farming sector, thereby placing an added strain on the sector participants’ mental models. The impact of the HIV and AIDS pandemic goes directly to the core of labour productivity, as can be seen from the empirical research findings in the preceding section. This ranges from a loss in production hours to a high labour turnover for those who succumb to AIDS-related sicknesses.

Of even greater importance is that within a climate of high prevalence of HIV and AIDS (Nothard et al., 2004), all its associated problems attack the core of productivity and by extension international competitiveness. This stems from the fact that sickly employees and absenteeism - an immediate consequence and one of the inevitable manifestations of HIV and AIDS – negatively affect the bottom line. Besides these short-term detrimental effects, more medium to long-term effects are that labour attrition and turnover is likely to cause whatever little investment in human capital (given BSSSGs typically meagre resources) to move out of the system over time. The effect of this is an erosion of competitiveness of the local industry over time, exacerbating the already strained situation.

Against this backdrop, it is important to note that unlike their global counterparts, the black domestic farming sector is also likely to face additional challenges associated with the capacity to raise funds, relatively low levels of proficiency in farming and a legacy of past discriminatory laws, all of which adversely affect their ability to compete.

On the positive side the government does have an HIV and AIDS programme which is freely accessible, however there is no escaping the effect the pandemic has on

productivity. In addition, the changes in lifestyle that are required to make a serious dent in the pandemic, as well as some degree of denialism, are still prevalent.

2.4 ECONOMIC ORGANIZATION.

The section below explores the role of coordination by the farming sector as they seek to leverage the power of pooling resources and collective effort in their quest to enhance their survivability. The section below shows that this strategy is an integral part of the measures that have been employed by farmers to enhance their survivability.

2.4.1 Economic Coordination and its Associated Impact

Economic coordination or agency among farmers has been employed to increase the chances of success and shield small farmers from vulnerabilities and challenges that they would otherwise experience as isolated entities. Transaction costs are a typical example of obstacles in this regard. Murphy (2012), Ortmann and King (2007), Church, Groom, Thomson and Dlamini (2008) variously support the practice of economic coordination as one of the strategies employed in the farming sector to enhance their survivability. This takes the form of either vertical or horizontal coordination.

Murphy (2012) reasoned that farmers engage in “agency” as one of their strategies. In her paper dealing with small farmers’ adaptive strategies to the pressures of globalisation, Murphy noted that:

“...the majority of analysis on commentary on agency among small-scale producers has focused on economic organization of producers in the form of cooperatives and cooperating to compete... agency extends well beyond economic organization of producers, to encompass the capacity of producers to organize and the ability to take effective action for self-determination”
(Murphy, 2014, p.4).

Similarly, Ortmann and King (2007) recommended cooperatives as a form of producer organisation for small-scale farmers within Impendle and Swayimane in KwaZulu-Natal as an adaptive strategy to *inter alia* mitigate transaction costs, which the authors term, “horizontal coordination”.

Further providing empirical evidence in support of horizontal coordination, Church et al. (2008) noted that small-scale farmers participating in the Dwangwa Cane Growers Limited and Kasinthula cooperatives benefited substantially from bulk purchasing discounts arising out of horizontal coordination. This is an example of farmers pooling their purchasing power and therefore increasing their bargaining power as an adaptive strategy, and wielding this to improve their position.

The prevalence of transaction costs as a prohibitive force, ostensibly necessitating individual and/or collective action by farmers, was also echoed by Ortmann and King (2010) as being among those obstacles facing small growers. The authors proposed vertical integration as a mitigation measure in this case, and considered vertical integration to be a strategy to enhance access to market.

In conclusion it is clear that under certain circumstances, economic organisation has the potential to enhance the survivability of farmers in general. However, in the case of Ugu District Municipality, two observations are relevant. Firstly, in the case of sugarcane production, Illovo Sugar is the only market and the economies of scale required are too prohibitive to consider establishing an alternative market, which negates vertical coordination.

On the other hand, fragmented individual cane growers, without some institutional arrangement that lobbies on their behalf, remain vulnerable and price-takers of an international commodity. For this reason vertical and horizontal strategies are much more likely to help farmers leverage the power of numbers. Forming themselves into cooperatives will at least help them purchase raw materials, reduce transportation costs and access accounting services so that they can obtain bulk buying discounts.

In this context it is important to note that the KwaZulu-Natal provincial government sees cooperatives as being vital to alleviate poverty as well as to achieve BBBEE. Consequently EDTEA, KZNDARD and DRLR are at the forefront of efforts to develop cooperatives in the province, which includes the research setting. In addition, DTI readily provides access to finance for cooperatives through its CSI. Over and above this, there are government-linked institutions such as SEDA and a local FET College that prioritise cooperative training.

This implies that in theory, farmers are guaranteed institutional support should they want it. To what extent then, does horizontal and vertical integration feature as part of survivability?

Finding answers to this question will provide the necessary insight into the effectiveness of cooperatives and a justification as to whether the budgets extended to achieve this are well directed.

2.5 FARM SIZE PRODUCTIVITY AND THE INVERSE RELATIONSHIP

The relationship between farm size and productivity is an intriguing one. It would appear that the bigger the size of the farm, the more productive it should be and the more profitable it would be. Yet several scholars have studied this relationship and reached very anomalous conclusions in this regard. In the majority of cases authors tend to conclude in favour of a prevalence of Inverse Relationship between productivity and farm size. The section below is dedicated to a discussion on the Inverse Relationship phenomenon, looking at both its proponents and exponents and the potential reasons for the phenomenon.

2.5.1 Inverse Relation between Farm size and Productivity

While there is overwhelming support for an inverse relationship between farm size and productivity based on empirical research findings (Assunção and Ghatak, 2003; Heltberg, 1998; Barret, 1996; Barret, Bellemare and Hou, 2010; Reddy, 2003), consensus remains elusive on its fundamental causes. Authors such as Barret (1996) contend that it is not the farm size that is behind the inverse relationship, but

rather market failure or mis-measurement of some other yet to be known underlying variable. Making a crucial observation in this regard, he noted that if the inverse relationship were to be explained purely on farm size alone, it would provide a strong argument for the sub-division of farms handed over to land redistribution recipients due to “inherently greater efficiencies” associated with smaller farms.

For South Africa, this phenomenon would hold significant relevance given the fact the country is grappling with the problem of land redistribution amid discouraging results on productivity and other fronts. With reference to the Inverse Relationship proposition, Barret et al. (2010) cautioned against potentially misleading policy conclusions in the following statement:

“From a policy perspective, one may be tempted to naively interpret the existence of the inverse relationship as prima facie evidence in favour of land redistribution. If small farms are more productive than larger farms, it should be sufficient to redistribute land from the latter to the former in order to increase total agricultural productivity and food availability, simultaneously reducing asset and income inequality” (Barret et al., 2010: 88).

One general observation to make about the inverse farm-productivity relationship is that it challenges the notion of economies of scale, which postulates that as businesses grow they are able to better leverage internal capacity, which results in greater productivity. On the other hand, it supports the theory that bigger businesses tend to be more efficient compared to their small sized counterparts. It is important to acknowledge that both the two positions occur in practice. There are numerous examples where the sheer size of a business has acted as a barrier to effective competition, which has led to decisions to unbundle or even shed some of the functional departments in favour of a much leaner organisation. This was seen in several cases when South Africa opened its doors for international trade at the onset of democracy.

Privatisation partially espouses this position in that when the public sector is replaced by private capital, there is more incentive to “cut excess fat” and to prime

organisations so that they attain some degree of nimbleness. Yet it is folly to think that this is always the case; sometimes big businesses have gained so much knowledge that it is ill-advised for novices to consider entering that space. Such businesses are likely to have gained such traction in their respective markets, based on their sheer size, that this position quashes any form of entry into that market.

Whether this Inverse Relationship phenomenon is prevalent among farms that have reached and passed the stages of economies of scale to the declining stage (otherwise experiencing diseconomies of scale), is hard to tell from the existing literature.

Van Zyl, Binswanger and Thirtle (1995) provided a crucial insight regarding the myth about efficiency that is intuitively assigned to large farms:

“International evidence indicates that a large-scale mechanized farm sector generally is inefficient, especially when compared to small-scale family type farm models. Although there may exist very real economies, they are mostly ‘false’ because they are usually the result of policies which favour large farms over small farms” (van Zyl, et. al., 1995:1).

Evidence of the counterintuitive nature of the Inverse Relationship can be seen in the following observation:

“The inverse relationship is at odds with textbook economic theory, which holds that factor productivity should be equal across farms, otherwise the land market would allow land to be sold or leased from lower marginal productivity to higher marginal productivity households. Similarly, within a farm operated by a single household, factor productivity should be equalized across plots else the household could reallocate inputs to increase output” (Barret et al., 2010: 88).

Yet Le Gal and Requis (2002) disputed the Inverse Relationship phenomenon, saying that small farmers are significantly less productive than their large counterparts:

“...small-scale growers’ yields are usually poor (30 to 50 t/ha vs 50 to 80 t/ha) for the large-scale growers, and their harvesting system poorly organized, there is a growing concern in the industry to improve their technical and economic performances” (Le Gal and Requis, 2002: 83).

Heltberg (2010) reasoned that in a world characterised by constant returns to scale and perfect markets there would be no incentive to apply variable inputs and factors of production differently. He therefore advances, either of economies of scale, efficiency differentials between large and small farmers, and market asymmetry as the driver of the inverse relationship. The author found significant and strong evidence of Inverse Relationship, and most importantly, confirmed strong support for market imperfections as the root cause.

However, notwithstanding the obvious consensus on the prevalence of the Inverse Relationship phenomenon, consensus on its root causes remains elusive. Various authoritative sources such as Barret (1996) explore different potential driving forces behind this phenomenon. He conjectured that the Inverse Relationship might be explained through differences in locality/village differentials in productivity, not necessarily the small size of farms.

To this end, he offered three explanations, the first of which is that Inverse Relationship might be caused by small farms being in food deficient regions as opposed to large farms being in food surplus regions. He posited that through the forces of supply and demand, deficit regions experience price escalations which start a chain of reactions that reinforce the status of small farms as being more productive.

The second alternative is that a high level of soil fertility might cause high farm density, which in turn dictates the subdivision of farms. This process results in many

relatively small and highly efficient farms being created, compared to their large counterparts (Barret, 1996).

The third explanation offered by Barret (1996) is that small farm region households might be surplus producers of labour, and consequently when such labour is applied into farming enterprises in these regions it becomes relatively cheaper (again the forces of demand and supply come into play here). This translates into these farms being productive because of advantageous labour costs, and because given this advantageous labour position these farm regions will tend to apply more labour units to take advantage of the situation.

These hypotheses, while to some degree plausible, still raise more questions than provide answers. For example the second explanation would mean that Inverse Relationship would have to be prevalent among a cluster of closely knit small farmers. In that case it would be very easy to prove/disprove this hypothesis because only small farms that exhibit cluster characteristics would exhibit the Inverse Relationship phenomenon. In addition, with the current advances in science and technology it should be easy to isolate soil-related characteristics and the extent to which they confer an advantageous position to these farms. Likewise, the first explanation merely labels the small farms as being in “food deficit” regions and the other farms in “food surplus” regions, yet it remains unclear what causes these farms to have different food statuses to begin with.

Even the issue of labour surplus is open to debate. Could labour advantages really confer on small farms such competitive edge as to cause for the existence of the Inverse Relationship? If so, what is it the relative weight of labour costs versus other inputs in the production function in respect of farming operations? If the relative weight is substantial, effects of labour advantages are likely to have a telling effect and perhaps contribute to the Inverse Relationship. However if the contribution of labour is only marginal, which is more likely the true scenario given the speed with which farmers are ready to jettison labour in favour of machinery, then it may be far-fetched to attribute the Inverse Relationship to labour advantages. Consequently,

Barret (1996) isolated differences in households' marketable surpluses under conditions of price uncertainty as a chief explanatory variable.

With regard to variations in soil quality, Heltberg's (2010) findings are at odds with Barret's (1996) earlier hypothesis, as he found strong evidence of the prevalence of the IR even under conditions when soil is controlled for.

Going back to van Zyl et al. (1995), these authors found not only overwhelming support for the Inverse Relationship phenomenon, but they also found Inverse Relationship prevalence to be more accentuated as more policy distortions were removed. The important observation about the prevalence of the Inverse Relationship was that it persisted regardless of the methodology employed.

The preceding analysis shows that the size of a farm does matter, however the manner in which size matters in the analysis is anomalous. The analysis of extant literature in the foregoing section shows that the Inverse Relationship phenomenon enjoys support from the majority of scholarly opinion, yet despite this overwhelming support on the Inverse Relationship prevalence, the views appear to be divergent in terms of the fundamental causes. However, notwithstanding disagreements in this regard, Inverse Relationship remains an important topic whose prevalence or otherwise holds important promise for farming, especially within the research context.

2.6 LAND TENURE SYSTEM, INVESTMENT APPETITE AND CREDIT ACCESS

Basic economic theory holds that land, together with capital, labour and entrepreneurship, is part of a vital "quartet" that is essential for production. For this reason, while various other authors concern themselves with farm size as regard its crucial importance in the productivity equation, others are interested in land tenure and its effect on productivity. For the latter group the issue is the extent to which land tenure can be an inhibitive/enhancing force for the farmers, especially amongst those who are emerging and who largely use their land as a single source of eking out a livelihood.

To this end it needs to be pointed out that within the South African context there are two types of land tenure systems, namely the freehold tenure system which secures individual title ownership (through title deeds) and the communal tenure system, where inhabitants are not assigned individual title and are therefore not guaranteed security of land ownership. While in the former case title owners enjoy free rights to mortgage land and are therefore able to offer it as security to raise capital, the latter land tenure system does not readily allow such a practice. Even in cases where this does happen, it is an exception to the rule rather than the norm. In the case of the communal land system, the ITB is the legal custodian of land, which is the land tenure under which most BSSSGs farm. This ability to mortgage land is at the centre of the discourse about whether land tenure can aid or inhibit development indirectly through investment appetite. The following section explores the literature relating to land tenure and its impact on development in general and farmer survivability.

2.6.1 The Impact of Land Tenure on the Farming Sector

Reddy (2003), in his study of Fijian farmers, found that the majority of farm operations were located on land leased and owned by the Native Land Trust Board. There are obvious similarities in land tenure systems between the Fijian study and Ugu, where the majority of BSSSGs operate on land under the Ingonyama Trust Board as opposed to having freehold title tenure. In the case of Fiji, the author found that the land tenure system posed challenges of tenure uncertainty and a resultant inability to obtain mortgages, which caused a decline in investment that in turn undermined confidence in the whole industry. Likewise, Ortmann (2005) with reference to the South African context noted that:

“In communal areas, insecure land tenure and free rider problems discourage investment in agriculture and hence diminish the competitiveness of this sector. Improving land tenure security would promote access to credit, strengthen incentive to improve land and adopt new technologies and

facilitate allocative efficiency and equity through rental transactions in cropland” (Ortmann, 2005: 310).

Carter and Olinto (2003) supported the notion of property rights as a factor in development, and further cautioned that land reform in property rights is only likely to benefit small farmers where legally insecure property weighs more heavily in favour of low income households. Otherwise, if these property rights reforms fail to remove the constraints that limit small farmers, the authors predict they would benefit medium and large-scale farmers to the exclusion of the small farmers. The authors base this argument on two observations based on their study of the Paraguayan experience:

- The credit supply effects of tenure security are nonexistent for the smallest farms and only become large for farms in excess of 15 hectares of land.
- Tenure security thus induces a shift in portfolio composition of capital for the smallest farms (toward more attached capital); only for larger farms is it estimated to enable an unambiguous increase in total capital stock (Carter and Olinto, 2003:185).

On the other hand, when discussing land tenure in the context of urban development notes, Payne (2000) noted that despite the popular perception that security of tenure is a precondition for households to invest in housing construction, other investments are possible simply through an official statement that the settlement will not be removed, by the provision of services or through the issuance of certificates of use. He further argued that contrary to popular belief it is not collateral security that detracts banks from giving loans to the poor, but rather high transaction costs and the failure to meet repayment obligations/affordability. He further cautioned against (blindly) regulating land tenure because of the unintended negative consequences that this may bring about. To this end he cited the example whereby turning squatter camps into legal titles might send a signal to large land owners that there is more money to be made by subdividing land. Likewise, it would encourage illegal land occupation (Payne, 2000).

Conversely, according to the Ferder and Feeny (1991), communal rights may best be appropriate in instances characterised by limited opportunities to invest in quality land when the community is small and land is sufficiently scarce to warrant an automatic exclusion of outsiders. In this regard, the Review further noted that if the size of the community changes, a mechanism for enforcing restrictions on individuals' land use patterns may be counterproductive and serve as a disincentive.

In support of mainstream thinking on the disincentive effects associated with communal land rights, the Review points out that:

“when new market opportunities arise or new technologies provide large benefits from investments, communal rights may no longer provide sufficient incentives” (Ferder and Feeny, 1991:140).

The Review further confirms the utility of security of tenure (individual title ownership) for collateral purposes in credit advances to reduce uncertainty and moral hazard problems for credit providers (Ferder and Feeny, 1991).

In conclusion, the preceding analysis of the land tenure system and its effect on investment weighs heavily in favour of freehold title as being more conducive to development. This is because financial institutions prefer land as a form of collateral/security for their loan advances, and communal land, unlike land under freehold title, does not readily lend itself to mortgages. Furthermore, it is not only the refusal of financial institutions to provide the sometimes much needed capital under this land tenure system, but the farmers themselves are not secure in the sense that continued productive utilisation of land can abruptly end, either because permission to utilise land can be abruptly withdrawn without any legal recourse, or because of other problems associated with a lack of exclusive rights to this type of land. As a result, it is possible that people/neighbours who might not have thought of the asset as being of any worth, notice that it is transformed into production and start making claims, whether justifiable or not. This adds to the list of disadvantages that BSSSGs are likely to contend with and begs the question, to what extent do BSSSGs perceive

land tenure as being a hindrance to their situations, if at all? What measures, if any, do they employ to enhance their survivability in the face of this hindrance?

2.7 CREATIVE LABOUR STRATEGIES

In the preceding section labour is mentioned as one of the factors of production along with three others. Against this backdrop, some degree of control of labour costs, along with an overall improvement in quality/productivity, undoubtedly goes a long way to improving profitability and survivability. In the case of emerging businesses like small farmers, who typically rely on labour intensive methods because of the financial costs of automation which might be prohibitive, this becomes more pertinent. This section explores creative practices for controlling this crucial production factor.

2.7.1 Creative Labour Strategies as a Potential Cost Mitigation Strategy

Creative labour solutions, or more precisely reliance on family labour as opposed to hired labour, has been touted by some authors as a viable strategy to enhance survivability. Incidentally, there is a strong positive correlation between small farm size and family farm enterprise ownership, as discussed under section 2.6.1 above. From a practical perspective, the substitution of hired labour with family labour is deemed to have dual benefits in that transaction costs such as supervision and other wage related costs are greatly reduced, and wage earnings are kept within the family. This practice of substitution of family labour for hired labour was also observed by Reddy (2003) in his study of the Fijian sugar industry, and was confirmed elsewhere by Olawale and Garwe (2010) and McLean-Meyinsse and Brown, Jr (1994).

Furthermore, creative labour strategies may partially be responsible for the Inverse Relationship. Referring to the phenomenon of creative labour strategies and the resultant advantages that possibly explain the inverse relationship between farm size and productivity, Wiggins, Kirsten (2010) and Llambi, conjectured that:

“On small farms much of the labour comes from the household: Self-supervising, motivated to work with care, and flexible to accommodate the unpredictable timing of some farm operations. Large farms, on the other hand, often depend heavily on hired labour that needs to be recruited and supervised, thereby raising transactions costs and thus the implicit costs of labour. Instead small farms typically apply more labour per land unit than large farms, and consequently obtain higher yields per hectare” (Wiggins, et al., 2010: 1343).

Creative labour strategies are of special interest to the BSSSGs and may hold the key to success, as the South African context is generally ravaged by labour unrest and resultant loss of production. It is often lamented by economic commentators such as Ortmann (2005) that the South African labour market is highly regulated, which renders it inflexible with dire consequences for international competitiveness. Consequently, labour productivity in the South African context is low (with a possibly comparatively lower work ethic), which is further exacerbated by a highly regulated labour market. Evidence of the proliferation of regulation is evident in the recent BCEA Number 75 of 1997: Sectoral Determination 13 which caused a significant increase in labour costs and in turn adversely affected farm profitability. As Ortmann (2005) noted:

“Although these laws benefit employees, they result in higher transaction and wage costs for employers in the agricultural sector by, for an example (i) raising the cost of dismissing and /or downsizing the workforce, (ii) increasing the cost of labour by requiring employers to pay higher rates for work performed on public holidays and Sundays” (Ortmann, 2005: 293).

A further dilemma to this is what economists generally argue to be the resultant substitution effect of labour by machinery - a natural adaptive strategy - which further drives up unemployment in the long term. For BSSSGs, wages payable alone, aside from other conditions attached to Sectoral Wage Determination, may prove to be too high and therefore detrimental to their immediate survival. How common, then, are creative labour strategies among BSSSG farming practices as a mitigation measure?

The preceding section pointed to the practice of creative labour strategies among the farming community to ease the costs associated with labour in an effort to improve business survival. Such is the importance of this practice that some authors conjecture that it may explain the Inverse Relationship.

While evidence linking creative labour strategies with the Inverse Relationship may not be conclusive, it is quite clear that this strategy can have enormous economic benefits that extend beyond the two that were initially mentioned under this section.

2.8 INCOME DIVERSIFICATION STRATEGIES

In business in general, diversification of income sources as opposed to specialisation is preferred as risk is spread across multiple platforms. The section below explores whether or not such a practice extends to the farming sector and to determine the extent to which it prevails, if it indeed occurs.

2.8.1 Diversification Practice within the Farming Sector

Aliber and Hart (2009) found a prevalence of this behaviour among black farmers to mitigate the adverse effects of changing circumstances, i.e. they adopted diversification which is a natural adaptive behaviour.

Beckford et al. (2007) observed the same behaviour among domestic food producers in Jamaica. They called this “Farm Fragmentation as adaptive sustainable resource use”. The obvious benefit that accrues to this practice is that farm plots are spatially dispersed over a wide area, which results in isolated non-contiguous individual plots. This hedges against diseases and ensures that fields are somewhat protected from pest attacks.

“However, it (farm fragmentation) is also a deliberate strategy to rationally allocate resources in response to spatial variations in environmental conditions and to spread risk and diversity of operations. Fragmentation therefore occurs as farmers attempt to exploit different and specific ecological

niches and make us of local soil conditions and microclimates” (Beckford et al., 2007: 281).

Perhaps to occur the importance of farmers constant battle to adapt to changes, is best exemplified in Eakin, Tucker and Castellanos (2006) in their study of adaptive responses by Mexican, Guatemalan and Honduran small holder coffee farmers to the coffee crisis in these countries, which was occasioned by economic liberalisation. Here the authors noted that apart from farmers diversifying crops or instituting multi-cropping, as referred to by Beckford et al. (2007), as a principal adaptive strategy, another important aspect of adapting is the creation and development of local networks among farmers, service providers and information sources as a means of facilitating adaptation within the context of economic liberalisation and globalised agriculture. Among other forms of adaptive behaviour observed in the study relating to Mexico was income diversification, other forms of collective and household organisation (similar to horizontal and vertical coordination), and in severe cases migration or the complete abandonment of farming. With regard to Guatemala, a similar role played by cooperatives in Mexico was assumed by non-governmental organisations.

Reardon and Taylor (1996) observed income diversification among South Asian farmers and noted that non-farm income is used to off-set shortfalls in farm income. Similarly, Bryceson (1999) supported the notion of income diversification as being central to rural livelihood approaches, which has become more prominent in the era of Structural Adjustment Policies (SAP). To this end, Bryceson (1999) conjectured that the removal of subsidies and the decline in marketing services as a result of SAPs left the rural peasant farming community more vulnerable and their farming operations unviable, warranting diversification of income to other sources.

According to Barrett and Reardon (2000), income source diversification is endemic among African rural households, with non-farm income as high as 45%. Meanwhile Barrett, Bezuneh, Clay, and Reardon (2000) compared data on behaviors in three agro-ecologies on the African continent, which were stratified according to arid-to-semi-arid (North Central Kenya and highland Rwanda) and humid-to-subtropical

Cote d'Ivoire, and found that livelihood strategies associated with non-farm activities offered the most income. The implications of this observation suggests that income from farm activities might be eroding and that policy interventions that centre around farm activities need to be considered circumspectly.

In their study dealing with adaptive strategies, Metz, Wadley and Christensen (2005) confirmed the prevalence of income diversification, where Indonesian farmers interchanged between cash cropping and rubber production.

The preceding analysis shows that diversification of income is a widely practiced strategy that is employed either as a natural adaptive (somewhat sub-conscious, automatic and unwitting) response to supplement subsistence incomes or as a proactive strategy that ensures that a greater crop variety is produced not only based on different harvest periods, or as a practical (conscious/witting) strategy to mitigate dependence on a single crop. The basic idea here is that if returns are negatively affected, whether these emanate from the market or drought or some other adverse conditions, the spread of economic activity cushions the farmer from the resultant effects. This is the same strategy that is followed within financial investment portfolios, whereby risk is spread between various portfolios to enhance returns and to reduce the risk associated with a single portfolio.

2.9 SUMMARY REGARDING SURVIVABILITY AS AN IMPERATIVE AND CRITICAL SUCCESS FACTORS

The foregoing literature review clearly shows the plethora of challenges that contemporary farming faces. While some emanate from economic globalisation via SAP (Eakin et al., 2006, Leichenko and O'Brien, 2002; Bryceson, 1996), others stem from a lack of access to capital and markets, extreme weather patterns with attendant effects on infrastructure, or severe drought causes. Further challenges, particularly in the case of South Africa, include imports of capital goods and input which make the domestic farming sector susceptible to currency fluctuations. Over and above these adverse factors, the literature has exposed the paucity of technical and business acumen among especially the emerging farming community, which is

characterised by an across the board high rate of business failure, all of which points to endemic weakness in the farming sector.

This section dealt with the numerous adaptive strategies available to farmers, among which are economic organisation, income source diversification and creative labour strategies. It is evident from the literature review that adaptability is crucial under the circumstances of economic liberalisation, especially among small scale farmers. This is further amplified in the following phrase by Eakin et al. (2006):

“Smallholder farmers have been singled out as particularly vulnerable to market fluctuations and global economic change, based on the observation that the impacts of global economic volatility are often felt more severely among the world’s peasant farmers” (Eakin et al., 2006, p.156).

This observation is particularly pertinent for the Ugu BSSSGs, who by all accounts have farm operations that are under siege from international globalisation and whose meagre farm sizes mirror the situation of the world’s peasant farmers.

From the study by Leichenko and O’Brien (2002), it is worth noting that economic liberalisation is not the only source of adverse exogenous changes that small farmers are exposed to, as they are exposed to adverse changes caused by climatic changes as well. These changes in weather patterns, which may manifest in severe and prolonged droughts as well as flooding, place a further strain on farmers’ adaptive capabilities and resources.

Leichenko and O’Brien (2002) also made an important assertion with reference to the concept of “dynamic vulnerability” to climate change as opposed to “traditional vulnerability”. In terms of the former concept the authors noted that traditional indices may be insufficient over time to correctly measure vulnerability to climate change, and the fact that those farmers who were deemed to not be vulnerable using traditional indices might be deemed vulnerable using dynamic vulnerability indices.

A combination of economic liberalisation and global changes as a result of changing weather patterns place a burden on farmers to adapt, failing which they are likely to perish. It is also important to note that pressures to adapt are not only limited to the international arena, for instance it can be noted that wage determinations, which are a domestic phenomenon, can have an equally devastating impact on farmers.

This section has extensively explored the literature relevant to adaptive strategies, inner capacities and psychology, which are imperative to determine a picture that mirrors how adverse effects of inherent volatilities that BSSSGs are exposed to may be mitigated.

It is clear from the literature that a strategy for survival should be multi-pronged, it has to take place at the farm level in the form of agronomic and micro-economic farm practices; at the level of internal resources of the business which extends to capital raising ability and leveraging of technology; and at the level of industry in terms of support networks and the dynamic nature of the market. It is a mental and psychological test of the will and resolve of the farmer as an entrepreneur and manager of his/her own business. It therefore requires that BSSSGs are fully aware of, and adaptive to, the environment that they operate in.

CHAPTER 3-RESEARCH METHODOLOGY

This chapter focuses on the methodology used, the rationale behind the choice of the methodology within its ontological, epistemological and axiological assumptions, the sampling technique chosen, types of questions employed in the study, the data collection method, informed consent and ethical clearance, and data analysis and interpretation. The chapter concludes with a brief section on the reliability and validity of the study. All of these aspects of the research are discussed with reference to the set of assumptions regarding the worldviews each of the assumptions espouses.

The chapter is structured such that the discussion of the methodological aspects is ordered as follows: Research Objectives, Research Design, Research Instrument Design, Sample, Data Collection Method, Ethical Considerations, Data Analysis, Reliability and Validity, and the conclusion of the chapter.

3.1 RESEARCH AIMS AND OBJECTIVES

The main aim of the research was to explore factors that account for the survivability of BSSSGs in Ugu District Municipality in the face of the serious challenges that beset the district's sugarcane industry. The study was broken down into the following objectives:

- Understanding BSSSGs' perceptions of the overall sugarcane industry.
- Understanding BSSSGs' perceptions of the farm-specific/micro-economic attributes that make them susceptible to failure.
- Determining whether BSSSGs employ deliberate strategies to counter the causes and/or the effects of the decline in the industry.
- Examining BSSSGs' perception of own farm size and land tenure in terms of whether these enhance or inhibit survivability.

It is anticipated that knowledge gained through this study will uncover insights into the state of survivability or otherwise of BSSSGs.

3.2 RESEARCH DESIGN

Several authors (Lee, 1999; Chen, Shek and Bu, 2011; Mustafa, 2011; Petty, Thompson and Stew; 2012; Ponterotto, Mathew and Raughley, 2013) have identified three different kinds of realities as espoused in three different types of assumptions that distinguish the two design types. The authors refer to ontological assumptions which relate to the nature of reality (i.e. single (objective) versus multiple (subjective) views of the world). This categorisation of world reality is consistent with the dichotomy between the non-positivism versus the positivism or post-positivism domains (Lee, 1999; Chen et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). Within the non-positivism domain is constructivism or interpretivism, as well as advocacy paradigms (Lee, 1999, Ponterro et al., 2013).

The second categorisation relates to epistemological assumption (Lee, 1999; Chen, et al 2011; Mustafa, 2011; Petty, et al. 2012; Ponterotto, et al, 2013). This refers to the role the researcher plays in the research process (Lee, 1999; Chen, et al. 2011; Mustapha, 2011; Petty, et al. 2012; Ponterotto, et al, 2013), the third reality relates to axiological assumptions (Lee, 1999; Chen, et al 2011; Petty, et al 2012; Ponterotto, et al. 2013; Mustafa, 2013). These assumptions view the role of the researcher in terms of a value system and how this influences the study in question (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013). The following section discusses the Research Instrument Design.

3.3 RESEARCH INSTRUMENT DESIGN

Ontological, epistemological and axiological assumptions further influence the choice of research instrument design (Lee, 1999; Creswell, 2009; Chen, et al. 2011; Mustapha, 2011; Petty, et al. 2012; Ponterotto, et al. 2013). This stems from the fact alluded to in the preceding paragraph, whereby assumptions related to the world view perspective, the role of the researcher in data collection, and the values of the research are of importance to the respective paradigms. Authors further distinguish between two types of research designs, namely quantitative and qualitative designs, which are in themselves aligned to each ontological, epistemological and axiological

assumption (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013).

Given their positivist orientation, quantitative designs employ a methodology that is strictly value-free and completely free from the bias of the researcher's pre-existing values and opinions (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013). In the case of quantitative design, the ontology aligns with the positivist and post-positivist paradigms and is consistent with a single objective world view (Lee, 1999; Chen et al., 2011; Pety, et al., 2012; Ponterotto et al., 2013). Likewise, the epistemology assumes a value-free approach by the research, where the aim is to uncover the absolute and objective truth about a phenomenon (Lee, 1999; Chen et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). Meanwhile axiological assumptions applicable to quantitative methods assume the value-free role of the researcher, whereby cold scientific facts relay the message about the phenomenon being studied (Lee, 1999; Chen, Shek and Bu, 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013).

By contrast, qualitative designs espouse an ontological assumption that is based on the multiplicity of equally valid world viewpoints depending on the subjective viewpoint of the holder (Lee, 1999; Chen, et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). In addition, qualitative design is predicated on an epistemological assumption, whereby it deems that the researcher is an instrument of the research and consequently in terms of axiological assumption empowers the researcher to use his/her own value systems in the research process (Lee, 1999; Chen, et al., 2011; Mustafa, 2011; Petty et al., 2012; Thompson and Stew, 2012; Ponterotto et al., 2013). A third design is a mixed methodology, which is essentially a hybrid of qualitative and quantitative designs (Creswell, 2009; Ponterotto et al., 2013). Based on assertions by several authors (Creswell, 2009; Tuli, 2010; Leung and Shek; 2011; Ponterotto et al., 2013; Leedy & Ormrod; 2014), table 3.1 illustrates some of the ways in which qualitative, quantitative and mixed designs differ further.

	<u>Quantitative Design</u>	<u>Qualitative Design</u>	<u>Mixed Method</u>
Applicability and transferability of research results	<ul style="list-style-type: none"> Results are generalisable to other situations because of inferential statistics. 	<ul style="list-style-type: none"> Results setting specific and therefore not generalisable outside the study. 	<ul style="list-style-type: none"> Mixed methods utilise both qualitative and quantitative design attributes and therefore depending on the decision of the researcher external validity can be attained.
Strategy of enquiry	<ul style="list-style-type: none"> Hypothesis testing and deductive logic is used to underpin the study resulting in theory verification. Reductionism underpinned. 	<ul style="list-style-type: none"> Hypothesis testing anomalous to this type of design and inductive logic used. Study may result in theory generation as opposed to testing. Complexity underpinned. 	<ul style="list-style-type: none"> Mixed methods depend on the choice of the researcher who takes advantage of both deductive and inductive logic within the same study. Pragmatic and therefore careful embrace

			reductionist tools whilst complexity underpinned.
Nature of phenomenon study	<ul style="list-style-type: none"> Enquiry strategy more suitable for explaining relations between variables based on a priori assumptions about these variables. 	<ul style="list-style-type: none"> Strategy of enquiry more suitable for complex problems where little is known regarding the phenomenon. 	<ul style="list-style-type: none"> Depending on the decision of the researcher, the inquiry strategy may incorporate both correlational studies based on a priori assumptions about a phenomenon and studying a phenomenon in depth to understand all its facets unfettered.
Numerical and scientific orientation	<ul style="list-style-type: none"> Enquiry strategy is typically more numerical-oriented with data reported 	<ul style="list-style-type: none"> More qualitative information is extracted through this inquiry where the overriding purpose is depth 	<ul style="list-style-type: none"> Based on the decision of the researcher, the design blends both numerical

	in categories based on the cause-effect analysis to the phenomena under study.	with no constraints being placed on the research.	orientation and rich text oriented reporting on findings.
Researcher's interface with the study	<ul style="list-style-type: none"> • Inquiry strategy does not require close contact with the phenomenon being researched and may take place in a contrived setting. 	<ul style="list-style-type: none"> • Inquiry strategy requires close contact with the research setting and may not take place in a contrived research setting. The research process is iterative. 	<ul style="list-style-type: none"> • Based on the researcher's decision, closer examination of the phenomena being studied can be adopted and triangulation of findings for verification using more than one enquiry strategy can be applied.

Table 3.1: Differences between qualitative, quantitative designs and Mixed Methods

Source: compiled by the researcher using Creswell (2002), Bahari (2010), Ponterotto (2010), Tuli (2010), Mays and Pope (2011) and Petty, et al., (2012)

Creswell (2009) conjectured that based on their deterministic nature, quantitative designs are reductionist-oriented. On the other hand, based on their espousal of multiple viewpoints, qualitative designs are akin to complexity theory (Creswell, 2009).

3.3.1 Case Study

Ghauri and Grøhhaug (2002) identified three qualitative design typologies, namely Historical Reviews, Focus Groups and Case Studies. Other authors, however, extended these typologies to include any or all of Ethnography, Grounded Theory, Phenomenological Studies, Content Analysis and Narrative Research (Lee, 1999, Leedy & Ormrod, 2005; Creswell, 2009; Leedy and Ormrod, 2014).

In line with the interpretivist paradigm, a case study was chosen for this inquiry. In choosing this enquiry strategy, due consideration was given to the fact that the intention of the researcher was to assess the industry based on its participants' subjective perspectives; and that as far as the researcher was concerned a study of this nature had not been conducted before on BSSSGs to the depth that the researcher sought to undertake. In addition to this, the researcher was cognisant of the fact that this was the first study of its kind that sought to ascertain the survivability of BSSSGs and therefore it was venturing into uncharted terrain. To this end it is noteworthy that several authors (Ghauri and Grøhhaug, 2002; Leedy & Ormrod, 2005; Creswell, 2009; Leedy and Ormrod, 2014) posited that case studies are more suitable in instances where the phenomenon under study is poorly understood.

In describing the research design enquiry, Ghauri and Grøhhaug (2002) posited that in a case where the researcher's questions concern "how many" or "how much" as an inquiry departure point, surveys are among the better tools to choose from. By contrast, if the researcher is concerned with "how" and "why", a case study method is a research strategy that is appropriate.

As can be seen from the research objectives, the researcher's intention was to elicit information on whether BSSSGs are surviving or not, and if so, to what extent and how, including understanding their rationale for selecting certain survival strategies. All of these and other relevant factors associated with the interpretivism paradigm as alluded to in table 3.1 influenced the researcher's decision in favour of the chosen inquiry strategy.

3.4 THE SAMPLE

The dichotomy between qualitative and quantitative designs, which by themselves derive from ontological, epistemological and axiological assumptions as alluded to in the preceding section, further dictate the sampling procedures and data collection tools to be followed in any study (Lee, 1999; Creswell, 2009; Tuli, 2010; Leung and Shek, 2011; Mustafa; 2011; Leedy and Ormrod, 2014). The reason for this has to be found in the fact non-positivist philosophy embraces multiple worldviews meanwhile a positivist and post-positivist paradigm (i.e. the quantitative research paradigm) searches for an absolute and single objective truth, while a non-positivist paradigm embraces subjective multiple view points as alluded to in paragraph 3.1. It therefore follows that based on its interpretivist/constructivist characteristics, non-positivist research will rely on research instruments that are suited for this purpose. Likewise, quantitative designs require research tools that are amenable to an objective assessment of reality (Ponterotto, 2010; Tuli, 2010; Chen et al., 2011).

Figure 3.2 illustrates the dichotomy between positivist and non-positivist research paradigms, and furthermore shows how each one of the paradigms in turn influence research design. Figure 3.2 makes it clear that further choices relating to a methodology are constrained by the dichotomy. Consequently, the sample is chosen based on this principle, and as such in the case of this study it can only chose from the left-hand side of the diagram which relates to the interpretivist/constructivist paradigm.

Further to this, a two-stage sampling procedure was used whereby the first two respondents from within streams A and B were chosen by convenience sampling until a total of 15 respondents, made up of eight and seven respondents from

streams A and B respectively. In this regard, two areas where sugarcane is grown within the district, namely Minini-Mfume Farmers Association (which has a membership located mainly on the North East of Ugu District along the coast in the Vulamehlo municipality) and Qhubekani Farmers Association (whose membership is located inland along the P68 Corridor Road and whose members come from both the Umzumbe and Hibiscus Coast Municipalities) were designated as streams B and A respectively to account for geographic variations. A manageable sample size of 15 respondents was selected in consideration of the fact that qualitative designs typically delve deeper into a phenomenon under study, which requires relatively more time (Bahari, 2010; Ponterotto, 2010; Leung and Shek, 2011). In making the decision on size, the researcher was cognisant that this sample would be manageable and thus ensure completion of the study within the time-frame limitations.

Another aspect of this sample is that a non-probabilistic sample was chosen in line with this type of design which does not require statistical inference and external validity (Creswell, 2009; McGregor and Murnane (2010); Tuli, 2010; Leung and Shek; 2011; Ponterotto, et al. 2013; Leedy & Ormrod; 2014).

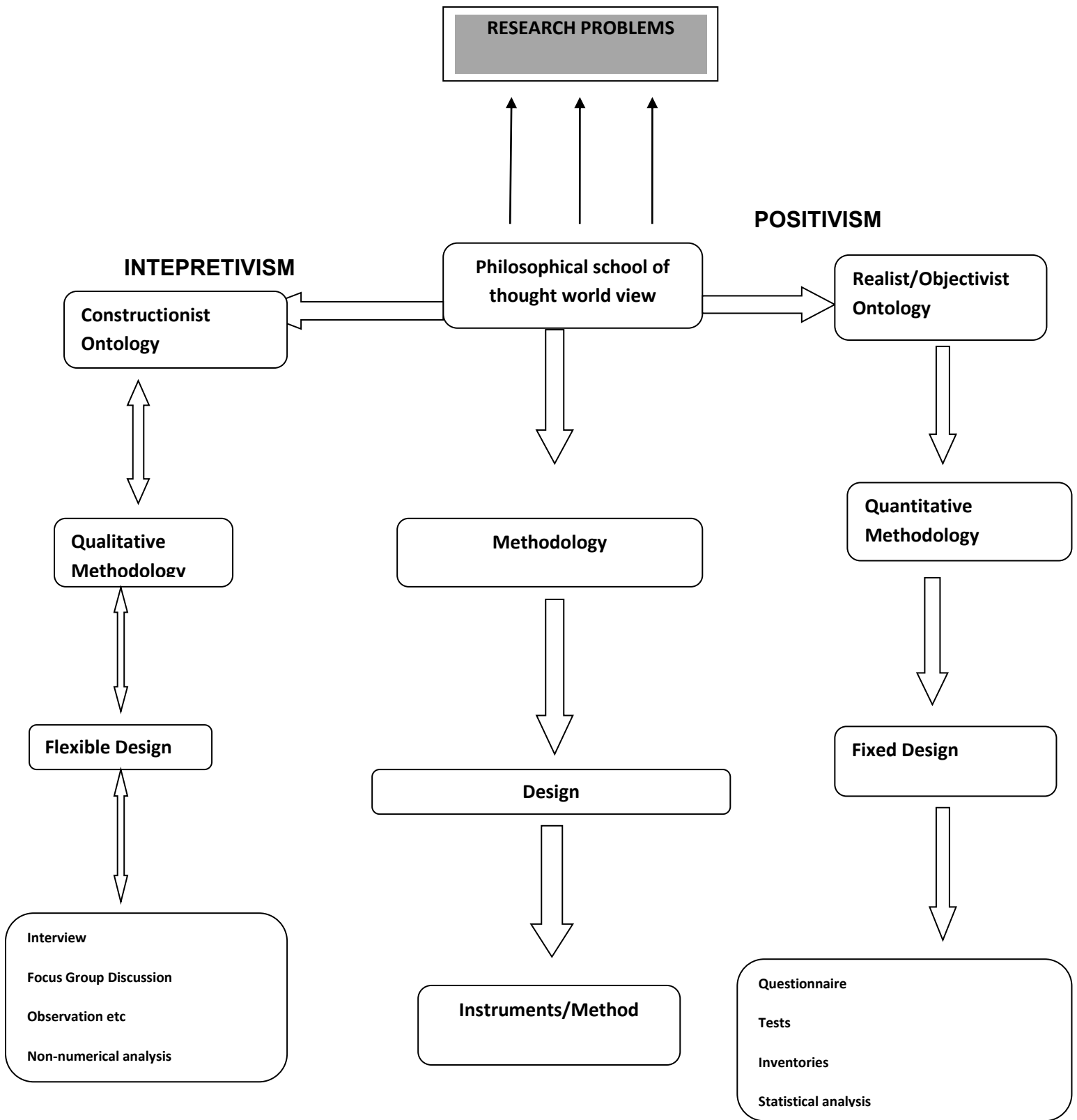


Figure 3.2: Dichotomy between positivist and non-positivist research philosophies

Source: Tuli (2010, p. 124)

3.5 DATA COLLECTION METHOD

Data collection instruments, like all other aspects of research, flow from ontological, epistemological and axiological approaches, which is clearly indicated in figure 3.2 by Tuli (2010) and echoed in Creswell (2009), Bahari (2010), Ponterotto (2010) and others. Lee (1999) identified three types of interviews, namely completely structured, completely unstructured and semi-structured interviews. Given that this inquiry was a case study which falls within a non-positivist paradigm and therefore was interpretivist in character, it was crucial that facets of the phenomenon were studied in greater detail to obtain the necessary insights into the perspectives of the target group. This paradigm also afforded the researcher greater intimacy with the process, as opposed to dualism between the researcher and the process which is typical of a positivist approach (Ponterotto et al., 2013; Leedy and Ormrod, 2014).

Unstructured interviews typically anchor on an overarching topic which is broken down into pre-planned questions. In this type of interview the primary role of the researcher is to facilitate a conversation, and where necessary, probe the respondent for a deeper understanding of meanings assigned to the phenomenon whilst simultaneously recording emerging themes and issues (Lee, 1999).

Semi-structured interviews are in essence a hybrid between unstructured and completely structured interview protocols. Similar to unstructured interviews they typically have an overarching topic, general themes, target issues and specific sequences (Lee, 1999). Over and above this, semi-structured interviews, similar to unstructured interview protocols, accord the researcher a degree of latitude to pursue emerging topics insofar as they relate to the phenomenon under study.

Ghuri and Grøhhaug (2002) distinguished between unstructured and semi-structured interviews in that in the former case respondents enjoy full liberty to discuss their perspectives on the matter at hand, with the researcher's role being only to lead and record the respondents for the information to be analysed at a later stage in order to understand the rationale for the responses. Semi-structured

interviews differ however, in that questions, their sequence and the interviewees are typically planned beforehand (Ghuri and Grøhhaug, 2002).

Lee (1999) referred to conversational interviews and posited that in qualitative research these are typically held in a semi-structured format. He added that on a continuum, a semi-structured interview tends more towards an unstructured than a structured format (Lee, 1999).

Consequently, the Interview Protocol (IP) (refer to Appendix A) chosen for this study was an open-ended, semi-structured one that intended to extract as much data as possible from the research participants. Consistent with the preceding, flexibility in the sense that this protocol is not constrained both in terms of adapting procedure during the data collection process and the fact that the nature of questions asked are not restricted only to predetermined ones supports the objective of the study.

3.6 ETHICAL CLEARANCE CONSIDERATIONS

Prior to the research being undertaken, an Ethical Clearance Certificate (refer Appendix C) was issued by the university which *inter alia* stressed the importance of informed consent, anonymity, confidentiality, voluntary participation and the right of participants to withdraw from the research should they feel like doing so at any stage of the research without prejudice.

Before the commencement of the interviews, a general protocol was followed whereby the researcher introduced himself and the study, and thereafter read/explained the Informed Consent Form (refer Appendix B) and gave all the particulars of the relevant person at the university to direct questions to should the respondents feel the need. Thereafter, the respondent was requested to sign his/her consent form, after which the interviews commenced. Included in this preliminary protocol, the researcher always sought respondents' permission to record the interviews.

Generally the interviews lasted between 45 minutes and an hour, depending on the level of depth that emanated from the discussions and the distractions that would occur to interrupt the interviews. One major problem that tended to sidetrack the

interviews at times was that the research coincided with disputes involving Illovo, the KZN Provincial Government and the farmers associations around the implementation of the recent small grower programme. There was so much dissatisfaction in some instances that there were at times attempts made to hijack the research by one or two respondents. On the other hand, in some cases (two in particular), interviews took longer because of the passion and enthusiasm that a particular respondent had for farming.

3.7 DATA ANALYSIS

From the assertions of various authors it is evident that the choice of research design affects the data analysis and data interpretation (Ghuri and Grøhhaug 2002; Bansal and Corley, 2012; Leedy and Ormrod, 2014). This is not surprising considering that each type of design not only elicits different types of information, but in addition each has a different ultimate goal. With quantitative designs, the nature of information can be easily manipulated given that answers from respondents are typically limited strictly according to the predesigned questionnaire. Confirming the point about qualitative research placing greater demands in terms of data analysis compared to quantitative research, Bansal and Corley (2012) remarked that data emanating from such designs cannot be easily synthesised or reduced into tables, which requires qualitative researchers to approach the task creatively.

Supporting this, Leedy and Ormrod (2005) asserted that qualitative designs are fundamentally interpretive, i.e. they typically elicit limitless response possibilities and with this comes greater tedium in analysing the data. The main consideration is that the questions associated with these designs are open-ended, semi to unstructured, and are designed purposely to stimulate a deep conversation with interviewees.

Drawing attention to some of the critical considerations of qualitative designs, Leedy and Ormrod (2014) posited that with the large amount of data typically associated with such designs it is incumbent upon the researcher to delve through the information, sort it and through inductive reasoning identify abstract underlying themes. Leedy and Ormrod (2014) further remarked that while in the case of quantitative research data interpretation and analysis are generally separate steps

followed by statistical manipulations, qualitative designs interweave the process of interpretation and analysis. Interpretation is particularly at the heart of a qualitative research design (Leedy and Ormrod, 2005), whereby the design type imposes no bounds to such an extent that subjective interpretation is permissible.

Ghuri and Grøhhaug (2002), like Leedy and Ormrod (2005), echoed the point about data analysis being interpretive. Meanwhile, Miles and Huberman (1994), as cited by Ghauri and Grøhhaug (2002), identified the following three stages as being integral to data analysis in qualitative research - data reduction, data display and conclusion drawing/verification.

Making use of this approach, the researcher first translated the data from the interviews and transcripts of the field audio recordings into narrative text. These were further collated and arranged so that similar type responses were aggregated while outlier responses were sorted. The next stage was to analyse data in search of underlying themes and patterns, which were interpreted for meanings using research objectives as a prism.

In line with the data display phase as proposed by Miles and Huber (1994), information was then organised in a manner that enabled conclusions to be drawn. A separate response analysis spreadsheet was created for this purpose, which allowed for further review and coding of the responses to discern underlying themes and the extent to which particular feelings were expressed by the respondents. The next stage was that of drawing conclusions about what the respondents were saying that was pertinent to their survivability, which was the main goal of the research.

Furthermore, given that this is a qualitative study with analysis challenges that are unique to this design, careful attention was paid to ensure that the process of transcribing and analysing data was free from bias.

Following Bansal et al.'s (2012) guidance, the researcher as much as possible abided by the following guidelines:

- Data must be shown, not merely described, so that the reader can connect the raw data with the analysed data, and the analysed data with the emergent theorising.

- The data must transport the reader into the context to provide a personal experience of the focal phenomenon and support for the emergent theory (Bansal et al., 2012, p. 511).

Taking cues from these authors, the researcher took every precaution to be rigorous in his data analysis and analysed the data repeatedly to eliminate any biases and distortion. In line with Kitchin and Tate (1999), the basic approach was to broadly describe, classify and discern data interconnections in an iterative process.

3.8 RELIABILITY AND VALIDITY OF RESEARCH FINDINGS

The fact that qualitative research designs tend more towards subjective opinions and are not primarily focused on measurable data may cause an erroneous belief that validity and reliability are discarded in this type of design (Morse, Barret, Mayan, Olson and Spiers, 2002; Merriam, 1995). However, despite the lack of consensus in this regard, there is enough support among scholarly opinion, notably Lee (1999) and Ghauri and Grøhhaug (2002) that these concepts apply equally to this type of methodology. Meanwhile, Mays and Pope (1995) posited that one of the ways in which qualitative and quantitative designs fundamentally differ from each other is in their ability to ensure validity and reliability of their findings. In defence of the presumed inferiority of qualitative research in this regard, the authors noted that these designs differ in subjectivity/objectivity only in degree. While they concede that quantitative designs are more akin with scientific procedures and statistical inferences, they still point out that both designs are equally susceptible to failure in this regard, as they both depend to some degree on the judgement and skill of the researcher. According to these authors all research is literal and selective - there is no way that the researcher can in any sense capture the literal truth of events.

On the other hand, Merriam (1995, p. 51) argued that questions referring to a lack of “generalizability of findings emanating from small”, “non random samples”, “...whether a different researcher would arrive at the same or different conclusions” and “the question relating to whether a researcher, deemed a research instrument in the research process, to what extent can they be deemed a valid and reliable instrument”, reflect cynicism as they represent an attempt to impose positivist

thinking in a non-positivistic paradigm, which is totally unfair. Merriam argued instead that validity and reliability must be addressed within the paradigm the study falls into.

Similarly, Morse et al. (2002) identified the following key verification strategies as they apply to qualitative data, which they deemed critical for improving research validity and reliability, namely methodological coherence, sample appropriateness concurrent collection and analysis of data, thinking theoretical and theory development. With regard to the former three strategies, these were followed during certain stages of the research as attested to in the relevant sections. With regard to theory development, this inquiry was approached with an open mind, with inductive logic being adopted rather than a preconceived framework being imposed on the process.

Given the time and cost constraints involved, the method chosen by the researcher was the one that allowed for communicating the results back to the respondents for confirmation. With regard to external validity, the results of this study do not necessarily lend themselves to generalisability. The main reason for this is that the study is qualitative and the manner in which the sample was drawn (refer to the relevant section above) is not amenable to this process.

3.9 SUMMARY

This chapter dealt with the Research Objectives, Research Design, Research Instrument Design, Sampling Procedure, Data Collection Method, Ethical Considerations, Data Analysis and Reliability and Validity. Using extant literature it became evident that ontological, epistemological and axiological assumptions leading to whether the study follows an interpretivist/constructivist approach versus a positivist research paradigm negates subsequent decision about the nature of sampling, data interpretation, proximity and depth of the research, data collection method and even reliability and external validity.

This chapter noted that a qualitative design was chosen for this study, as were non-probabilistic sampling, an interpretivist approach, an unstructured IP protocol as well as a data analysis approach. Reliability and validity were also discussed, along with the dichotomy imposed by ontological, epistemological and axiological assumptions.

To this end the chapter covered the steps that were employed during the research process to mitigate any bias.

CHAPTER 4-RESEARCH RESULTS

This chapter deals with the heart of the study, which is reporting on the research findings. To restate, the study sought to determine the survivability of BSSSGs in an industry that is facing an onslaught from forces related to global competitiveness as well as domestic socio-cultural and legal factors. The main goal of the study was broken down further into four objectives, namely examining BSSSGs' perceptions of the overall sugarcane industry, understanding BSSSGs' perceptions of the farm-specific/micro-economic attributes that make them susceptible to failure, ascertaining whether BSSSGs employ deliberate mitigation strategies to counter the causes/effects of the industry decline, and whether BSSSGs perceive farm size and land tenure as having any effect on survivability.

The chapter is structured as follows: Section 4.1 reports briefly on demographic and other measurable data to illustrate the profile of the BSSSGs. Although this study is qualitative, demographic information such as the age profile, generation of farming, education and farming experience were used as proxies and therefore a basis for speculation on the typical industry participants and by extension its future. This does not in any way detract from the research design being qualitative in nature; rather the researcher deems that this information makes the study richer. Table 4.1 tabulates the demographic profile of the BSSSG respondents. In keeping with the principle of anonymity, the respondents were identified as A1 or B1 etc. in ascending number sequence, with either A or B referring to the stream from which the respondent was drawn, and the number next to the letter referring to the chronological number sequence in which the interviews were held. As indicated in chapter 3, respondents belonging to Qhubekani Farmers Association were designated Stream A and those that belonged to Mnini-Mfume Association were Stream B.

4.1 BSSSGs' DEMOGRAPHIC PROFILE ANALYSIS

Table 4.1 tabulates all the demographic information pertaining to the respondents. This is followed by additional sections that discuss other demographic information further where the researcher deemed it necessary.

Respondent No	Age	Hectares	Profitable	Gender	Farming experience in years	Highest standard in education	Estimated annual turnover	1st, 2nd or other generation farmer	Other business interests unrelated to cane farming	Number of people employed
A1	55	15 ha	No	Male	2 years	Std 10	R350,000	2 nd Generation	Yes	300 in the season Aug-Oct
A2	45	5 ha	Yes	Female	4 years	Std 9	R600,000	1 st Generation	Yes	Farming done through contractor scheme
A3	64	2 ha	Yes	Male	8 years	Std 2	R672,000	2 nd Generation	No	Farming done through contractor scheme

A4	80	4 ha	Yes	Male	22 years	Std 10+	R26,000	1 st Generation	No	Farming done through contractor scheme
A5	60	20 ha	Yes	Male	32 years	Std 8	R50,000	2 nd Generation	No	Farming done through contractor scheme
A6	62	3 ha	Yes	Male	1 year	Std 10	Not available	1 st Generation	Employed Fulltime elsewhere	Farming done through contractor scheme
A7	57	25 ha	Yes	Male	10 years	Std 10+	R40,000	2 nd Generation	Taxi and Fulltime employmen t elsewhere	Farming done through contractor

										scheme
A8	64	4 ha	Yes	Male	1 year	Std 2	Figures not available	1 st Generation	Taxi	As above
B1	53	35 ha	Yes	Male	31 years	Std 8	R300,000	1 st Generation	Taxi	13 employees
B2	64	4 ha	Yes	Male	24 years	Never attended School	R100,000	1 st Generation	Spaza Shop & Shebeen	None (because of season)
B3	71	12 ha	No	Male	20 years	Std 6	Don't know	1 st Generation	None	Farming done through contractor scheme
B4	44	5 ha	Yes	Male	12 years	Std 10	Don't know	2 nd Generation	Fulltime employee elsewhere	As above

B5	71	3 ha	Yes	Male	11 years	Std 6	R8,000	1 st Generation	None	None at present due to season
B6	54	3 ha	Yes	Male	17 years	Std 8	R18,300	1 st Generation	Gum Tree Felling, Piggery Farming	None at present due to season
B7	66	5 ha	Yes	Male	17 years	Std 10	R36,000	2 nd Generation	Vegetable farming	4 for veggies (7 to 8 for cane)

Table 4.1: Demographics of Respondents

Source: Table compiled by the researcher using data acquired during the study

4.1.1 Gender Distribution

Figure 4.1 shows that BSSSGs are predominantly male, with this gender group having a significant 93% representation. This could be as a result of the patriarch nature of the research setting. Notwithstanding the effect of the socio-cultural dynamics, proponents of transformation and gender representativity may find this situation unacceptable.

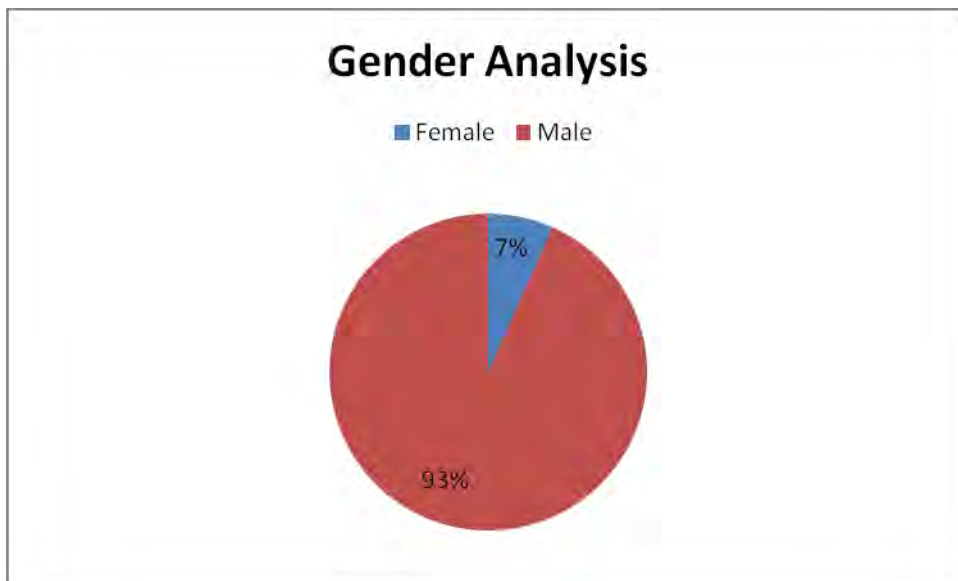


Figure 4.1: Gender distribution of respondents.

4.1.2 Age Analysis of the Respondents

Figure 4.2 depicts the age distribution of the respondents. This figure shows a preponderance of the age bracket 60-69 years among respondents, which on its own accounts for 40% of the group. A further 13% of the respondents fall within the age bracket 70-79 years, with a further 7% belonging to the age category 80-89 years. This accounts for a total of 60% of the respondents. This age distribution raises questions regarding the present and medium term future of farming if one considers that the legal retirement age is 65. In addition, one farmer indicated during the interviews that physical exertion required by farming was very taxing on his body. Against the backdrop, where comparatively low levels of mechanisation were noted, this observation about age becomes problematic. On the other hand it may have its

own positives in the sense that these farmers are highly experienced in what they are doing.

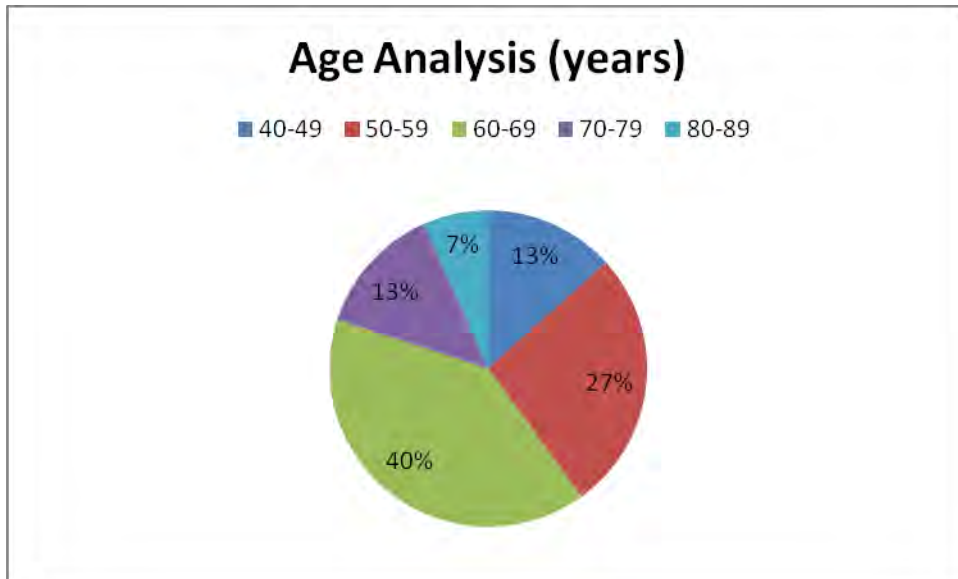


Figure 4.2: Age analysis of the respondents

4.1.3 Educational Level of Respondents

Figure 4.3 depicts the respondents' education levels. This figure shows that 67% of the respondents fell within the category of Standards 6-10. A further 13% of respondents had achieved an educational level above Standard 10, whereas the other 13% had attended schooling below standard 5. Interestingly, 7% had never attended school. The comparatively low levels of education raise questions about the adaptability of respondents, especially regarding the sophisticated decision tools and agronomic practices that seem to be demanded in contemporary farming as alluded to under the relevant section in Chapter 2 of this study. This aspect will be revisited under Chapter 5 when the results are discussed further.

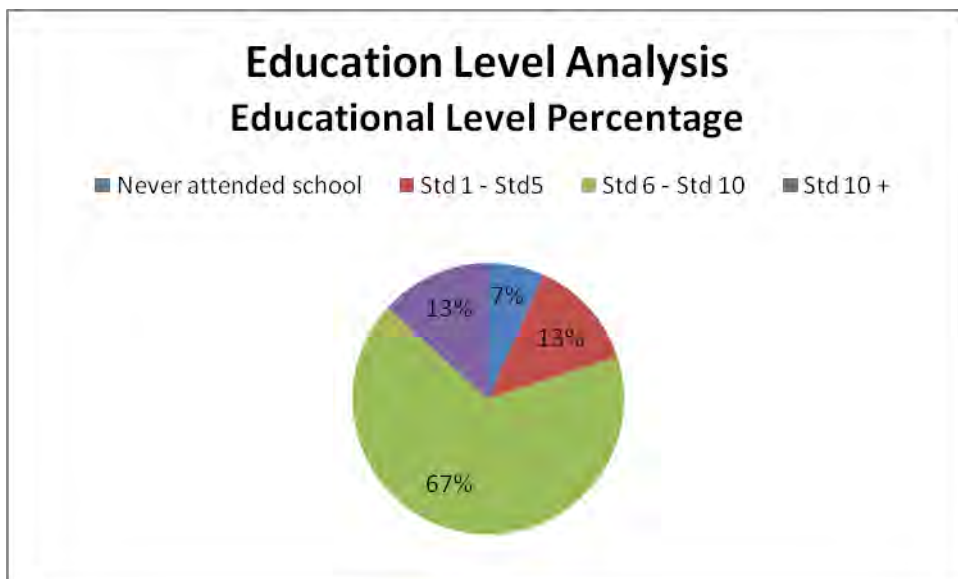


Figure 4.3: Educational level of respondents

4.1.4 Farming Generation of Respondents

Figure 4.4 depicts the respondents in terms of their farming generation, with 40% being second generation farmers. This is positive in the sense that if this trend persists, it may mean that there is a likelihood of a family member taking over the family farm from current BSSSGs in the event of retirement or death. Furthermore, the other 60% could be an indication that the industry is attractive enough to entice new farmers.

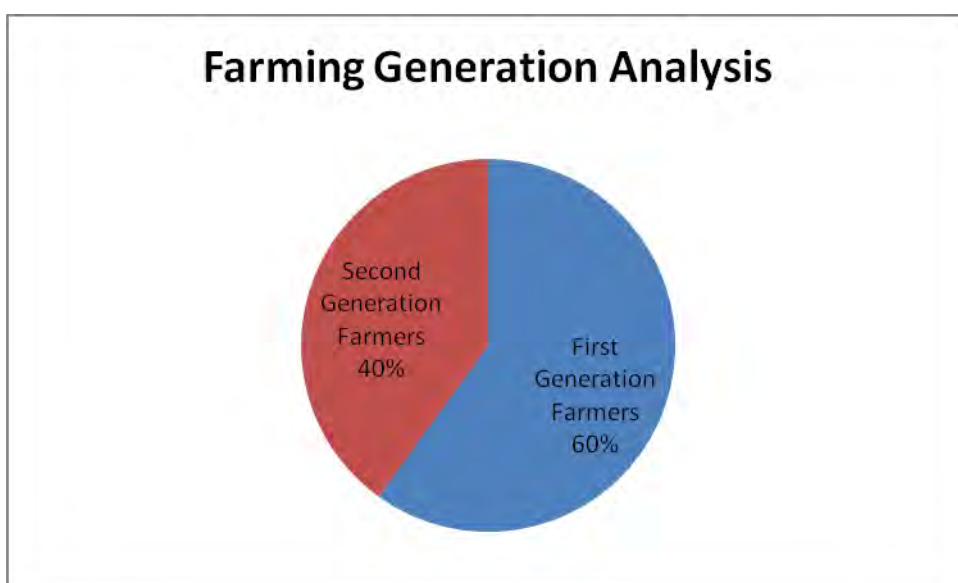


Figure 4.4: Distribution of respondents according to farming generation

4.1.5 Income Diversification Propensity of Respondents

Figure 4.5 depicts the extent of income diversification among respondents. At 67% it can be seen that there is significant income diversification among the respondents, however it needs to be pointed out that diversification could lend itself to various interpretations, e.g. it may mean that sugarcane as a business in itself cannot be relied upon solely as a means for eking out a living. In support of this conjecture, one can see from the table that turnover figures point more towards the lower side if one excludes the study's top income earners. On the other hand, one respondent indicated that his motivation to go into farming was because he saw people who were sugarcane farmers earning a decent living. In addition to this, other respondents credited sugarcane farming with being able to put their children through schooling up to tertiary level. Ultimately, one has to question whether this is a perception or reality, and whether it is based on historical or current performance. There is no doubt that historically people would have made much more money from cane farming when conditions were more favourable and returns in the industry were higher prior to the era of international competitiveness. This prompts the question, is this attraction simply a false lure?

Diversification may also be attributable to the individual farmers in terms of how resourceful they have been over the years in terms of adapting to and stemming the import tide (rather than it purely being a case of sugarcane farming). Ultimately diversification is commendable as a mitigation strategy, as was extensively discussed in the literature review as one of the survivability strategies associated with farmers as they negotiate adverse conditions. Contrary views notwithstanding, however, an overwhelming majority of respondents rated the industry as being profitable.

The last point about diversification is that it could be an intention amongst some to phase themselves out of cane farming. In two cases this was said to be a certainty and in another case the respondent was more speculative, saying that the final decision rested on comparative returns between cane and alternative crops.

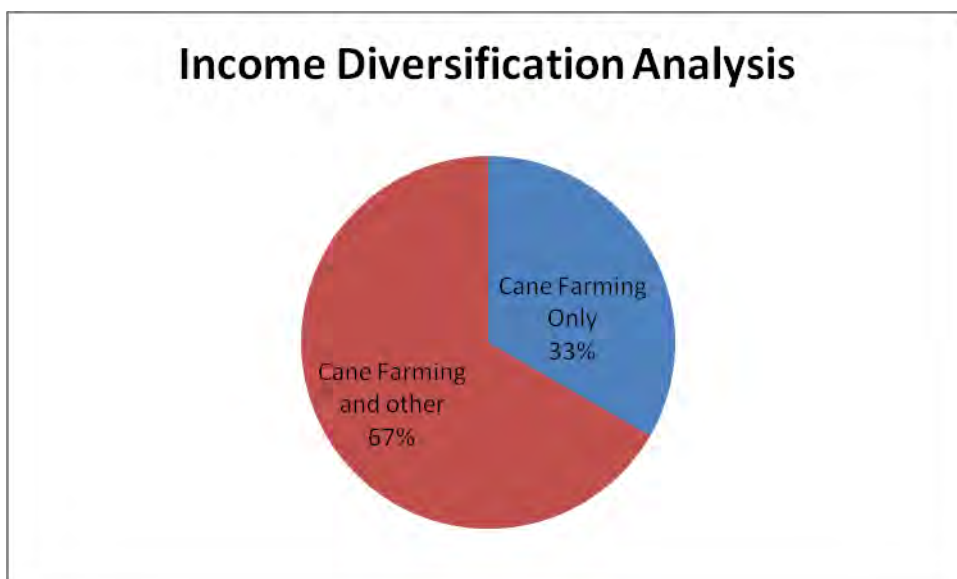


Figure 4.5: Income diversification prevalence among BSSSGs

4.1.6 Employment Creation Capacity of Respondents

Table 4.1 shows the extent of employment created per respondent at a particular time. The first observation to make about employment trends is that they are seasonal and only last during the farming and harvesting season. The second and most intriguing aspect is that in 53% of the cases, no employment was recorded. The reason for this is that the farming is done through a third party contracting under the government-sponsored scheme. This has given rise to the phenomena of “passive farming”, which will be discussed further in chapter 5. Interestingly, table 4.1 does show one stand-out case where a farmer employed 300 people during one season.

Apart from the stand-out case these figures may give rise to concerns that the expectation of creating employment through BSSSGs may prove to be a fallacy. This may have adverse implications for policy considerations and interventions intended at targeting this sector as a potential source of employment generation. “Passive farming” as a result of indiscriminate farmer support was widely blamed for contributing to the industry decline by respondents. This aspect will be revisited in Chapter 5 under the section dealing with entrepreneurial capacity.

An analysis of turnover figures as illustrated in figure 4.6 below reveals that 46% of BSSSGs earn an annual income of between R0 and R150,000. A further look at figure 4.1 reveals that if one excludes income from the four top earners from the calculations the average income per respondent falls drastically to R4,166 per month with the majority of these respondents earning R50,000 or less per annum. A further concerning aspect revealed by these figures is the number of cases where non-availability of data was recorded, calling into question the farmers' ability to manage the microeconomic aspects of their businesses. Overall, the figure depicts an income distribution that indicates that BSSSGs could in the main be struggling financially.

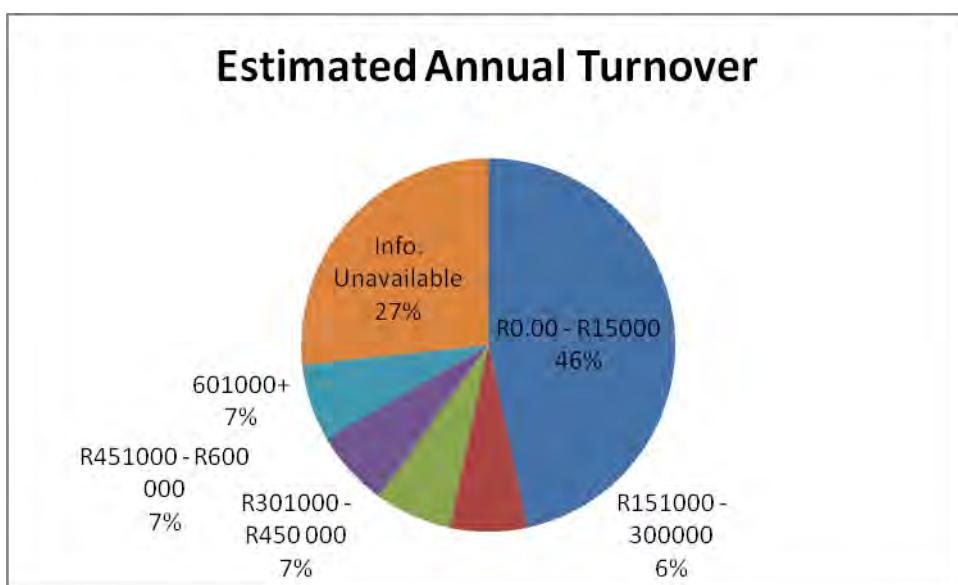


Figure 4.6: Estimated Annual Turnover for BSSSGs

4.2 RESEARCH RESULTS

This section reports on the BSSSGs' responses to questions posed in the study. Reporting on the findings will follow the same sequence as the way in which the questions were set in the Interview Protocol. This section is structured such that the following broad questions are dealt with: responses to the question that sought to elicit the BSSSGs' overall perception of the sugarcane industry; the BSSSGs' perception of micro-economic/ agronomic practices that prevent their businesses from failing; responses relating to whether BSSSGs employ deliberate mitigation strategies to counter the decline of the industry; and responses related to the

question that sought to determine whether BSSSGs perceive land tenure and farm size to be a factor in their businesses.

4.2.1 BSSSGs' Perception of the overall state of Ugu Sugarcane Industry

The first question dealing with the BSSSGs' assessment of the industry presented the researcher with mixed results, based on the fact that a total of six respondents (40% of the sample) assessed the industry as being on the decline as opposed to five (33% of the sample) who felt the industry was stabilising. This difference in the correct assessment of the industry assessment is cause for great concern. It may also mean that there is none to deal with the stagnation/decline at farm level. What was also interesting to note is that apart from the remaining two respondents who assessed the industry as being "stable", the remaining two did not know or were undecided. Overall, there is an urgent need for the BSSSGs to become more aware and appreciate the gravity of the situation the industry is facing.

4.2.2 BSSSGs' Adoption of Adaptive Strategies over the 10 Years Prior to the Research

The second question under this objective sought to elicit whether BSSSGs implemented adaptive strategies over the 10 years prior to the study. The rationale for this question was to ascertain the extent of evolution of farming practices in response to the adverse changes to discern any deliberate measures by BSSSGs to counter the industry decline. Choosing the last 10 years was crucial because the first documented decline traces the phenomenon to around 2005.

Responses to this question were again varied. A significant number of respondents (71%) in Stream B indicated that their farming had evolved from using a span of oxen to a fairly mechanised state. Interestingly, one farmer indicated that he still uses a span of oxen in undulating and muddy terrain. Other changes in the farming practices related to the adoption of scientific farming methods, forging partnerships with white commercial farmers, and in one case of venturing into alternative products such as vegetables as a direct survival strategy to counter the decline. The farmers in Stream B appeared to be more inclined to adopt adaptive strategies than those in

Stream A, where only two farmers indicated that they had formulated some kind of strategy to deal with industry problems.

The reason for this became clear during the study when the respondents indicated that in the area that fell under Stream A, sugarcane planting had completely stopped in the eight years or so prior. The majority of respondents in this stream were thus only participating in the sugarcane industry (as a distinct concept from farming) because of the incentive scheme created under the Recapitalisation Program, which itself proved to be great source of discontent among farmers. This point will be further discussed in Chapter 5 with regard to its implications for entrepreneurship and other aspects from the extant literature.

Based on the responses from the question seeking to understand mitigation strategies implemented by respondents it became apparent that the Stream A respondents were in the main caught up in the negativities of the Recapitalisation Programme and apportioned blame and accused Illovo Sugar of impropriety. These respondents also showed less of an inclination to resolve the farming problems and felt that the Recapitalisation Project should provide solutions to their farming challenges. However the Stream B area was also benefiting from the Recapitalisation Programme and respondents were also unhappy with the programme, but sugarcane farming never stopped. This aspect will be dealt with again under Chapter 5 when a phenomenon of passive farming is discussed, which arose unintentionally from the Recapitalisation Programme.

4.2.3 BSSSGs' Intention to expand or decrease Sugarcane Planting in the near future and the underlying rationale for such a decision

The next set of questions posed to respondents sought to determine their outlook on the industry by determining their appetite for expanding their investment in farming and the rationale for this decision. By asking these questions, the researcher sought to firstly gain insight into whether the situation was bad enough that BSSSGs are contemplating exiting the industry, and secondly, if this is indeed the case, do they directly attribute this in some way to the decline. The two questions posed were thus:

“Do BSSSGs intend to expand or decrease sugarcane farming in the foreseeable future?” and “What is the rationale behind this decision?”

Surprisingly, an overwhelming number of BSSSGs (80%) indicated their plans to increase sugarcane planting, with Stream A’s response rate in this regard being 88%. Within the context of an overall industry that is ailing this observation is encouraging, and at face value shows a guaranteed participation of BSSSGs in the foreseeable future.

A further question regarding the rationale for the optimism revealed varied responses, with the key one being profit motive. Another reason that was mentioned more than once was to turn fallow land over for economic use, and in a single instance one respondent stated that he was doing this expansion to prevent his land from being taken by a local Inkosi who is notorious for taking away people’s vacant land and re-assigning it without owners’ consent.

Whilst there is no denying that there are three stand-out cases where BSSSGs had made substantial profits based on the assets that they had acquired over the years, it is noteworthy that all three of them fell into the group of BSSSGs who had made the most tangible strategic adaptation over the years, i.e. they had constantly adapted to industry adversities, and they had been in the industry long enough to understand its intricacies and were therefore adept at withstanding every challenge that came their way. Interestingly, one among these three respondents indicated that he did not intend increasing cane plantation.

Furthermore, it is well documented that in earlier periods the industry was very profitable and it is only within the last ten years that profits appear to have dwindled significantly, casting serious doubt on the claim to the contrary by new industry entrants. Furthermore, turnover figures discussed under 4.1.7 seem to suggest otherwise.

4.2.4 BSSSGs' Perception of factors that exacerbate the decline leading to farms going bankrupt

An analysis of the responses revealed that there is a strong apportionment of blame among BSSSGs for the manner in which the government and Illovo Sugar handled the program. For the government further criticism was levelled at it by respondents through its implementation of other programs such as the Reconstruction and Development Programme (RDP) and the Land Restitution Programme. For example, 27% of the sample (three-quarters of which emanated from Stream B) blamed the government and Illovo Sugar for the Recapitalisation Plan and the Contract Farming Programme, with all of the BSSSGs alleging misappropriation of funds intended for this programme.

Similarly, 27% of the respondents blamed land restitution and competition from other farming sectors, which according to the respondents were responsible for the declining share of sugarcane in land allocation. Surprisingly, these respondents limited this divestiture to the forestry sector and the government's RDP Programme, or simply cane land that they observed being turned into residential use, either through formal proclamation or informally. One such case is the Ilovu residential area, located east of Amanzimtoti and Isipingo, which one respondent noted in 1980 was large tracts of cane fields. Another example, although relatively small, is a respondent who claimed that he was forced to sell 10.9 hectares of prime cane land to give way to a soccer field. Of critical importance about this lost land is that it is not replaced. Of further interest is the fact that respondents only cited forestry as a farming alternative. This is against the trend noted in the Ugu Sugar Industry Report (2010), which states that the divestiture trend tends to favour high value crops such as macadamia nuts and tea tree essential oils. This group of respondents was equally split between the two streams.

The next group of stand-out responses to this question referred to cost competitiveness, import effects and the fact that the industry structure favours everyone from the contractor to the cane hauler, transporter and the mill, with instances where the farmer gets nothing out of the harvest being a reality. This group of respondents accounted for 20% of the interviewees. One-third of the respondents

from this group emanated from Stream B. Other notable responses to this question were a failure by BSSSGs to reinvest in business, government dependency by BSSSGs (characterised by unfulfilled expectations in this regard), a lack of farming skills amongst BSSSGs, and high transport costs.

4.2.5 BSSSGs' Implementation of Micro-Economic Measures that Mitigate the Decline

An analysis of the responses to the above question revealed a surprise in that two respondents claimed that they were not aware of the industry's decline. Upon further probing this it became a cause for concern when it appeared that one of the respondents was actively involved in and sits on various committees that deal with matters pertaining to the sugarcane industry in the district. His claim was that all the discourse that he is exposed to in these committees indicates that the industry is on an upward trend.

The responses did, however, indicate a significant adoption of improved agronomic practices. It is also interesting that Illovo Sugar was mentioned by at least one respondent as playing a pivotal role in the propagation of new seedlings and as being responsible for research into improved cane cultivars with direct benefits to BSSSGs.

One respondent claimed that he did not implement any agronomic practices because there was nothing wrong with the industry, but that the problem lies with Illovo and the government around the Recapitalisation Programme which they claimed would take care of all problems. Yet this respondent was responsible for the most employment created in one season and his turnover figures place him in the top earning income bracket. For this reason he is probably implementing improved agronomic practices, and his answers may only be a reflection of an obsession and anger about the Recapitalisation Programme.

The researcher is of the opinion that the farmers still retain the ultimate responsibility for any improvement in agronomic practices as business owners, irrespective of outside interventions such as the Recapitalisation Programme. A significant number of respondents claimed to be implementing agronomic practices and their answers in

this regard were backed with a certain degree of conviction. This group constituted 60% of the sample. A further analysis of this group shows that the majority of its respondents (63%) emanated from Stream B.

More interestingly, among this overall group, some respondents displayed positive turnover figures and a propensity for income diversification, with three of the farmers in this category having gone out and forged relationships with established White commercial farmers who they credited with the improvements they subsequently achieved. Of these three respondents, two came from Stream B.

The last notable group of responses elicited under this question revealed a “passive” farming phenomenon. These respondents are the current recipients of the Recapitalisation Programme, where farming is done on their behalf by a third party who is paid by the government via Illovo under the programme. This group constituted 40% of the sample. This group is a source of great concern given that in the main they are hardly distinguishable from landlords who offer land for commercial activity and in return receive money, without being hands-on in the actual business. One encouraging aspect of this is that one respondent appeared to be very knowledgeable about the agronomics of farming and she was actively attending training to improve her technical farming skills.

It was also interesting that Illovo, despite receiving much criticism, also received praise concerning the propagation of a new variety of seedlings, which not only are easier to plant thereby cutting production costs substantially, but also have a shorter harvest cycle. Furthermore, these respondents claimed that these varieties are resistant to numerous cane diseases.

For those farmers who reported an improvement in agronomic practices, 47% overall, (57% from Stream B and 38% from Stream B) in 38% of these cases, these did not just appear to be superficial but characterised by some level of depth and in the process discerning entrenched use of scientific methods of farming. Evidence of this can be seen in the following responses:

“Relied on expertise from commercial farmers and followed strict regime of fertilisation, matching soil type to fertilizer and soil testing” (Respondent B1).

“Applied stricter fertiliser regime for surface and underground soil, and proper and regular use of pesticides, propagation of new seedlings by Illovo Sugar” (Respondent B7).

“Obtained assistance from white commercial farmers which resulted in adopting more sophisticated agronomic practices” (Respondent B6).

“Planted new variety of seedlings and did propagation assisted by white commercial farmers” (Respondent A4).

Two conclusions can be made about this behavior - one is that a significant number of respondents (47%) are implementing sound agronomic strategies which deserves praise, with the other being that the remaining 53% are not keen to embrace agronomic practices. Of more concern is that fact that these BSSSGs have apportioned blame on the government and Illovo, and place the responsibility for correcting the industry problems on these institutions.

4.2.6 Major Changes Implemented by BSSSGs in the last 10 Years

The above question sought to ascertain the BSSSGs' responses regarding noticeable changes that they had effected in the 10 year period prior to the study, and whether these changes were deemed to have impacted on the survival of their businesses. This is based on this period being deemed to have been the most turbulent in the history of the industry. The two questions that the respondents were required to answer were, “What are the most major changes that BSSSGs have effected in the last 10 years”, “ what was the underlying rationale for these changes”, and whether the respondents consider these changes to be critical for business survival.

Interestingly, the respondents gave similar answers to those they gave for the preceding question dealing with agronomic practices and to the earlier question which sought to determine which adaptive strategies had been effected in the last 10 years. Although these questions are superficially somewhat similar, with regard to agronomic practices, the researcher sought to establish any adoption of changes insofar as they related to practices associated with the internal productivity function,

including the extent of use of technological advancements. These would range from the applications of computer technology and modelling as a business aid to the adoption of scientific methods of farming practices.

The first question about adaptive changes effected over the last 10 years related more to the evolution of farming practices in general, which may or may not relate to the difference between surviving or failing as not all changes made over time mean the difference between survival and failure. To this end, the last question related to changes that are directly related to survival, while the former question related to more general, organic and evolutionary changes. The rationale for the second question was to engage respondents in a more critical assessment of the changes effected and to perform some subtle weighting of those changes, so that even if numerous changes occurred, the BSSSGs could distinguish the one that was most important.

Despite this, the answers centred mainly around profitability. On the other hand, some respondents felt that they had implemented changes to achieve higher productivity, while others rationalised this as means to counter imports and/or the decline. Concerning Stream A respondents, the fact that no stand-out answers were forthcoming is understandable, given that sugarcane farming had completely stopped in this area for almost eight years prior to the study. Apparently these farmers were lured into cane farming by the Recapitalisation Programme, which incidentally has gained notoriety due to allegations of fund misappropriation and a now infamous contractor growing scheme.

Regarding the question which sought to determine how BSSSGs consider which changes are critical for survival, those that did make changes indicated some business improvements that were critical, especially during the decline, but interestingly did not necessarily claim that these improvements prevented their businesses from failing. This made it hard to discern if these changes were business-saving or normal evolutionary ones. Others in the same group believed that they would have gone under had they not made the changes. In support of this assertion they indicated that they had seen numerous other BSSSGs whose businesses had gone under over the years, which had spurred them on to make

these critical adjustments. Overall, these changes are not markedly different to enhanced agronomic practices as discussed earlier, therefore these will not be repeated under this section. Interestingly, even those farmers who claimed they were not aware of the decline and those that strongly felt that the mill or the government was responsible for the decline did not exhibit any different agronomic practices to the group that made adjustments.

Lastly, while sugarcane farming had completely stopped in areas under the Qhubekani Cane Farmers Association (Stream A) for at least eight years prior to the study, farmers belonging to Mnini-Mfume Farmers Association (Stream B) had persisted. One of the respondents who plays a pivotal role in mobilising cane farmers indicated that whilst the Illovo Mill was experiencing a decline overall, the association of which he is a member was the only one that was experiencing an exponential increase in tonnage. This has led to the area receiving accolades and being visited by mill representatives from Mount Edgecombe, who heaped praise on them for the significant contribution they made amid the declining feedstock supply.

A further question regarding the tangible effects of changes revealed some notable positive ones. In one instance in Mnini-Mfume, the same respondent indicated that his cane production in 1993 was less than 300 tons a year, but currently stood at 3,400 tons – a 1,133 % increase – and was still on an upward curve. What was also interesting to note was that an illiterate farmer who claimed not to have attended school noticed an increase in his harvest based on improved agronomic practices. When asked how he measured this increase (given his illiteracy), he indicated that he determined this through the increase in the number of trucks harvested without an increase in the hectares planted. This is one notable case of how a farmer who lacked any formal schooling belonged to the three top performers. Despite this reported increase in sugarcane volumes, a significant number of respondents reported an improvement in cane quality and profitability as well.

4.2.7 Effects of Farm Size on Survivability

The next question dealt with effects of farm size on survivability. A comprehensive discussion of the inverse relationship between farm size and profitability in the literature review showed an overwhelming prevalence of the phenomenon. Accordingly the expectation was that the responses would confirm this. Furthermore, the researcher sought to ascertain whether farm size was credited by the respondents in any way for either enhancing or inhibiting success.

An analysis of the responses in this regard showed that 40% of respondents were neutral with respect to farm size as a factor in survivability. A further 47% of respondents felt advantaged by their small size farm in one way or another. The remaining 13% respondents felt disadvantaged by their small farm size. The latter group of respondents generally associated small farm size with lower profitability, while others in the same group indicated that it posed constraints in terms of expanding, which there was a definite appetite for among BSSSGs as evident in the question that dealt with industry outlook. Superficially, this might lend itself to the interpretation of the non-existence of an Inverse Relationship. This aspect of the study will be dealt with again in Chapter 5.

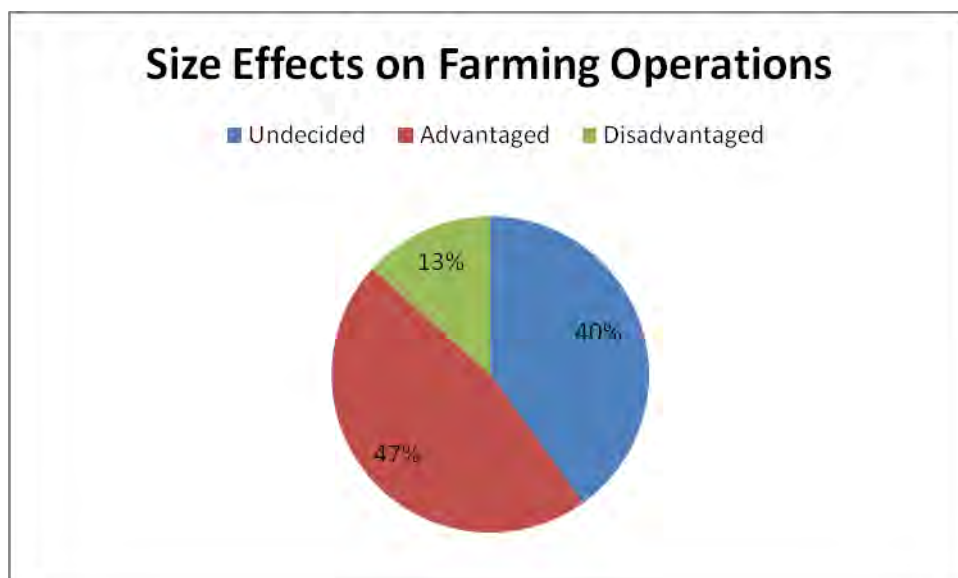


Figure 4.7: Size effects on Farming Operations

4.2.8 Effects of Land Tenure on Survivability

On the question of land tenure, 53% of the total sample had no opinion on the land tenure effects on survivability. Interestingly, all respondents were farming under the ITB land with the exception of two who had a title deed. Five (33%) respondents indicated that they were impeded by the land tenure. The remaining two indicated the land tenure system was beneficial - among the benefits they stated were the close proximity of the farms to their residences and the flexibility this provided, which in turn improved profitability. Further to this they stated that not having to pay rent was a positive.

One respondent whose farm has a title deed complained that he was excluded from benefiting from the government assistance directed at BSSSGs. This concern is valid as the only thing that differentiates this respondent from the other BSSSGs is his form of title ownership, otherwise he faces the same challenges as his counterparts. What makes the concern more valid is that the other farmer whose farm is on title deed, which is also within Stream A some five kilometres away, does receive assistance from the government.

Among the group that felt disadvantaged by the ITB land tenure system, the negative responses varied from an inability to expand since land is allocated for residential land use only, to jealousy from fellow communal land residents leading to them setting cane fields on fire, livestock invasion, and insecurity of tenure as a particular Inkosi has a tendency to take away portions of land without existing owners' consent.

In these instances the result is a disincentive to invest in such land tenure, however when looking at the responses, at first glance it may seem surprising that 54% of respondents were neutral with respect to land tenure. Viewed against the extant literature, credit access is among the main reasons why land tenure is a factor in production. Yet close examination of the responses show that external credit access was for some reason not an issue that was raised. This gave the impression that BSSSGs were not active solicitors of external credit. Among the possible reasons for this are that the majority of BSSSGs are engaged in "passive" farming, or that those who had been in the industry for years had found more creative and non-

conventional substitutes for external credit access as a way of adaptability, given the fact that the conventional doors of access to finance are closed for them.

Interestingly, even the two respondents who possessed title deeds did not seem to appreciate the fact that their land title made it possible to access finance. Nor did they indicate that they felt more advantaged generally from the security of tenure that comes with a freehold title.

To this end, respondents appeared to generally self-fund their assets, with only a few cases reporting that external financing was involved. For those that did indicate they had difficulties in acquiring machinery at one point or another, white commercial farmers had been instrumental in helping them access finance without necessarily going the conventional route.

Also noteworthy is that where respondents felt impeded by the land tenure system, it was only because of the previously mentioned constraints. Some respondents who belonged to the best performing category as per annual turnover indicated that they had outgrown communal land farming, which they considered to be a “training ground” to graduate to more large scale farming. These farmers indicated that while they felt ready to take over farms under the land restitution programme, they felt the processes was not fair and worked through political connectedness rather than merit.

On the last question dealing with the generation the farmer belonged to, the research revealed a split of 53% to 47% in favour of first generation farmers. At face value this shows a correct balance between new entrants and succession in the industry, however this could pose a conundrum with adverse consequences for the industry as the prevalence of passive farming seems to occur exclusively among the new industry entrants. In fact, some of the new entrants indicated that they would not be in farming had it not been for the assistance promised under the Recapitalisation Programme. The next chapter of the dissertation deals comprehensively with the phenomenon of passive farming, how it came about, what impact it has on the industry, and its implications for the overall sugar industry.

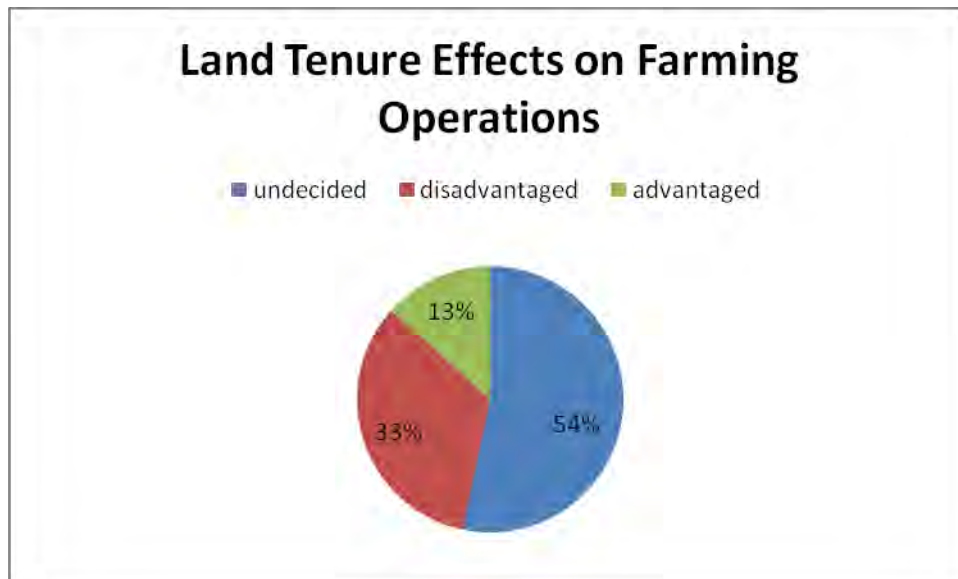


Figure 4.8: Land Tenure Effects on Farming Operations

4.3 SUMMARY OF RESEARCH RESULTS

The preceding section on the research results, which commenced with the demographic profile of the BSSSGs, was graphically presented and discussed with respect to its characteristics and its meaning. This was followed by a detailed discussion of responses in respect of each question that was asked in the research process. This section revealed some positive trends in respect of some BSSSGs who distinguished themselves as being progressive in their attitude. This is evident in the fact that they seem to have embraced the challenges of the sugarcane industry. As a result they have been creative in dealing with their problems, including forging strategic partnerships with white commercial farmers. Through these linkages they state that their farming operations have been greatly enhanced. This group has also shown themselves to be generally aware of the decline of the industry and attribute it to globalisation and imports. The group was unhappy with the role of the government and Illovo Sugar regarding the implementation of the Recapitalisation Programme, but notwithstanding this, these respondents have confronted the challenges they face head on.

On the other extreme, there is a group of passive farmers which is an unintended consequence of the Recapitalisation Programme, whereby participants are only required to provide land and the rest is done under the contractor farming

programme. This study showed that this might have attracted people who are not of the right calibre for farming, who for all intents and purpose are neither farmers nor entrepreneurs. In the literature review section, entrepreneurship and the key role it plays in business survival was reiterated. Evidently there is a prevalence of “spoon-feeding” and a climate where it is possible for the misallocation of harvests, given that there is a group of farmers who are not sufficiently knowledgeable about their own farming operations. Naturally, these farmers are not taking responsibility for any of the problems afflicting the industry and deflect the blame on the government and Illovo Sugar. It is important to note, however, that even the progressive farmers blame the government and Illovo Sugar for all the problems, and particularly accuse the government of inculcating a culture of dependency, among other things.

Another highlight of the study is the high optimism level regarding the industry, which was gleaned from the respondents’ intentions to expand sugarcane farming. Even more interesting in this regard is the fact that they cited a profit motive as their rationale. This raised serious doubts about the veracity of the claim given that the industry had been declining for the 10 year period prior to the research.

This chapter synthesises the information collected through the research and interprets same in order to provide conclusions about the state of survivability of BSSSGs in the sugarcane industry. Chapter 5 deals comprehensively with the research results in the light of the extant literature.

CHAPTER 5-DISCUSSION OF RESEARCH RESULTS

This chapter discusses and analyses the themes that emerged from the study and interprets these in the light of authoritative sources discussed in the literature review. Following this discussion and analysis, the researcher draws conclusions regarding the state of survivability or otherwise of the BSSSGs within Ugu District Municipality, based on the areas of strengths and/or weaknesses elicited by the study.

Emerging themes emanating from the study are dealt with in the chapter in the following order: the passive farming phenomenon, entrepreneurship and its potential impact, general levels of profitability of BSSSGs' farm operations, BSSSGs' technology uptake and agronomic practices, income diversification strategies, the HIV and AIDS pandemic, creative labour strategies, farm size effects on farming operations, and land tenure effects on survivability. This chapter ends with a conclusion that summarises the key findings on the survivability of BSSSGs.

Among the key themes emerging from the study is the following, Land use and government policy dilemma, age and gender distribution of BSSSGs, key supporting role and mentorship of BSSSGs by White Commercial Farmers, relatively low capacity for employment creation by BSSSGs, relatively low profitability, a critical indicator of business viability, by BSSSGs and lack of use of decision support tools by BSSSGs, low capitalization by BSSSGs and relative low levels of sophistication in farming, the latter which made it difficult to judge on the prevalence or otherwise of the Inverse Relationship.

5.1 THE PASSIVE FARMING PHENOMENON: IMPLICATIONS FOR ENTREPRENEURSHIP AND POTENTIAL CONSEQUENCES

The study revealed a significant amount of passive farming among BSSSGs at 40% prevalence, which upon further investigation was found to have been caused by the manner in which the Recapitalisation Programme had been implemented. These findings about passive farming simultaneously confirmed the scarcity of technical farming proficiency and business acumen, as asserted by Maloa (2001) and Murphy (2012). Furthermore, based on the fact that these farmers play no part in their

farming operations, these BSSSGs are presumed to be lacking in key attributes that are deemed by several researchers to be drivers of success in business (Cunninghan and Lischeron, 1991; Shaver and Scott, 1991; Rauch and Frese, 2000; Shane et al., 2003; Baum and Locke, 2004; Sumner, 2011; Young et al., 2012).

The study also found that among the BSSSGs, a small percentage are highly motivated, directly involved in their farming business, and to some degree display the traits needed for success in business as alluded to above, including a perception of themselves as entrepreneurs upon whose efforts and decisions the success of their operations depend. The attributes displayed by these respondents are consistent with the motivational and individual psychological traits put forward by Shane et al. (2003) and Baum and Locke (2004), amongst others. These respondents distinguished themselves with a comparatively high level of technical acumen in farming practices, and had forged relationships with their white commercial farmer counterparts. This level of proficiency was more in line with the prediction of Maloa (2001) and Ortmann (2003), however all the respondents lacked the degree of technological integration in their businesses that was envisaged by Van den Berg and Smith (2005).

Another finding in respect of the small group of respondents were that while encouraging as these findings are, the researcher noted that they still fell short of the expectations implied by the assertions of authors such as Sumner (2011), Beckford et al. (2012) and Genis (2012) when it comes to the degree of integration of measures that these authors prescribed as critical for success. In addition, these BSSSGs had comparatively low capitalisation levels, which is an indication of farm operations that are relatively small and largely constrained in the level of absorption of technology and other contemporary facets of farming as envisaged by Ortmann (2005) and Van den Berg and Smith (2005). Likewise, passive farming is consistent with the predictions of Olawale and Garwe (2010) and Urban and Naidoo (2012), who spoke about the general lack of skills in the SMME sector which in turn causes a high rate of failure.

While passive farming needs to be understood within the context of the quest to find an urgent solution to the decline in the sugarcane industry, its unintended

consequences are a cause for concern. For the government the scheme has a dual purpose, i.e. to enable an increase in tonnage to revive the industry which is of strategic economic importance to the region, and to extend participation to the industry in line with the government's BBEE policy. The program was designed in such a way that people willing to participate only had one requirement to fulfil, namely to assign land for the plantation of sugarcane with no pre-screening required. Whilst in theory the scheme would serve to gradually introduce the novice farmers through a phased introduction to farming by third parties used in the scheme (hired contractors), in reality participants in the majority of instances ended up playing no part in the farming operations.

During the research process Illovo Sugar and the government were widely criticised by the majority of the respondents, including the contractors as indicated above, with most claims being centred around allegations of fund misappropriation. However, most pertinently, the scheme itself received legitimate criticism for creating dependency. This was expressed by the most progressive group of farmers amongst the respondents, who themselves participated in the contractor scheme. They voiced their frustration that most recipients were sitting expecting hand-outs from the government and lacked the drive to take charge of their situations. These contractors blamed the government for spoon feeding and not consulting the farmers on how best to tailor the assistance programmes. This criticism of Illovo and the government was not limited to the elite group of farmers however, but resonated with most respondents. The group of respondents who for all intents and purposes were no more farmers than they were landlords expecting a return from leased land, however, seemed oblivious of the situation. These farmers were naturally the most passive of the whole group and in terms of answering questions about the industry, agronomic practices and future outlook respectively claimed stability, ignorance and optimism.

Whilst the contractors' role was controversial, some of the respondents were themselves contractors and appeared honest in their appraisal of the contractor system, as well as in conducting their businesses in general. Among them there was an elite group who seemed to have the interest of the industry at heart and took up contracting to uplift their struggling counterparts. For this reason, the researcher

believes that some form of pre-screening of individuals from both sides before they participate in the programme might bring the whole vision back on track. Currently, however, the majority of the respondents indicated that the situation is bleak.

Unfortunately, apart from resulting in the apparent infamy of the contractors, another aspect that is detrimental to the industry is that farmers who are passive adopt an aloof and uninterested disposition towards farming. This has created a serious dependency on outside grant, which passive farming interestingly is blamed even by the farmers who have been in the industry for long enough. They felt that this group of farmers were only a burden to the system and that perhaps do not warrant the assistance given to them. The researcher concurs with this view, especially in the long-term, notwithstanding that it may appear to solve the immediate problem of expanding sugarcane plantations.

Apart from providing land on which production takes place, these BSSSGs are nothing more than pseudo-landlords with income paid to them in the form of rent. This group of farmers are clearly lacking in the motivation and cognitive attributes that are critical to drive a successful enterprise. Furthermore this didn't measure up to the level of the expectations of entrepreneurship as envisaged by several authors such as Shane et al. (2003), D'Aveni and MacMillan (1991), Van Gelder et al. (2007) and others.

Based on the foregoing, except for a progressive few farmers who distinguish themselves in this regard by achieving a relatively high level of income diversification, relatively high levels of contemporary agronomic practices and high turnover levels, the majority of the respondents displayed serious shortcomings when assessed against the ideals as espoused in the body of knowledge on what constitutes entrepreneurship, especially in the contemporary business landscape which is characterised by turbulence and complexity. Naturally, this spills into other important areas of business and is likely to have a crippling effect on the industry in general. More importantly, the efforts of the Recapitalisation Programme may not achieve the desired results.

5.2 GENERAL LEVELS OF PROFITABILITY OF BSSSGs' FARMING OPERATIONS

The findings on the low levels of turnover and profitability experienced by the BSSSGs appear to contradict the assertions of several authors such as Ortmann (2005), Van den Berg (2005) and Sumner (2011), which in turn raises serious doubts as to the BSSSGs' competitiveness. However, at an average of R49 992 per respondent per annum, the income that accrues to BSSSGs is substantially higher than the R5, 000 projected annual start-up income for the Recapitalisation Programme (Kaye, 2013). The picture changes slightly and income drops when calculations are based on the lower income bracket of respondents, whose income fell between R0-150,000 at an average of R21 429 per respondent per annum.

Overall, despite BSSSGs appearing to be generating reasonable revenues, this may not be consistent with the levels implied by Ortmann (2005), Van den Berg (2005) and Sumner (2011) as related to international competitiveness. Furthermore, the majority of BSSSGs appear to be largely operating at a survivalist level where the scale of farming operations is negligible. Even those that belong to a high income bracket have a lower level of mechanisation than those envisaged for commercial farmers in terms of degree of mechanisation, labour force, transport facilities and access to credit (Kaye, 2013). It is not surprising that the majority of respondents stated a lack of transport or high transport costs and the general problems of logistics for sugarcane hauling and transporting to the mill as among their major problems.

5.3 BSSSGs' TECHNOLOGICAL UPTAKE, AGRONOMIC PRACTICES AND GLOBAL COMPETITIVENES

Firstly, passive farmers are detached from their farms which means that they cannot be regarded as farmers in the strictest sense of the word. Viewed in light of the literature review, this situation poses serious challenges for the state of BSSSGs' survivability and raises general concerns for the industry as a whole. Regarding these farmers, practices of critical importance to them and the industry as espoused

by authors such as Beckford et al. (2007), Ortmann (2005) and Murphy (2007) with regard to the embrace of relevant technology was absent. The study further found that this group of farmers was particularly lacking an appreciation of the agronomics practices that drive success in the industry, which was termed the bedrock of a competitive industry by Ortmann (2005).

These findings are at odds with the farmer envisaged by Maloa (2001), who is not only adept at leveraging information systems as a business operations managerial tool, but is also highly proficient in both technical farming skills and business acumen. These findings are furthermore at odds with an entrepreneur as envisaged by various authors such as Young et al. (2012) and Van den Berg (2005).

In Chapter 2, the role of technology intertwined with enhanced agronomic practices was asserted by, among other authors, Maloa (2001), van den Berg and Smith (2005), Murphy (2012) and Beckford et al. (2007). Apart from these authors, other authoritative sources referred to the perennial skills shortage in the farming industry, which translates to a paucity of managerial and technical acumen, which in turn hinders the international competitiveness of the sector (Ortmann, 2005; Olawale and Garwe, 2010; Urban and Naidoo, 2012). Meanwhile, other authors reiterated the role of the entrepreneur as a controller of the internal business environment (Aliber and Hart, 2010; Young et al., 2012). The findings regarding agronomic practices indicated that an overwhelming majority of respondents appeared to be following basic agronomic practices. As such there appeared to be no concerns regarding fertilisation, application of pesticides, improved variety of seedlings and all basic agronomic practices. At face value this supports the theories of the above authors, at least insofar as basic agronomic practices are concerned.

However, one area that stood out as lacking was in terms of the farmers' uptake of decision support tools. Evidence of this is that not a single respondent indicated that he/she was using a computer as a decision support tool. In this context it should be noted that Van den Berg and Smith's (2005) crop modelling support decision system requires some degree of computer literacy. This further contradicts Maloa (2001), who envisaged a farmer leveraging information systems as a tool to enhance business decision and overall farming proficiency. This represents a serious

limitation in the BSSSGs' capacity to move a notch higher in, for example, employing the crop growth modelling as envisaged by Van den Berg and Smith (2005).

Another observation was that although farming practices have evolved to such an extent that there is a certain degree of automation, this remained at a marginal level amongst the BSSSGs. This is another area of possible improvement as the degree of mechanisation is likely to be a factor in international competitiveness. A comparative study of international producers of cane of a similar stature as BSSSGs might shed more light in this regard.

5.4 INCOME DIVERSIFICATION STRATEGIES

At 67% overall diversification propensity, the BSSSGs seemed to fair reasonably well in terms of diversification strategies. This supports the patterns observed by authors such as Reardon and Taylor (1996), Bryceson (199), Barret and Reardon (2000), Barret et al. (2000), Metz et al. (2005), Eakin et al. (2006), Beckford et al. (2007), Wouterse and Taylor (2008) and Aliber and Hart (2009). Whilst the sugarcane industry appears to provide substantial opportunities for diversification, a sizeable number of BSSSGs diversified outside of the industry. Three respondents indicated that they had business interests in the taxi industry, one had a successful construction business, one was retailing in liquor and groceries, one was involved in other crops such as vegetables, and another one was involved in tree-felling and piggeries. In total this diversification accounted for 47 percent. The majority of these respondents extended their diversification activities to contract farming as well. A further three were employed elsewhere to make up 67% income diversification reflected under section 4.1.5. This income diversification pattern occurred from the mid-income category to the top earning bracket. Further, it tended to coincide with higher education levels, with the exception of one case where the farmer had never attended school yet his farming and other enterprises placed him among the top earners. This case was referred to in the discussion of educational level of BSSSGs under section 4.1.3.

As such, while these findings support the prediction of most authors regarding diversification behaviour by small farmers, they also differ in the sense that farm

fragmentation is an integral part of their diversification strategy to take advantage of spatial variations and environmental conditions (Beckford et al., 2007). As can be seen in the study, the majority of diversification happens outside of the farming enterprise thus confirming the predictions of Reardon and Taylor (1996), Eakin et al. (2006) and Wouterse and Taylor (2008). Furthermore, this confirms Barret and Reardon's (2000) previous findings which noted that non-farm income sources constituted 45% of total income. Likewise, this somewhat supports Bezuneh et al. (2000), who noted that in North Central Kenya, the highlands of Rwanda and Cote d'Ivoire, livelihood strategies associated with non-farm activities offer the most income.

With regard to the three respondents who are employed fulltime elsewhere, the researcher conjectures that this kind of income diversification is not the most ideal. This is based on the reasoning that fulltime employment places its own onerous demands on individuals that ordinarily would cause serious conflicts of interest, ultimately leading to one of the jobs being seriously compromised. However, in this particular instance, passive farming through third party contract farming under the Recapitalisation Programme makes this ordinarily untenable situation possible.

As such, a high percentage of BSSSGs seemed quite diversified; this was spread across income opportunities to avoid being exclusively dependent on sugarcane farming income. This is evidence that BSSSGs are able to hedge income variations from sugarcane farming by relying on other sources. At the same time this may raise other questions about those BSSSGs who hold a permanent job while participating in the industry.

5.5 ECONOMIC ORGANIZATION

The study found a complete lack of economic organisation among respondents, which is at odds with the observations of Beckford et al. (2007), Ortmann and King (2007), Church et al. (2008) and Murphy (2012), who posited that horizontal and vertical coordination is a strategy to mitigate transaction costs. In this regard, the formation of cooperatives by farmers is seen as an imperative. Meanwhile, in the case of BSSSGs in the area of focus of the study, opportunities to register

cooperatives are plentiful given that Cooperative Development (which entails encouraging farmers to register themselves into cooperatives and assisting them financially to do so) is an integral part of farmer and overall SMME development in the KwaZulu-Natal Provincial government, and is therefore fully embraced by the Department of Agriculture and Rural Development and the Department of Economic Development and Tourism and Environmental Affairs. (It should be noted that these departments would have played a critical role in the implementation of the Recapitalisation Scheme.)

Whilst respondents acknowledged that they were encouraged to form cooperatives as part of the programme, none of them did. In one particular instance, a respondent heavily criticised cooperatives as creating an unnecessary “free-rider” phenomenon, and therefore strongly objected to it as stifling entrepreneurship. With regard to the potential benefits of horizontal and vertical coordination to enhance market access, it is clear why this potential benefit is not recognised, as the BSSSGs are assured of a market for their produce in the form of Illovo Sugar Mill.

Notwithstanding the lack of uptake of economic organisation by respondents, there are many potential benefits of this that can be explored by farmers. These include collective ownership of transportation/logistics, fertiliser and pesticide bulk purchases, and sharing accounting services and cane cutting, all of which can help BSSSGs mitigate problems through leveraging numbers. Yet due to the manner in which cooperatives are promoted as being solely focused on primary production, BSSSGs may be oblivious to their potential benefits.

5.6 HIV AND AIDS PANDEMIC

The study found that none of the respondents incorporated HIV and AIDS strategies into their operations. This is of great concern given that authors such as Nothard et al. (2004) and Ortmann (2005) identified HIV and AIDS as one of the challenges that the farming sector has to contend with. Among the devastating effects of the pandemic on the industry are high labour turnover and reduced labour productivity as a result of the associated illnesses and increased level of absenteeism. The Ugu

District Growth and Development Strategy (n.d.) highlights the Ugu region as the area with the highest prevalence of the pandemic.

A closer examination of the situation of the farmers shows that this may be because none of the respondents employed a significant number of labourers, with the exception of a single respondent who at some point during peak season employed 300. The researcher speculates that even in the case of this respondent, the employment relationship is of such a casual nature that labourers keep changing season by season. Given the challenging circumstances facing the BSSSGs, HIV and AIDS strategising may not be regarded as a priority.

5.7 CREATIVE LABOUR STRATEGIES

An overwhelming majority of respondents indicated that they did not engage in creative labour strategies, which is at odds with several authors who perceive this to be a critical survival strategy, notably McLean-Meyinsse and Brown, Jr (1994), Reddy (2003) and Wiggins et al. (2010) among small farmers. Only two respondents indicated reliance on family labour, and the family involved seemed very few to have a significant impact on the farming operations.

In theory, this may mean that BSSSGs may be exposed to high transaction costs associated with this factor of production, subsequent to the introduction of the Basic Conditions of Employment Act 75 of 1997: Sectoral Determination 13. However, employment levels associated with BSSSGs were comparatively low and the researcher speculates that this is one potential reason explaining the non-prevalence of creative labour strategies. Within the context of low employment numbers, there is no reason to control this cost which in any case is insignificant.

A further finding of the study showed a 60% prevalence of second generation farming phenomenon among BSSSGs. This might be interpreted as historical evidence of reliance on family labour and a form of succession planning; this implies an additional long-term benefit of creative labour strategies that goes beyond immediate cost mitigation.

5.8 FARM SIZE OPERATIONS AND PRODUCTIVITY EFFECTS

During the study 47% of the respondents indicated a small farm size to be an advantage. This contradicts existence of Inverse Relationship as espoused by authors such as Barret (1996), Binswanger et al., (1996), Heltberg (1998), Assunção and Ghatak (2003), van Zyl and Reddy (2003) and Barret et al. (2010), and the assertion of Kaye (2013) who claimed that (a lack of) economies of scale represents a major factor in the profitability of all businesses, including those of small farmers.

A further 40% was ambivalent on this factor while only two felt advantaged by their size. Whereas the remaining 13% respondents indicated that they were disadvantaged by the small farm size. This is in line with the predictions of Barret (1996), van Zyl et al. (1996), Heltberg (1998), Le Gal and Requis (2002), Assunção and Ghatak (2003), Reddy (2003), Barret et al. (2010) and Wiggins et al. (2010). Interestingly, of those respondents who considered small farm size to be an advantage, none of them attributed this to productivity, but rather to the fact that these small farms were more manageable and saved them from onerous demands physically. This response was thus based more on a match between the energy levels of a farmer against the demands of a farm in terms of physical exertion as opposed to a statement about Inverse Relationship. Most crucially, this is based more on intuition than a highly sophisticated and scientific analysis of farm productivity.

During the discussion on Inverse Relationship it became very clear that to refute or prove its existence requires sophisticated levels of farming proficiency, characterised by a high degree of scientific farming methods based on sophisticated decision support systems. This assertion is based on the fact that both exponents and opponents of the Inverse Relationship rely on very sophisticated analyses and scientific comparative analysis data encompassing a myriad of factors, to support or contest the Inverse Relationship rather than looking superficially at absolute values of productivity and profitability growth with additional hectares added.

Despite this, respondents in the study presented a case characterised by a very basic adoption of agronomic practices where applicable, including the already

discussed issue of passive farming. For the respondents who institutionalised agronomic practices, these primarily concerned the correct balance between soil types, soil testing practices, new variety of cultivars and generally other technical regimes that ensure the right mix of inputs and the soil to improve yields. Whilst the importance of this cannot be discounted, the researcher noted that this remains significantly short of the level required to be able to make an informed judgement on the existence or otherwise of the Inverse Relationship Phenomenon. The technical proficiency level of these farmers simply does not allow them to consider the Inverse Relationship in the first place, let alone make an informed choice on its prevalence or otherwise. Therefore, within this context, rather than the verdict of absence of the Inverse Relationship, it is better to conclude a lack of awareness of its existence, which may be subject to further validation through correct technological application. In the case of the respondents who associated higher profit with size, it may well be that they made this assertion based on intuition, which is understandable. It is already suggested by some authors that the Inverse Relationship is counterintuitive, which means that it can only be proved through relevant and highly scientific and sophisticated analysis, which was definitely lacking among BSSSGs. It may also be argued that the employment of sophisticated technology in farming and leveraging of information systems and other decision support tools may ensure that BSSSGs are likely to enhance their judgment regarding the Inverse Relationship.

5.9 LAND TENURE EFFECTS

The study found that a majority of respondents were undecided at 53% about land tenure effects on farming operations. Surprisingly, this contradicts the views of several authors such as Carter and Olinto (2003), Reddy (2003 and Ortmann (2005), who see communal land tenure as an impediment to farmers and investment in general. Notwithstanding the 33% who felt impeded by the communal land tenure system, the reasons that they advanced for this were different from those of mainstream theory on communal land tenure as an impediment of development. Surprisingly 13% of the respondents felt that the tenure system was an advantage, which supports the assertions by Kaye (2013).

An examination of reasons advanced by respondents for the communal tenure system being a disadvantage had nothing to do with financing requirements; in fact, respondents were typically at the lower end of the mechanisation continuum which gave an impression that credit access was not much of a factor in their capital. It should be noted that the disinvestment incentive associated with the communal land tenure system stems from this type of tenure not being amenable to transferability, which in turn hinders the ability to mortgage which is a requirement for accessing credit. On the other hand, respondents raised very valid concerns associated with communal land tenure which needed to be mitigated, especially within the context whereby KwaZulu-Natal is prioritising ITBL as a cornerstone of unleashing agricultural potential as contemplated in the KZNPGDP. These are freely roaming livestock, veld fires, incapacity to expand due to settlement pattern and jealousy among community members.

Overall, even the two respondents who farm on freehold title did not indicate that they were advantaged by the title, which is at odds with mainstream land tenure theory.

5.10 EMPLOYMENT CREATION CAPACITY OF BSSSGs

One of the observations made during the study was that the levels of employment created by respondents were surprisingly low. Despite it being 21.4 on average per respondent, one farmer was the biggest contributor to this number with 300 labourers in one season. If this farmer's contribution is taken out of the equation the average declines drastically to 1.5 jobs per respondent. This contradicts the proposition by Kaye (2013) who deemed the agricultural industry as being labour intensive. The absence of significant labour numbers also negates labour legislation and related challenges, as posited by Ortmann (2005) and Genis (2012).

On the other hand this confirms Ortmann and Stockhill (1997) and Ortmann (2005) who observed a decline in unemployment within agriculture. In the case of Ortmann and Stockhill (1997) this decline was attributed to substitution of labour automation and labour contractors. This was further predicted by Murray and van Walbeel (2007) who predicted manual weeding with chemical weeding thus negatively and

the use of labour contractors thus affecting negatively the labour force. Indeed, in the case of the study the role of contractors was very prominent and could have possibly accounted for the low employment figures attributable to BSSSGs. Paradoxically, this happened in the government sponsored program which places a high premium on job creation.

5.11 HIGHLIGHTS OF RESULTS

This chapter discussed the research findings in light of the literature review. The following topics were covered in this chapter, namely the phenomenon of passive farming, its implications for entrepreneurship and potential consequences, profitability levels attributable to BSSSGs, the BSSSGs' technological uptake, agronomic practices and global competitiveness of the sector, income diversification with reference to sources of such behaviour, economic organisation, the HIV and AIDS pandemic, BSSSGs' implementation of creative labour strategies, farm size effects on operations, land tenure effects, policy conflict and employment generation capacity of BSSSGs.

This chapter showed mainly two distinct behaviour patterns by BSSSGs, namely those that are intimately involved in their businesses and those who rely on contractors under the Recapitalisation Programme. Based on these behaviour patterns respondents tend to exhibit different survivability patterns, whereby the group that was more involved in their businesses tended to be more successful than those that were reliant on third parties. Based on this dichotomy, farmers tended to lean to the side of those that are progressive and more in tune with what is happening in the sugarcane industry, including implementing strategies that enhance their survivability and those that are dependent on contractors systems, with its challenges as alluded to in the preceding section. In between these extremes are those BSSSGs who are either employed elsewhere fulltime and only use their farm income as a supplement, but they are also nearing retirement and therefore plan to take up farming full time in the coming years.

Another important observation from the study is that BSSSGs contributed relatively low numbers in creating employment. As alluded to in the preceding section this may be as a result of the labour contract system.

Chapter 6 will focus on conclusions and recommendations based on key findings on BSSSGs' survivability as elicited by the study.

CHAPTER 6-CONCLUSION AND RECOMMENDATIONS

The persistent decline in the sugar cane industry within Ugu District Municipality is of serious concern given its strategic importance to the economy of the region. Furthermore, sugarcane farming is one of the few industries whose pattern of occurrence readily lends itself for extension into the highly underdeveloped hinterland, and therefore has vast potential for improving the quality of lives of the inhabitants of these areas which are characterised by lack of employment opportunities. Against the backdrop of the industry having experienced an exodus of established white commercial farmers and the unintended negative consequences of the Land Restitution Act (USIR, 2010), there has been declining participation amongst the established farmers in the industry. This has raised concerns as this translates into a loss of years of farming expertise.

Within this context it was of great importance to ascertain whether the BSSSGs were surviving the sugarcane industry, which had proved to be highly competitive as indicated by the USIR (2010) and other sources (Ortmann, 2000; Ortmann, 2005; Genis, 2012). This study thus focused on addressing the following research questions:

- What are the BSSSGs' perceptions of the Ugu District Municipality's overall sugarcane industry?
- What are the BSSSGs' perceptions of the farm specific/micro-economic attributes that make them susceptible to failure?
- What are the BSSSGs' propensities to employ deliberate strategies to mitigate the causes and/or effects of the decline?
- What are the BSSSGs' perceptions of farm size and land tenure effects on survivability?

The study was conducted using a convenience sampling for the first two respondents, followed by the snowballing sampling technique until a total of 15 respondents were reached from two farmers associations within Ugu District Municipality, namely the Qhubekani Farmers Association and Mnini-Mfume Farmers

Association. An interview protocol was used to collect data through a semi-structured approach, which was followed in order to delve deeper into the issues and elicit rich information about what the respondents think about the district's sugarcane industry as well as its survivability factors.

The following section deals with how each research question was addressed.

6.1 HOW THE GOALS OF THE RESEARCH WERE ACHIEVED

6.1.1 BSSSGs' Perception of the Ugu District Municipality's sugarcane industry

In terms of the first research question relating to the industry outlook, only 40 percent of the industry participants see the industry as declining, which is cause for concern given that the statistical data points to an industry that is in serious decline.

The research further showed that although farming practices among BSSSGs had evolved in the preceding 10 years, which was the time during which the industry fell into sharp decline, not an enormous amount of evolution in farming practices was noticeable among BSSSGs. It may be argued that changes such as replacing spans of oxen with tractors, as important as it is, does not represent the most dramatic reengineering of business processes in the face of international competition. It was evident that the degree of automation (capitalisation) of most businesses was still at an entry phase, even for those respondents who had accumulated farming assets over the years. As such, the BSSSGs' adoption of changes in the 10 years prior to the research cannot be said to have been ground breaking.

Surprisingly, the research showed an 80 percent intention amongst the respondents to expand their sugarcane farming in the foreseeable future, despite a 40 conviction rate that the industry is declining. Even more confusing is the fact that the profit motive was advanced by the respondents as the underlying reason for this expansion. This raised the question, is the profit claim a realistic one or a fallacy?

On the question of BSSSGs' perceptions of the factors that caused sugarcane businesses to fail, a deeply concerning pattern emerged whereby the role of government and Illovo Sugar was questioned. In this regard RDP Housing Scheme

and Land Restitution by some of the respondents as contributing to the dire industry situation through competition for land. On the other hand some respondents appeared to understand the farm and industry specific factors which may result in the downfall of their businesses outside of the government and Illovo Sugar.

6.1.2 BSSSG's perceptions of farm-specific micro-economic attributes that mitigate their susceptibility to failure

As has already been pointed out in the earlier chapters, a significant number of respondents were happy to apportion the blame for industry problems to Illovo Sugar and the government because of the Recapitalisation Programme. As such they exhibited external orientation, otherwise referred to as an external locus of control (Twenge, Zhang and Im, 2004; April, Dharani and Peters, 2012). This psychological state is often associated with negativity, for example April et al. (2012) found in their study that bi-local expectancy psyches were more adept at coping with life's challenges than either internal or external locus of control psyches. Meanwhile, Twenge et al. (2004) found external locus of control psyches to have a propensity for cynicism, poor achievement in school and helplessness. In this study, these are the respondents who had distinguished themselves through the phenomenon of passive farming and its attendant negative consequences for development of the small scale cane growers as alluded to under Chapters 4 and 5. To this end, a significantly small percentage of respondents (20%) had significantly improved their micro-economic practices and showed a deeper level of insight about the status quo of the industry. Overall these farmers were more hands-on in their day-to-day farming operations. They had also actively solicited knowledge by attending courses in farming, as well as forging relationships with their white commercial counterparts.

6.1.3 BSSSGs' propensities to employ deliberate strategies to mitigate the causes and/or effects of the decline

At 60% of overall respondents, a significant number of respondents, with the exception of the passive farmer group, claimed to have implemented strategies to mitigate the decline. These respondents were seen to be internally focused (an

internal locus of control) and accordingly acknowledged the onerous responsibility of farm-specific practices and the adoption of mitigation measures to stem the tide of farm failures. However this means that the remaining 40 percent of respondents utilise farming practices that are not in tune with agronomic practices which is a source of concern. Of further concern is that only 47 percent of those respondents that rationalised farm specific measures with positive results in their farming operations.

In an effort to ascertain whether respondents had included any major interventions in their businesses, whether it was the introduction of technology or a stand-out reengineering of farm operations, none of the respondents indicated such initiatives at the height of the decline. This is of concern and may be interpreted to suggest that while the industry in general may have been facing tough times, farmers are oblivious and adopt a 'business as usual' approach. None of the respondents mentioned the use of a computer in their business operations.

With regard to income source diversification and economic organisation, the BSSSGs fared well in terms of diversification, with sources extending well beyond their immediate farming businesses. This ensured that farm incomes were supplemented by other economic activities which generally improved livelihoods.

With regard to economic organisation, this strategy was totally unused by the farmers. On the other hand, potential for cooperation could be ascertained in the area of transportation and logistics as well as bulk purchases of farming inputs, to name just a few areas where farmers can leverage the power of their numbers.

6.1.4 BSSSGs' perceptions of farm size and land tenure effects on survivability

The research revealed that none of the farm operations incorporated sophisticated approaches and tools to help determine the existence or otherwise of an inverse relationship between productivity and farm size, which is more a reflection of where these businesses are in terms of their development than a judgment on the Inverse Relationship. As a result, the advantages and disadvantages of small farm sizes

were not rationalised by respondents on the basis of the Inverse Relationship phenomenon.

Likewise, in the case of land tenure there were no discernible preference patterns of either type of land tenure system, surprisingly against the proposition the freehold tenure is more beneficial than communal tenure. Where respondents deemed communal tenure systems to be a disadvantage, challenges such as veld fires, free roaming livestock, bush pig invasions, jealousy among community members and in one case the threat of land confiscation by an Inkosi, were cited as reasons.

Overall these farmers expressed indifference about the tenure system, which was understandable given the relatively low level of capitalisation that was observed among respondents, which is a proxy for low utilisation of credit.

6.2 RECOMMENDATIONS

The section below concludes the study and focuses on recommendations aimed at improving on the shortcomings that were observed during the study. The following sub-topics will be covered under the recommendations sections, namely information dissemination on the state of the sugarcane industry, restructuring of the Recapitalisation Programme, a holistic assistance programme for small farmers, government policy alignment, and the promotion of economic organisation among farmers.

6.2.1 Information dissemination on the overall state of the district's sugarcane industry

It was of great concern to note during the study that farmers, as the participants on whose hands the future of the industry depends, have such a low level of awareness about the critical shortage of the sugarcane supply. While the effort of Illovo Sugar and the government to turn the situation around is highly commended, their disregard of farmers and individual farms as the basic building blocks of the revival defeats the aims of the programme. For this reason, it is recommended that any such programme in the future be supported by a campaign that raises awareness of the BSSSGs of the critical shortage of cane supply. In addition, apart from the

programme being a means of income generation, the government and Illovo Sugar were pinning their hopes on the emerging farmers resolving the decline in the industry. If this was communicated, the BSSSGs would have a greater sense of appreciation of the fact that their efforts/roles are important for the greater good of the region and not just for themselves and their families.

6.2.2 Restructuring of the Recapitalisation Programme

Throughout the study a deep sense of mistrust was directed at the government, Illovo Sugar and the contractors, which was detracted from the importance of the intervention whose underlying aim was to mitigate the dire situation the sugarcane industry is facing. It is thus recommended that future phases of the Recapitalisation Programme be implemented alongside genuine partnerships between Illovo Sugar, the KZN Provincial Government and farmers through the farmers' associations. Under the revised implementation model these three organisations would establish a representation model which would formulate, plan and agree upfront on specific targets and outcomes, including a monitoring and evaluation framework. While the project is being implemented, these parties should meet regularly and share information and concerns, as guided by the predetermined and agreed targets. Issues such as the selection and role of contractors, their performance and the overall financial information of the project should be shared in this forum to prevent accusations of impropriety by any party and to engender co-ownership of the project.

At a farm level there has got to be a review of expectations, whereby an entrepreneurial role should be expected of the owner of the land. This will help ensure that those people who are participating in the Recapitalization Programme will one day take over the farming to ensure sustainability, otherwise when the Programme ends, farms that are solely dependent on contract farming will fail and all the effort will have been in vain. For this to succeed, the project partners may have to implement some form of pre-screening of individuals to ensure they have an interest in farming and the potential to develop into a farmer.

6.2.3 Need for holistic assistance to farmers

It has to be acknowledged that as much as the sugarcane supply decline is a production programme, behind resolving the situation are aspirant farmers, and this implies the need for the development of human capital. As such this challenge should be viewed within the overall context of challenges associated with small business development. After all, the success of the technical production side depends on the human capital development side for sustainability. A structured Programme to enhance technical proficiency and business acumen should thus be integrated into future phases of the Recapitalisation Programme. To this end, participants should be placed into a business incubator model for intensive training in sugarcane farming, and thereafter be sent back to their farms to apply the knowledge that they gain. They should be assigned mentors who will ensure follow-up on training, assess how these emerging farmers are coping with practical challenges, and evaluate how the theoretical training assists these farmers adapt to the practical demands. Information obtained through mentorship follow-up should then get fed back into the system to enhance areas of strength whilst improving on weaknesses. To this end, the role of the contractor system must be transitional and not be used to substitute the farmers.

It is recommended that the Skills Enterprise Development Agency (SEDA) and the Agri-SETA become partners with Illovo Sugar and the Government to share their expertise for designing and implementing the development of sugarcane farmers.

6.2.4 Government policy alignment

Throughout the study farmers pointed to the apparent conflict in government policies, whereby sugarcane land has been substituted with residential and sometimes sports and recreational usage. Another issue that came out strongly from the research is the implementation of land restitution, whereby some respondents felt that some beneficiaries obtained farm land through this process yet their skills are still at very low levels and they are unable to maintain optimal productivity levels, which is

exacerbating the decline. In addition there are allegations of impropriety in the gate-keeping system which may exclude other people who merit participation whilst including others who may not merit inclusion, with some saying that there is undue political influence in the allocation of these farms.

It is thus recommended that an incubation system could help improve the technical proficiencies and business acumen of prospective land restitution beneficiaries. As for the policy conflict around land use management, the government needs to set its priorities straight and designate sugarcane as the priority sector.

6.2.5 Economic Organisation

It was noted during the research that none of the respondents use economic organisation, despite the potential benefits this has. The respondents' numbers could be positively harnessed for bulk purchasing of input costs such as fertilisers, transportation of cane and even accounting and bookkeeping services, yet during the interviews a strong sentiment opposing the cooperative model was echoed throughout. However, closer examination of the causes indicated that cooperatives may have been promoted to force cooperation in primary sugarcane production. The researcher is of the view that for the cooperative approach to be beneficial, farmers should retain their status as producers of sugarcane independently, and only use cooperatives in respect of services that would help them save on aspects that they would have incurred at a slightly higher cost individually. Under this approach their individual farms, as building blocks of sustainability, should not be tampered with. For this to be achieved a message concerning the promotion of cooperation needs to be revised and emphasis should be placed on cooperation at a level above primary production, otherwise fears of a free rider phenomenon will continue to detract from the potential benefits this approach holds.

6.2.6 Need to make sugarcane farming attractive to the Youth and females

One of the noticeable features of the demographic information of BSSSGs is the preponderance of males as well as the fact that BSSSGs are generally aging.

Against the backdrop whereby farming is a physically demanding activity and the fact that youth are the back-bone of any succession, it is imperative that sugarcane farming like other industries attract youth of the right calibre. Also from a gender empowerment perspective, it is imperative that efforts are made to attract women as well **so as to ensure their participation** in sugarcane farming.

On the other hand attracting these groups (especially youth) into sugarcane farming may prove difficult if the revenues and wages payable within the sector are relatively low as alluded to in the section that discussed turnover and employment figures attributable to BSSSGs. As such, this may imply that the whole returns structure within the industry may need to be reviewed.

6.3 RECOMMENDATIONS FOR FUTURE RESEARCH

This section proposes potential future research areas regarding the BSSSGs and the local sugarcane industry based on the gaps that were identified by the researcher during the study. One area of possible future research is a comparative study of the degree of institutionalisation of automation/mechanisation and the extent to which this correlates to industry success between local small-scale sugarcane growers and their international counterparts. A related study could determine the differences in size of capitalisation of local farmers and their international counterparts.

Other areas that are worth exploring are as follows:

- A comparative analysis of the degree of agronomic practices and information technology systems used by BSSGs versus national and international trends, and the impact of these on survivability.
- An evaluation of the Recapitalisation Programme with specific reference to the roles of its key stakeholders, namely Illovo Sugar, the KZN Provincial Government, participant farmers and cane growers associations. What lessons can be learned to improve future implementation?

6.4 CONCLUSION

Based on the objectives that sought to be achieved through this study, the researcher observed two distinct behaviour patterns exhibited by BSSSGs, which in turn affect survivability in different ways. These behaviours can be distinguished into two main categories - one category comprises those BSSSGs who are intimately involved with the intricacies of their farming operations, who implement basic agronomic practices, are actively engaged in learning about improved farming methods as well as forging relationships with established white commercial farmers, and generally have a comparatively high level of capitalisation in their farm operations.

The other category of farmers comprises those that are only in existence for no other reason than the Recapitalisation Programme implemented by Illovo Sugar and the KZN Provincial Government, which is not an ideal situation. These farmers adopt an aloof posture and leave everything to the contractors who are hired to carry out the farming work. Needless to say, this group does not show the same level of enthusiasm about their farms and it is doubtful that they regard themselves as entrepreneurs and business owners in the true sense. As such, in the majority of cases they did not appear to be bothered about the most basic of tasks associated with farming operations. This group was more inclined to perceive the intervention as a hand-out by the government with no reciprocal value-add warranted from their side.

Based on these two groups, the former is deemed to be more survivable and can be referred to as a model of relative success and therefore a backbone of emerging farming. However, in general terms all farmers appeared to be at relatively low levels of capitalisation, even though this tended to be appreciably better compared to the former group. In the case of passive farmers, this group invariably owns parcels of land under the Ingonyama Trust land tenure system, which is their sole contribution to farming.

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APPNEDIX 1-INTERVIEW PROTOCOL

Respondent's age _____ Estimated Annual Turnover-----

Number of hectares _____

Profitable or not _____

Gender ----- Other Business Not related to sugarcane farming-----

Number of years farming _____ Number of people employed-----

Highest standard of education-----

1. EXAMINING BLACK SMALL-SCALE GROWER PERCEPTION OF THE OVERALL SUGARCANE INDUSTRY.

- 1.1 What is your assessment of the overall state of sugarcane industry within Ugu?
- 1.2 What changes, if any, have occurred in past 10 years that have affected the manner in which you conduct your own business?
- 1.3 Do you plan to expand/decrease your sugarcane plantation in the foreseeable future?
- 1.4 What is the underlying reason for the decision to the preceding question?

2. UNDERSTANDING OF BSSSGs' PERCEPTION OF FARM-SPECIFIC/MICRO-ECONOMIC ATTRIBUTES THAT MAKE THEM SUSCEPTIBLE TO FAILURE?

- 2.1 In your opinion what are the major factors/attributes that exacerbate the decline or going under of farms?
- 2.2 What are the factors that ensure that farms are least prone to decline?
- 2.3 In the case of your farm what specific measures do you adopt to prevent this?

3. EXAMINING WHETHER SMALL GROWERS EMPLOY DELIBERATE MITIGATION STRATEGIES TO COUNTER THE CAUSES/EFFECTS OF THE DECLINE IN THE INDUSTRY?

- 3.1 What has been the most major change (s) you have had to make in the last 10 years in your business?
- 3.2 What has been the underlying rationale for these changes?
- 3.3 In what way, if any, do you consider such changes critical to the survival of your business?
- 3.4 What would have happened had you not made the changes?
- 3.5 What are the effects/results of these changes to your business?

4. EXAMINING RESPONDENT'S PERCEPTION OF FARM SIZE AND LAND TENURE ON SURVIVABILITY.

- 4.1 Are there any factors associated with your farm size that enhances or impedes your survival?
- 4.2 Please list these factors and how they positively or negatively impact on your business.
- 4.3 Are there any factors associated with land tenure that enhance or impedes your survival?
- 4.4 Please list these factors and how they impact on your business.
- 4.5 Are you first or second generation farmer?

APPENDIX 2-INFORMED CONSENT LETTER

Informed Consent Letter 3C

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

Master of Commerce in Leadership Research Project

Supervisors : Dr Paul Edmund Green

Contact Number : 033-845 8804

: 084-206 8767

: Dr Cecil Gerwel Proches

: 031-260 8318

Research Office : Ms P Ximba (0312603587)

Dear Respondent,

I, **MANDLAKHE DICKSON MKHUNGO** am a Master of Commerce student in Leadership, at the Graduate School of Business and Leadership, of the University of KwaZulu-Natal. You are invited to participate in a research project entitled, **WHICH FACTORS ACCOUNT FOR SURVIVABILITY OF BLACK MALL-SCALE SUGARCANE GROWERS IN UGU DISTRICT MUNICIPALITY?** The aim of this study is to shed light on factors that enhance resilience of these farmers and to use the results to influence policy making.

Through your participation I hope to understand pertinent issues that enhance Black Small-Scale Sugarcane Growers' Resilience. The results of the interview are intended to contribute to knowledge on how best to support farmers and to replicate lessons learned through the research exercise.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this interview. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN.

If you have any questions or concerns about completing the questionnaire or participating in the interview or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The interview should take you about 45 minutes to an hour to complete. I hope you will take the time to participate in the interview.

Sincerely

_____ Date _____

Mandla Mkhungo

APPENDIX 3-ETHICAL CLEARANCE APPROVAL LETTER- ATTACHED

APPENDIX 4-TURNITIN INDEX REPORT

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UNIVERSITY OF KWAZULU-NATAL FACTORS THAT ACCOUNT FOR SURVIVABILITY OF BLACK SMALL-SCALE SUGARCANE GROWERS IN UGU DISTRICT MUNICIPALITY BY MANDLAKHE DICKSON MKHUNGO 202 527 207 A DISSERTATION IN PARTIAL FULFILLMENT OF A [MASTER OF COMMERCE DEGREE IN LEADERSHIP STUDIES COLLEGE OF LAW & MANAGEMENT STUDIES GRADUATE SCHOOL OF BUSINESS LEADERSHIP SUPERVISOR](#) : CO-SUPERVISOR : [DR PAUL EDMUND GREEN](#) [DR CECILE GERWEL PROCHES](#) 2015 i [DECLARATION I](#), Mandlakhe Dickson Mkhungo, [declare that: \(i\) The research reported in this dissertation/thesis, except where otherwise indicated, is my original research. \(ii\) This dissertation/thesis has not been submitted for any degree or examination at any other university. \(iii\) This dissertation/thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons. \(iv\) This dissertation/thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other](#)

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Signature: _____ Name of student:

Mandlakhe Dickson Mkhungo ii ACKNOWLEDGEMENTS No undertaking of a project as intense as this study is possible without the contribution of many people. It is not possible to single out all those who offered support and encouragement during what at times seemed to be a 'never ending journey'. However, there are individuals without whom this project would not have been completed, and to them go my special thanks and acknowledgement of their contributions. Firstly, I am indebted to my co-promoters, Dr Cecile Gerwel Proches and Dr Paul Edmund Green for guiding me through very difficult phases of this project, Mr Pfano Mashau for the role he played during the my MCom studies from the beginning to the end. I also want to thank EDTEA for sponsoring my MCom studies. I reserve a special appreciation for the members of the Umnini-Mfume and Qhubekani Cane Growers Association, especially the chairpersons of these associations for consenting to my study and the members of the two associations who set aside their time and willingly shared insights and experiences pertaining to the study. Lastly, I convey my sincerest appreciation to my wife and my family for the support. Over the years you have been my eternal source of inspiration and strength, and I owe all my successes to you! iii ABSTRACT This research sought to determine survivability of Black Small-Scale Sugarcane Growers (BSSSGs) in Ugu District Municipality amid the severe decline in the sugarcane industry using two Sugarcane Growers Associations existing within the District Municipality namely, Umnini-Mfume Farmers Sugarcane Farmers Association and Qhubekani Farmers Association as a case study. The objectives of the study were to ascertain BSSSGs' perception of the overall sugarcane industry, to ascertain BSSSGs' perception of farm specific/micro-economic attributes that make them susceptible to failure, to ascertain whether they employ deliberate strategies to mitigate the causes and or effects of the decline and to ascertain BSSSGs' perception of land tenure and farm size effects on their survivability. The sampling procedure employed in the study was a convenience sampling technique for the first two respondents from Streams A and B respectively, followed by a snowballing sample until the total target respondents of 15 are reached. The study revealed among other things that the majority of respondents were optimistic about the future of the industry and as such, were planning to add to the existing hectares of sugarcane planted. Notwithstanding evidence of the decline in profitability, which is advanced as the driver of the industry decline, most BSSSGs stated profit as the motive for the planned increase in hectares. In terms of adoption of agronomic practices, the majority of BSSSGs appeared to be implementing these measures and in some instances attributed these to the survival of their business or alternatively attributing these as underlying reasons for tangible improvements to farming operations e.g. improved yields and profitability. Regarding major changes that BSSSGs had introduced in the 10 years prior to the study, which is considered the most difficult period during which the sugarcane industry decline started to manifest, the research didn't reveal any implementation of any

groundbreaking changes by BSSSGs. On the causes for the industry decline, only a handful of farmers linked this to international competitiveness, while others indicated transport costs as one of the drivers of the decline. A significant number of respondents blamed the Recapitalization Program and its sponsors as having contributed to the decline. iv Furthermore, the RDP Housing Scheme and the Land Restitution Programme were also mentioned by farmers as contributing significantly to loss of productive cane land to competing uses for reasons discussed in detail in the study. In general, the key findings of the research highlighted two categories of BSSSGs, namely those that were fairly successful and belonged to a small percentage of a **relatively high income bracket, and these BSSSGs’ farm operations tended to** have relatively high capitalization and they generally exhibited better knowledge of farming, had forged relationships with White commercial farmers and in some instances had taken it upon themselves to assist other fellow BSSSGS, hence some of them were participation in the Recapitalization Program as contractors. Overall, these farmers were generally more aware of the industry situation and their survivability was judged to be at a high level. On the other extreme, the study elicited a group of farmers who were engaged in passive farming which was an unintended consequence of the Recapitalization Program, which also created contract farming. This was severely criticised during the research and findings point out that, the contrary to the original noble intentions of the program sponsors, this may be causing further discontentment among its intended recipients and also inadvertently promoted a culture of hand-outs. Of the two groups, the study revealed that former group was more survivable and these farmers can serve as a model of successful farming, and key lessons can be learned from this group and replicated to enhance survivability within the industry. Another important aspect elicited by the research is BSSSGs comprise mainly farmers who are beyond the age of 60 which is a cause for concern. v

LIST OF ABBREVIATIONS AND ACRONYMS
BBEE BCEA 75 of 1997 Number 75 of 1997 BEE BSSSG CIS DRLR Land Reform DTI EDTEA ESE FET HRD IR ITB KZN KZNDARD KZNP GDP LED NAch NCA 34 of 2005 NRTS :
Broad Based Black Economic Empowerment : Basic Conditions of Employment Act : Black Economic Empowerment : Black Small-Scale Sugarcane Grower : Cooperative Incentive Scheme : Department of Rural Development and : Department of Trade & Industries : Department of Economic Development and Tourism and Environment : Entrepreneurial Skills Efficacy : Further Education and Training : Human Resources Development : Inverse Relationship : Ingonyama Trust Board : KwaZulu-Natal : KwaZulu-Natal Department of Agriculture : KwaZulu-Natal Growth and Development Plan : Local Economic Development : Need for Achievement : National Credit Act Number 34 of 2005 : National Rural Tourism Strategy PDI : RDP : SAP : SASA : SASRI : SEDA : SMME : SONA : UGDS : USIR 2010 : Previously Disenfranchised Individuals Reconstruction and Development Program Structural Adjustment Program South African Sugar Association South African Sugar Research Industry Skills Enterprise Development Agency Small, Medium and Micro Enterprises State of the Nation Address Ugu District Municipality Growth and Development Strategy Ugu Sugar Industry Report, 2010

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INTRODUCTION				
The purpose of this study is to determine the factors that are necessary for the survival of BSSSGs within Ugu District Municipality, against the backdrop of a chronic decline in the sugarcane industry that has been documented within the district since the second half of 2010 (Ugu Sugar Industry Report (USIR), 2010; Kaye, 2013). Umzimkhulu Sugar Mill in Ugu has experienced intermittent closures due to				

drastic decline in sugarcane output in the district as a whole, which manifests in chronic shortages of feedstock. While on the surface the issue of concern is the decline in feedstock to the mill, the underlying reason is key, i.e. a drastic decline in profitability. An industry study undertaken in 2010 clearly points to this as being the first layer of causes beneath the surface (USIR, 2010). According to the same report another underlying driver of the decline is international competitiveness, while other domestic factors also left the local sugar industry in a serious state of decline. Figure 1.1 shows a graphic illustration of the decrease in sugarcane feedstock tonnage between 2002/2003 and the 2013/2014 harvesting season. According to this figure, sugarcane delivery from the mill has decreased from roughly 220,000 tons to roughly 100,000 tons. At approximately 55%, this decline has undoubtedly led to dire economic consequences for the region.

DELIVERY HISTORY - SEZELA

SEASONS	TONS
02/03	250000
03/04	200000
04/05	150000
05/06	100000
06/07	50000
07/08	0
08/09	0
09/10	0
10/11	0
11/12	0
12/13	0
13/14	0

Figure 1.1: Historical delivery tonnage of feedstock delivery from 2002/3 to 2013/14 Source: Sezela-Illovo Sugar 2014

The Ugu Growth and Development Strategy (UGDS): 2030 Vision (n.d.) notes that the decline in sugarcane production is a manifestation of the decline in profitability. This precipitated the exit of the industry by White established commercial farmers (USIR, 2010). Evidence shows that in mid- to late-2010, agriculture, and in particular sugarcane, shed a lot of farm land to the property development sector which at the time was booming (UGDS: 2030 Vision, n.d.). Incidentally, figure 1 shows that for the first time since the 2002/2003 season, tonnage began to fall below the 100,000 market in 2010, which seems to support the timeline of the reported period of exodus of White farmers. Interestingly, the exodus of White farmers in response to legislation and other pressures related to liberalisation is not new or unique to Ugu District Municipality (Hall, 2011). This behaviour was noticeable elsewhere in the country and conjectures that these farmers exited farming and sold their farms and invested in new careers or in other sectors of the economy (Hall, 2011). Meanwhile, in the case of Ugu, the property development sector was not the only beneficiary, as high value crops such as macadamia nuts and essential oils are among the sectors that gained from this switch in investment (USIR, 2010). Further aiding the decline of the sugarcane industry was the negative effect of legislation (UGDS: 2030 Vision, n.d.). In this regard, three pieces of legislation in particular increased the burden on farmers. Lamenting the challenges associated with the contemporary operating environment facing South African farmers in general, Ortmann (2005) surmised that the farmers face, among others, problems with Agri-BEE, new labour legislation and minimum wages. Ortmann (2000) also noted that the challenges of globalisation and increasing competition are not only confined to farmers, but extend to agricultural economists who needed to constantly upgrade their skills to offer superior services to their clients. Seemingly, these new laws are the Sectoral Wage Determination 13 of the BCEA Number 75 of 1997, [Restitution of Land Rights Act](#) Number [22 of 1994](#) and [the NCA](#) Number 34 [of 2005](#), and this is further confirmed in the UGDS: 2030 Vision (n.d.). Whilst the land restitution legislation created an immediate atmosphere of uncertainty and an investment disincentive for existing farmers, Sectoral Wage Determination increased the cost of labour (and further reduced profit margins), which exacerbated the already adverse industry situation and drove the industry even closer to the precipice. This resonates with MacNicol, Ortmann and Ferrer's (2008) findings, who

proposed the following: ? [Government should review restrictive labour legislation such as minimum wages to reduce the costs associated with permanent labour and slow the casualisation process, thereby promoting permanent employment.](#) ? Government should indicate the [maximum annual increase in wages that farmers may expect to](#) pay in order to alleviate [some of the uncertainty surrounding](#) minimum wage [legislation.](#) ? Government should provide detailed and relevant information on [land valuation and](#) inform [farmers whose](#) farms are [subject to restitution to](#) decrease any uncertainty (MacNicol et al., 2008, p. 133). MacNicol et al(2007) also found land reform, minimum wage legislation and sugar [price variability to be the most important](#) source of business [risk,](#) in that order of priority, among [large-scale sugarcane farmers in KwaZulu-Natal.](#) It is important [to](#) note within this context that sugar is an international commodity, i.e. its price is internationally determined (Devadoss and Kropf, 1996). This renders South African cane producers price-takers, BSSSGs included price-takers rather than price-makers (Hurly, 2013). These onerous conditions outlined above bring to the fore a very pertinent question: are BSSSGs within Ugu District Municipality, given their perceived weaknesses in comparison to their white commercial counterparts, armed with the adequate knowledge and skills to survive the adverse conditions that characterise the industry? Answering this and other pertinent sub-questions is of critical importance to this study.

1.2 Background Ugu District Municipality's sugarcane industry, which is the focal area of this study, has experienced a sharp decline in recent times (USIR Volume 2, 2010). The industry's report attributes the phenomenon largely to challenges emanating from globalisation and international competitiveness, and in part to a combination of the Restitution of Land Rights Act No 22 of 1994 and the BCEA Number 75 of 1997: Sectoral Determination 13, which came into effect in March 2006. This latter Act sets out minimum wages (at a considerably higher rate than the industry going rate at the time) and other onerous service conditions to be complied with within the agricultural sector. A further hurdle was the extensive review of lending policies by institutions following the enactment of the NCA Number 34 of 2005. In the case of South Africa, the strain that BCEA Number 75 of 1997: Sectoral Wage Determination 13 has placed on industries across the board is evident; Ortman (2005) observed declining unemployment in the agricultural sector caused by substitution of labour by automation, labour contractors and other labour saving technologies. Stockil and Ortman (1997) confirmed these behaviours by farmers in their study of perceptions of risk by KwaZulu-Natal farmers within the context of a changing environment. On the other hand, Murray and van Walbeek (2007) in their study of the impact of the BCEA Number 75 of 1997: Sectoral Determination 13 among the KwaZulu-Natal North and South Coasts commercial farmers found that farmers were more prepared to replace manual weeding with chemical weeding in an effort to reduce their total wage bill as a result of the ACT, while mechanization was not necessarily seen as a feasible option. Overall these farmers had resorted to reducing the work-week by reducing the number of hours as opposed to retrenching workers (Murray and van Walbeek, 2007). The effect of this change in work hours reduces the total wage bill and the share of income attributable to farm workers which is a concern. However, notwithstanding the gains for the individual farmer, this phenomenon may, in the absence of an alternative industry being able to absorb the labour shed through mechanisation, simultaneously create high unemployment levels in the greater economy along with other socio-economic challenges. The

[Restitution of Land Rights Act No 22 of 1994](#) has also brought about wider ranging negative implications on the Ugu sugarcane industry and other agricultural sectors (Ugu District Municipality Growth and Development Strategy: 2030 Vision, n.d.). This was observed by Ortmann (2005) in KwaZulu Natal, whereby he recommended that government must [relax restrictive labour laws](#) and [reduce uncertainty](#) around [land claims](#), among other actions, to mitigate against the competitive challenges facing the KZN sugar industry. Needless to say, there have been both negative and positive implications. On the positive side the objective of this Act is to achieve economic transformation and social justice by ensuring that previously disenfranchised individuals PDIs participate in and acquire land as an important factor of production. Within this context, Thirtle, Piesse and Gouse's (2005) assertion is clear: **"Economic Apartheid will not end until reasonable opportunities and incomes are available to the mass of the population rather the privilege of the few"** (Thirtle et al., 2005, p. 38). Meanwhile, Ortmann (2000) made the point that land redistribution, a highly emotive topic in [Africa, is high on the South African government's agenda](#) [and](#) correctly so, given its importance to achieve political stability which is a prerequisite for economic growth. These views are instructive for a country like South Africa which seeks to redress imbalances caused by its apartheid history, however often trade-offs and delicate and hard choices need to be made with no clear cut directions. Nevertheless, notwithstanding the noble intentions of land restitution legislation, within the Ugu context the negative experience stems from the fact that for farmers whose farms have been earmarked for land restitution, a high degree of uncertainty and the slow finalisation of the process created a disincentive for further investment in the sector (USIR Volume 2, 2010). For this situation to be properly managed and well mitigated, the transfer process needs to be done as quickly as possible and with precision (UGDS: 2030 Vision, n.d.). Unfortunately this has not been the case as the process tends to be protracted and take years to finalise - often with dire consequences to the industry (UGDS: 2030 Vision, n.d.). Evidence of the adverse effects of the land restitution process is unmistakable in the following **paragraph: "The slow pace of land reform and the large number of unsettled land claims in the region are impeding development. Failed land reform projects through a lack of adequate support and mentorship, unsustainable development models and weak management have resulted in a large number of vacant and unproductive farms. In order to address these challenges the district must make sure that the National Department of Land Reform and Rural Development assists in fast-tracking the land reform process and that relevant departments (such as Agriculture) are pulled on board to ensure the transfer of skills to new recipients of land so that they can continue to maintain productive capacity"** (Ugu Growth and Development Strategy: 2030 Vision, n.d., p.7). The third piece of legislation that has brought about a negative impact on the sugarcane industry is the NCA Number 34 of 2005. This legislation, like its counterparts, has had a contrasting effect in the sense of having [both a positive and a negative effect on the](#) South African economy. On the positive side, apart from promoting responsible lending, the NCA Number 34 of 2005 has been widely credited for ensuring that South Africa came out of the world financial markets crash in 2007/8 relatively unscathed. While most world financial markets crashed because of delinquent lending, (Brunnermeier, 2008; Hellwig,2009), the South African financial markets survived the resultant **domino effect that reverberated throughout the world's financial sector,**

thanks to the restrictive lending practices visited upon the sector by the NCA Number 34 of 2005 (Sewnunan and Green, 2015). On the other hand, the reality of this Act is that it affected many of the established commercial and emerging farmers in the sense that those who are not affected by land restitution would have invested in their farms under conditions prior to the NCA Number 34 of 2005, but have not thanks to the new stringent lending **conditions (UGDS: 2030 Vision, n.d.). This is due to this legislation's of reduction of financial institutions' appetite for lending much needed capital** for investment. This exacerbated the scarcity of capital problems and **depressed investment in the industry, which precipitated the industry's decline (UGDS: 2030 Vision, n.d.)**. In tandem with the adverse effects brought upon the industry by new legislation, changes in weather patterns - particularly drought - continue to plague the industry and exacerbate the situation. It must be pointed out, however, that whilst drought seems to be the current state of affairs, the extreme weather patterns which sometimes cause flooding lead to serious damage to infrastructure and generally make planning very hard. This further deepened the near crisis situation the industry is facing. Singels, Ferrer, Leslie, McFarlane, Sithole and Van Der Laan (2011) noted the adverse consequences of severe weather patterns to **rain-fed areas: "The 2010/11 season will be remembered for a severe drought in the rain-fed areas with devastating short and long-term consequences on productivity. Rainfall from January to September was the lowest ever recorded and resulted in very poor growth and low yields in coastal areas, poor profitability of the industry as a whole" (Singels, et al., 2011, p. 66)**. Of even more concern is the observation by Reddy (2003) regarding an interesting trend in which sugar cane farming experiences its own peculiar laws of diminishing returns (over and above the normal phenomena associated with the normal production function espoused by economists), i.e. there is a natural decline in sucrose content with every cane harvest, with all other factors remaining constant. Reddy (2003) attributes this decline in sucrose content to a natural phenomenon whereby consecutive sugarcane harvests from the portion of the same stalk left underground (ratoon) decline progressively; he referred to it an inverse relationship between the age of the ratoon and crop yield. Based on this inverse relationship, the overall supply is likely to experience a natural decline in the absence of any replenishment of new cane plantations and if the area under cultivation remains constant. In the case of Ugu District Municipality where there is already a notable decline in sugarcane production a decrease in sucrose content would pose a concern to the level of yields even under normal conditions. Crucially, in the case of Ugu District Municipality where cane farming is already declining sharply rather than being stable, the inverse ratio could be actually exacerbating the situation. Considering the abovementioned issues and the additional evidence demonstrated in the ensuing section, it follows that the agricultural industry of Ugu in general and its sugar industry in particular has been hit thereby rendering the local sugar industry less competitive internationally. On this issue of industry decline, while its seriousness and the adverse impact on the economy was only documented by the Ugu District Municipality in 2010 through a study undertaken on the industry (USIR Volume 1), it is worth noting that according to Kaye (2013), the decline in the industry began manifesting as long ago as 2007/8. In consideration of the importance of **agriculture and in particular the sugarcane industry to the region's economy,** a project named Small Growers Renaissance Multi-Stakeholder Project also

known as the Recapitalization Program, which is a partnership between EDTEA, Illovo Sugar and Small-Scale Cane Growers from the three municipalities of Ugu District Municipality, namely Umdoni, Vulamehlo and Umzumbe, was established in 2007/8 (Kaye, 2013). This project intended to place an additional 500 hectares of land under cane production as a first step towards arresting the negative trend (Kaye, 2013). This project was a provincial government initiative and as such enjoyed the status of being **referred to as a "Flagship Project"**. One of the reasons why Ugu was considered for this project, apart from the obvious serious threat to the overall economy posed by the chronic decline, was the fact that Ugu District Municipality is designated one of the Presidential Poverty Nodal Points (SONA, 2001). Describing Presidential Poverty Nodes, the NRTS (2012) pointed out that these are areas inhabited by almost 10 million people who live in extreme poverty. Among the districts designated as Presidential Poverty Nodal points in KwaZulu-Natal are Umkhanyakude, Zululand, Umzinyathi and Sisonke District Municipalities, in addition to Ugu. Consequently, such districts enjoy priority status for public sector **interventions aimed at improving livelihoods for the districts' inhabitants**, which it is readily acknowledged is not easy to achieve and requires massive state allocation of resources. It is therefore not surprising that in designating these areas Presidential Nodal Points, President Thabo Mbeki (2001) made a call to government, labour and business to form strategic partnerships aimed at mitigating the scourge of poverty in these nodes by investing in projects that seek to fundamentally alter the adverse socio-economic conditions. The Small Growers Renaissance Project has to be seen within the foregoing context and underscores the seriousness of role players to give effect and commitment to the upliftment of Presidential Nodal Areas in practical terms. Incidentally, in the most recent survey of municipalities, Vulamehlo, Ezingoleni and Umuziwabantu Municipalities (all constituent municipalities of Ugu District Municipality) achieved ranks of 1, 4 and 8 respectively in the KwaZulu Natal ([KZN](#)) [Multiple Deprivation Index by the KZN Treasury for 2011](#) (UGDS: 2030 Vision, n.d.). This not only means that one of Ugu **Municipality's** constituent municipalities (Vulamehlo) had the worst ranking in terms of deprivation, but the district also had the most municipalities in the top 10 bracket of worst ranked jurisdictions. This confirms the severity of the limitations of economic prospects for the inhabitants (UGDS: 2030 Vision, n.d.). Although the Small Growers Renaissance Project initially intended to place 500 additional hectares of land under cane production, the amount was later reduced to 460 hectares because of the sudden increase in fertilizer and diesel costs which occurred prior to the implementation of the project. Unfortunately this project did not achieve the success that was hoped for, thus the downward slide of the industry continued unabated. With regards to the overall industry decline, it is highly likely that by the time Ugu District Municipality undertook its own study in 2010, this trend had already taken **root (Kaye, 2013)**. Although Kaye's focus was to some extent limited to the Grower Renaissance project and the success recorded in terms of meeting the project objectives, the author did comment that the problems had already begun to appear by the early to mid-2000s. Notwithstanding the above, the region only began to realise the gravity of the situation when the 2010 study was released. Through this study, alarming facts about the industry were laid bare and a call went out for drastic remedial action. The study provides ample empirical evidence regarding the decline in the sugar industry in Ugu and its dire consequences on the economic prospects of the

region (USIR, 2010). Prompted by the decline of the feedstock to the two district-based mills of Sezela and Umzimkhulu, and in an attempt to understand the root causes behind this, the study exposed an industry that is under severe pressure, some of it from the international arena but also from domestic forces. The decline manifested in intermittent closures of the Umzimkhulu Mill, which resulted in simultaneous cut-backs and the transfer of labour to the Sezela Mill, with a significant number of cane-growers having to travel additional distances to get the feedstock to the mill and in the process incurring transport and time costs. This was of great concern in a region with a limited economic base. In summary, the Sugar Industry Assessment Study Report highlighted the following alarming statistics about Ugu (USIR, 2010, p. 7). ? By 2009/10 sugarcane had lost 6.5% more hectares of land in the five years prior than other economic sectors. ? In the same period both Umzimkhulu and Sezela Sugar Mills processed less than three million tons of cane feedstock. ? By contrast the combined capacity of both mills is 3.8 million tons of cane, indicating the dire extent of underproduction. ? The report projected that the combined tonnage would further drop to 2.6 million. ? Most tellingly, the report states that over 1 000 jobs were lost during the same period. ? The same study concluded by pointing out an urgent need to plant a further 200,000 tons of sugarcane and set out various steps and supporting interventions that are critical to achieving this as a remedial intervention if drastic, adverse changes to the socio-economic prospects of the region are to be mitigated against. This study of the Ugu sugar industry not only bears testimony to the dire situation of the industry, but it also identifies the hinterland as the future area of growth as the hinterland/areas under the Ingonyama Trust Board (ITB) as the only viable alternative to salvage the situation given the loss of cane land in traditional farming areas. Incidentally, ownership of this land, although under legal stewardship of the ITB, is assigned/reserved for BSSSGs. This means that for the first time the peripheral hinterland not only stands to offer solutions to save the ailing industry which is part of the mainstream economy, but the situation potentially provides an ideal opportunity for real Broad Based Black Economic Empowerment (BBBEE) for BSSSGs based on the prospects of commercial production located right at their doorstep. It also represents an unprecedented statement in the history of the region whereby large scale commercial production is contemplated in the hinterland and areas where PDIs stand to meaningfully participate as land owners. On both accounts, it is imperative to gain insights into the proficiency levels of BSSSGs as potential pioneers of commercial production of some scale in these areas, and to utilise insights gleaned from this to formulate a preparedness strategy in support of the imminent roll-out of commercial production as earmarked for the hinterland.

1.3 Problem Statement

The study is aimed at determining the survivability of BSSSGs within the chosen area of Ugu District Municipality against the backdrop of a chronic decline in the sugarcane industry. In the preceding section it was shown that the sugarcane industry of Ugu District Municipality is under siege from factors that emanate mostly from the international arena, as well as to some degree domestically. It is argued that the combined effect of legislative changes alone could be devastating for BSSSGs, given that by virtue of their survivalist and novice stature in the industry, combined with other reasons that derive from the apartheid exclusionary policies, they are inherently more vulnerable than their commercial counterparts. The researcher therefore explored to what extent BSSSGs are surviving in an industry which

is under siege from international competition, and which has recorded an en masse exodus of large-scale commercial farmers (USIR; 2010).

1.4 Focus of the [Study This study seeks to investigate the chances of survival of BSSSGs within Ugu District Municipality given the drastic, chronic decline that it has experienced for almost a decade. The research sampled BSSSGs whose farmers are located along the P68 Corridor, which comprises the Umzumbe and Hibiscus Coast Municipalities, as well as Mfume BSSSGs whose farms are located in Vulamehlo Municipality.](#)

1.5 [Aims and Objectives of the Study The main aim of the research was to explore factors that account for the survival of BSSSGs in Ugu District Municipality in the face of the serious challenges that beset the district's sugarcane industry. The study was broken down into the following objectives:](#)

- ? To understand BSSSGs' perception of the overall sugarcane industry.
- ? To understand BSSSGs' perception of farm-specific/micro-economic attributes that make them susceptible to failure.
- ? To determine whether BSSSGs employ deliberate strategies to counter the causes and/or effects of the decline in the industry.
- ? To examine BSSSGs' perceptions of their own farm size and land tenure in terms of whether these enhance or inhibit their survival. Alternatively, could it be that large-scale farmers are less adept at surviving than BSSSGs? Could the IR phenomenon be responsible for this, or is it the case that these emerging farmers are quietly perishing without much attention being paid to them? By answering the above questions the researcher surmises that insights about the overall survivability of small sugarcane farmers will be gleaned, which will assist in determining whether some corrective measures are necessary.

1.6 Research Questions The research [questions were formulated in order to gain an insight into the levels of proficiency, awareness and technical acumen across the four thematic areas that the researcher conjectured are critical for BSSSGs' survival given the current state of the industry. These thematic areas are as follows:](#)

- ? What are BSSSGs' perceptions of the overall sugarcane industry?
- ? What are BSSSGs' perceptions of farm specific/micro-economic attributes that make them susceptible to failure?
- ? Do BSSSGs employ deliberate strategies to mitigate the causes and/or effects of the decline?
- ? Do BSSSGs perceive farm size and the land tenure system to be a factor in survivability?

1.7 [Significance of the Study This study and its relevance must be viewed within the context of the KZNPGDP. The document is a blueprint for the province which aims to turn around its socio-economic status based on a single provincial vision that stretches from now until 2030. The vision represents the first of its kind within the South African context that projects economic growth and social development across a wide spectrum of indicators on a long-term basis. This plan essentially directs the marshalling of resources by the private, public and non-governmental sector/civil society in an LED triad. The KZNPGDP designates the province's agricultural sectors as being critical to the province's quest to turn around its economic fortunes. Under the plan's strategic objective relating to the unleashing of the province's agricultural potential, it sets various targets relating to inter alia emerging farmers and SMME development, turning vast hectares of virgin Ingonyama Trust \(hinterland\) land into large scale commercial production, value chain mainstreaming of emerging farmers, and massive employment creation arising out of projects and programmes falling under the KZNPGDP. As per the sugarcane study, the rural hinterland was identified as a potential growth point. Taking cues from the KZNPGDP, Ugu District Municipality has developed its own version of the Growth and Development Plan. Based on its unique spatial and economic attributes \(dual](#)

space economy), the district plan identifies agriculture and tourism as its leading sectors and therefore deserving of the most attention. On the other hand agriculture is facing serious problems of job losses, as discussed in the Growth and Development Strategy. With reference to the current state of **Ugu's agricultural industry and its importance to overall economic fortunes, the strategy observes that: "One of the traditional mainstay economic sectors in the region, agriculture, has shed jobs at an alarming rate over the past decade, primarily due to restrictive legislation which has affected the agricultural investment appetite. These jobs have been lost to the local economy due to the inability of other sectors to absorb or replace them. The tourism sector, perceived by many as the lead sector within the region, has struggled to grow off a shrinking tourism season" (UGDS 2030 Vision, n.d., p. 5).** The report further alarmingly notes that: "This situation has been further worsened since 2007 due to a number of factors, including the global economic downturn and stricter national credit control measures, resulting in a marked decline in investment across all sectors. This has generated fears that gains in poverty reduction in the Ugu district prior to 2007 may have been reversed. While there is some indication of recovery in recent years, it is clear that without targeted and significant 14 intervention and investment within the economy that could take advantage of its many comparative advantages, the district will continue on its path of deepening poverty, increasing joblessness, spatial fragmentation and increasing polarization between those with and without access to the formal economy. The Ugu district is clearly at a cross-road" (UGDS: 2030 Vision, n.d., p. 5). In fact of the two sectors, i.e. tourism and agriculture, an even greater emphasis is placed on agriculture. The main reason behind this, apart from the recent shrinkages noted above, is that tourism, like other significant sectors such as manufacturing and others, has tended to only thrive in the coastal belt of the district. Whilst the importance of this growth cannot be discounted, the challenge is that the majority of the PDIs reside outside of these urban areas. The result is that traditionally PDIs have only been able to meaningfully participate in the economy through the migrant labour system, which has its own socio-economic ills. These sectors, by virtue of their skewed prevalence patterns, are ordinarily inaccessible to PDIs for economic transformation. For this reason they do not readily lend themselves to the **government's BBBEE objectives and economic transformation, since established businesses in the coastal strip offer limited, if any, opportunities for radical economic transformation.** On the other hand it can be argued that new ventures with a hinterland bias, within a land tenure system that somewhat favours PDI and a proximity that is close to PDIs, not only offers greater prospects for achieving BBBEE objectives, but further addresses the problems of rural-urban migrants in search of jobs, which causes urban sprawl and other attendant socio-economic problems. The UDGS: 2030 Vision (n.d.) confirms the notion that the hinterland, mainly through **agriculture, offers improved prospects for BBBEE: "The ailing agricultural sector offers the greatest potential for spatial integration.** Whilst there is currently a stark spatial divide between commercial and subsistence farmers, opportunities for expansion in the sector lie in the undeveloped, fertile Ingonyama Trust lands. If communities were engaged, sustainable livelihoods identified, natural resources well-managed, supporting infrastructure, such as roads and dams, were provided and market linkages were forged then the spatial landscape of economic activity could be fundamentally transformed. The Tourism Sector also has potential to

integrate the region through (the) linking of coastal and hinterland tourism products” (Ugu Growth and Development Strategy: 2030 Vision, n.d., p. 29). Confirmation of the dichotomous spatiality of the Ugu District economy is further discussed in the following statement: “Economic Activity remains concentrated in the coastal strip. Manufacturing remains clustered close to the major nodes of Port-Shepstone and Marburg due to availability of serviced land and connectivity to the N2 (road) network. Very limited manufacturing occurs outside these key nodes. Retail, commercial activity and tourism activity is largely concentrated in the coastal towns. The main economic activities within the hinterland are: agriculture (commercial and subsistence), forestry and some mining” (Ugu Growth and Development Strategy: 2030 Vision, n.d., p. 28). As a graphic illustration, Figure 1.2 shows the historical trends of employment per sector in Ugu from 2000 to 2009. Figure 1.2: Historical employment trends in Ugu by sector since 2000 Source: UGDS: 2030 Vision (n.d., p. 23) Figure 1.2 shows among other trends, that the combined sectors of Agriculture, Forestry and Fisheries experienced a sharp decline around 2001, which persisted through to 2009. What is worth noting is that none of the other sectors within the economy experienced the necessary growth to offset the decline in the latter sector. Evident in the same graphic is that the majority of other sectors barely experienced any meaningful growth; those that did grow only did so marginally, while the majority remained stable. This had an adverse effect on the employment situation. Meanwhile, the UGDS: 2030 Vision (n.d.) highlights even more disconcerting figures concerning the district’s fortunes relating to the agricultural sector. For example, the report indicates that a total of 21,299 jobs were lost between 2000 and 2012. Among the leading causes of these losses was the slow pace of land claim resolutions and the resultant disincentive effect it had on investment by affected existing farmers. Other reasons include the under-capacity of successful land claimants who, subsequent to restitution, being industry novices often confront massive technical, business acumen and financial capacity challenges that render them unable to maintain pre-restitution levels of production, leading to a drastic reduction in overall farm productivity. These adverse factors have worked in tandem with a wave of diversion of land use away from sugarcane farming to other more attractive sectors, particularly the real estate/property development sector, thereby exacerbating the reported 6.5% loss of hectares away from sugarcane farming (USIR, 2010). On the socio-economic front, the UGDS: 2030 Vision (n.d.) comprehensively delves into the prevailing socio-economic state of Ugu District Municipality and reveals a region that is gripped by extreme poverty, as attested to by the following statistics: using extreme poverty (people living under 1 US Dollar per day) as an indicator, 53,097 people of the roughly 750,000 total inhabitants are reported to be living in extreme poverty (UGDS: 2030 Vision, n.d.). Using the Minimum Living Standard Measure the situation is more severe, with the figure standing at 407,138 poor individuals. This represents approximately 58% of the total population of Ugu (UGDS: 2030 Vision, n.d.). Figure 1.3 illustrates the skewed nature of industry distribution patterns along the coastal belt within Ugu District Municipality. The patterns illustrated underscore the need to find a way to bolster economic growth in the hinterland. It should be borne in mind that one of the direct consequences of skewed economic growth is rural-urban migration, which results in other problems associated with urban sprawl. Port Shepstone is the administrative node for the whole region. All of the secondary nodes, which

represent centres of economic activity, are located in the coastal strip, with **the one exception being Harding. The areas depicted in the map as "growth & retention" are in close proximity to the secondary nodes and are therefore considered economic "hotspots".** Another observation about this map is that the concentration of light industrial nodes has a higher prevalence on the coastal strip. One reality that the map does not show is the depth and size of these industries, which in urban areas, would be substantially higher, with greater economic benefits in the form of workforce size and other factors. Lastly, this map shows two tertiary nodes, however these are nothing but fledging nodal points in rural areas with comparatively insignificant economic activity. Figure 1.3: Distribution Patterns of Infrastructure and Economic Activity within Ugu District Municipality Source: Ugu Spatial Development Framework & Land Use Management Framework (2005, p.7)

Apart from illustrating the concentration of economic activity on the coastal strip, the above map also underscores the dire extent of need/deprivation in the hinterland. This pattern of concentration also mirrors a lack of infrastructure and public transportation, as well as water and sanitation, schools, electricity, health care and policing services, amongst others. In a way this map indirectly mirrors the existence/accessibility or otherwise of amenities to the inhabitants of Ugu. From an economic stand point and given the spatial inequities illustrated in the map, it therefore stands to reason that given the absence of viable alternative economic options (sectors) within the **hinterland, that Ugu District Municipality and its constituent municipalities'** agriculture is the most likely sector to resolve the perennial problem of hinterland underdevelopment. In this regard, it should be borne in mind that unlike other districts, Ugu is not endowed with a strong manufacturing or even a mining sector of significance to drive the economy out of extreme poverty. Although there are other industries, of great concern is that their growth has been far from impressive, as illustrated in figure 1.2. This study may be of interest to policy makers who are concerned about the economic decline in the district and are looking to revive the sugar industry to arrest the chronic decline in feedstock, and by extension the industry and overall **economy's dwindling capacity to support livelihoods. Illovo Sugar may also** pay special interest to the research, since by its own admission the hinterland and by definition BSSSGs will be at the forefront of this new wave of production in sugarcane to the hinterland. After all, the dire situation directly affects the organisation in the form of intermittent closures of one of its mills, while production fluctuates on the edge of break-even point. LED practitioners, Agricultural Extension Officers and anyone who actively participates in LED will find this research of interest, as understanding the state of survivability or otherwise, including strategies where applicable, will deepen their insight and understanding of the industry and the coping strategies employed by BSSSGs. It will also help practitioners to replicate successes where such are recorded, which should ensure that best practices are shared. Likewise, information on failures will be disseminated and hopefully mistakes will not be repeated.

1.8 Limitations of the Study

This study falls within a qualitative and non-positivist paradigm which is geared towards understanding a phenomenon in greater depth with a view to eliciting context specific knowledge and insights. Therefore, unlike a quantitative design, it is neither the intention of the researcher to test hypotheses nor to generalise results from the study. In summation, the study does not intend to test relationships between any variables, since what is of primary concern to the study is to understand how BSSSGs are adapting

without a priori assumptions. 1.9 Research Methodology The [research methodology employed in this study](#) was a qualitative [design](#). The sampling followed was a two-stage sampling process, which commenced with convenience sampling followed by a snowball sampling technique. Accordingly, two sugar cane farmers associations in Ugu were chosen, namely Qhubekani Farmers Association and Umnini-Mfume Farmers Association. These associations were designated into Streams A and B respectively. A total of 15 respondents were interviewed, with eight being from stream A and seven from Stream B. Whilst the first two respondents from both streams were chosen using convenience sampling, subsequent respondents in each stream were chosen by the snowballing sampling technique until a targeted number of respondents per stream was reached.

1.10 [Structure of the Dissertation Chapter 1](#) provides an [introduction](#) to the research milieu and deals with all the pertinent aspects of the research, which include the economic situation and the relevance of the industry thereto, the international and domestic forces driving the chosen industry to the brink, the importance of the study and what it needs to elicit in terms of BSSSGs survivability, Chapter 2 provides a theoretical framework and insights into the dynamics associated with the study, leading to the research questions that underpin the study, Chapter 3 deals with the nature of the design, sampling techniques and interview protocols. Chapter 4 includes the results of the study in thematic areas as they emerged from the process. Chapter 5 incorporates [a discussion of the results and findings](#). [Chapter 6](#) deals with [conclusions and recommendations](#). CHAPTER 2 2.1 LITERATURE REVIEW This chapter looks at farming practices to discern prevailing trends and their implications for survival in a situation of extreme global competitiveness, as well as other challenges such as severe weather patterns. The chapter further looks at technological advances, individual farmer attributes, management competencies, technical skills and entrepreneurial acumen, all of which are associated with success from studies undertaken in South Africa and elsewhere on aspects that serve as proxies for business success in general. The following section covers aspects related to agronomic practices and related skills and knowledge, and business decision making tools which are deemed to be an imperative feature of a 21st century SMME who is acutely aware of the robust competition that he/she constantly faces. 2.2 SOUND AGRONOMIC PRACTICES, PRODUCTIVITY AND GLOBALIZATION EFFECTS. It is widely acknowledged that the demands of globalisation have made it imperative for producers across the globe to stay competitive. Nowhere is this more evident than in the case of Ugu, where the overall economic performance has suffered the most adverse consequences of this phenomenon. This is most notable in the agricultural sector, which ranks among the worst casualties (UGDS, 2030 Vision, n.d.). Globalisation and allied pressures to stay internationally competitive are among the principle drivers behind the decline, with Ortmann (2005) confirming that both large-scale [and small-scale farmers](#) are exposed to [the changes of](#) the dynamic global trade environments [caused by the liberalisation of international trade markets](#). Of relevance to South Africa, Genis (2012: 102) observed the dynamic nature of farming and relevant pressures this exposes farmers based on evidence from Limpopo, Western Cape and Northern Cape, found the following top five pressures facing the farmers in their order of importance. ? Production costs. ? Climate and weather. ? Labour matters such as productivity of farm workers and labour legislation. ? Uncertainty about the government's land

and labour policies. ? The prices received for produce. In terms of the critical role that individual farmers play as pillars of industry competitiveness, **Ortmann (2005) commented that: "The competitiveness of a whole industry, such as the beef, maize or sugar industries, depends on the competitiveness of its individual farmers..." (Ortmann, 2005: 309).** Ortmann (2005) further posited that international competitiveness and the ongoing quest to survive also require constant technological improvements within the sector, citing the following practices and behaviours as being critical: ? Adoption of new technologies which results in production increasing with the same or fewer inputs. ? Adoption of improved technology by using new varieties of high yield crops and better livestock breeds. ? ? Improved methods of insect, disease and weed control regimes. Improved mechanisation, timeous planting and harvesting, and better tillage techniques overall. Sumner (2011) reiterated the importance of following a strict agronomic regime as a way to enhance industry productivity, and lamented the fact that efforts in this regard exclude or seldom include root excavation as part of a diagnostic process to formulate remedial measures. He pointed out that this biased concentration surface activities rather root penetration and other ailments beneath the surface, compromises effort to improve crop yield over time (Sumner, 2011). Similarly, Shane, Locke and Collins (2003) discussed the importance of cognitive factors, including knowledge, skills and abilities (KSA), along with entrepreneurial motivation, as critical success ingredients. Beckford, Barker and Bailey (2007, p.274), in their study of survival strategies of small-scale farmers in Jamaica, stated that this sector was lagging behind in terms of technological advancement. In this case the **authors observed a pattern as these farmers were still inclined to: "... operate under difficult circumstances, employing practices and technologies with low levels of input that have been relied upon for generations"** (Beckford et al., 2007, p. 274). Numerous other authors such as Murphy (2012), Young, Schafers and Bruwer (2012) and Aliber and Hart (2010) provided further insights into the onerous conditions facing the sector based on pressures from various origins. Murphy (2012) commented on the paucity of skills with reference to farmers, together with other endemic challenges that inhibit this sector from flourishing. He added that the challenges that are besetting the small-scale farmers include a lack of decent inputs, a lack of good quality land, insufficient smart technologies, and a lack of capital markets. All of these challenges go to the heart of the input-out/production function and ultimately affect competitiveness. Further evidence of an absence of skills is evident in Maloa (2001), who referred to the practical steps that were undertaken to enhance the skills levels of black cane growers within the South African context. In this case the author outlined a number of steps which black growers implemented to enhance their proficiency in productivity and therefore their growth prospects. Among such steps the author listed, **"dedicated economic, resource utilization (productivity and costs minimization), database information systems, and organizational management advisory service by canegrowers "(Maloa, 2001: 2).** From this assertion it is evident that the author envisions a farmer who is fully conversant with micro-economic dynamics as they relate to his/her farm production function, and who are adept at leveraging information systems as an important business managerial operations tool. The author went on to mention that training of 17,471 growers at a total cost of R5.9 billion in sugarcane husbandry and technical and business skills had already been achieved by as far back as 31st March 2001 (Maloa, 2001, p.5) to mitigate

the challenge of technical and managerial proficiency among the target farmers. This training confronted the challenge that the author mentioned of **a lack of "targeted human resource development" head-on** (Maloa, 2001:2). Young, Schafers and Bruwer (2012), on the other hand, argued in favour of the importance of firmly controlling the internal environment by business owners. In their research on the power of internal financial controls as a determinant of sustainability among informal sector businesses in the Cape Town Central Business District, the authors echoed its importance within the small business sector, but disappointingly they found this to be acutely lacking among the sample. Young et al. (2012) found internal financial environment controls to be perceived to be beneficial by respondents in the following ways: ? Useful and effective for business growth. ? A preventive measure against fraud, losses and theft. Meanwhile, Urban and Naidoo (2012) and Olawale and Garwe (2010) cited poor performance as a major shortcoming of South African SMMEs. This is cause for great concern. Regarding the propensity by South African small businesses to perish, Urban and Naidoo (2012) observed a high failure rate among SMMEs that they attributed to deficiencies in managerial skills. [Olawale and Garwe \(2010\)](#) commented [that the failure rate among South African SMMEs is](#) an overwhelming 75%, which ranks amongst the worst in the world. Olawale and Garwe (2010) ascertained that the reasons behind SME failures can be divided into two broad categories, namely internal and external environmental forces. Crucially, among internal obstacles management skills feature prominently, thus underscoring the centrality of the manager and his/her competency in ensuring SMME survival. Also notable among internal factors is the ability to invest in and to harness information technology as a critical success ingredient. This echoes the importance of sound agronomic practices and the leveraging of technology, as alluded to previously. Van den Berg and Smith (2005), like Maloa (2001), referred to the practical measures taken to mitigate the ongoing skills deficiency which adversely affects the emerging farming sector. They created a comprehensive plan to enhance the skills level of farmers to achieve the objectives associated with HRD with the farming sector. In this regard, Van den Berg and Smith (2005) provide a comprehensive regime for the support of sugar cane farmers based on the progress level achieved by SASRI in a crop growth modelling support decision support system. On the utility of the **crop growth model the authors noted the following: "Model output can be prescriptive, indicative for example, when to irrigate and how much. More commonly, however, output is provided as conditional; for example, what yield can be expected if certain decisions are taken (e.g. to apply x mm of irrigation water next week instead of today). Such 'what if?' models give the user freedom to analyze trade-offs between biophysical aspects and other dimensions of decision making which are better accounted for by mental models"** (Van den Berg and Smith, 2005, p. 498). The crop growth modelling support decision was intended to enhance productivity competitiveness, which in essence is a function of how efficiently the producer combines factors of production and how well the input-out function is leveraged relative to his/her counterpart, both domestically and internationally. As an emergent characteristic it tends to be interwoven with a web of other attributes, defining the operating context in which the sector under consideration prevails. As such, it tends to primarily centre around any or all the four factors of production in combination, namely land, labour, capital and entrepreneurship. In conclusion, it is evident from the literature that the

agricultural sector is exposed to many challenges, some of which emanate from international competition which appears to be the most severe, as well as changing weather patterns which cause a great deal of crop uncertainty and sometimes poor yields. It was also noted that [South Africa performs poorly when it comes to](#) SMME failure rates, which points to a dearth of managerial acumen and technical farming proficiency (Urban et al., 2012; Olawale et al., 2010). Against this backdrop it was also highlighted that individual farmer competitiveness is the bedrock of overall industry competitiveness, which South Africa is dearly lacking. In response to South Africa's unique circumstances, SASA and SASRI took steps to mitigate any deficiencies by introducing training (Maloa, 2001; Van den Burg et al., 2005). It is evident from the literature that this training was tailored to **reinforce emerging farmers' ability to control** their internal environment and to improve their agronomic proficiency overall. It is also evident that Information Technology systems and technology adoption would greatly enhance farming productivity. The role of a farmer as a main driver of success and his/her ability to enhance the overall survival of their business, especially in the constantly changing operating environment that typifies the 21st century, is apparent.

2.3 PSYCHOLOGICAL ATTRIBUTES OF SMMEs AS DETERMINANTS OF BUSINESS SUCCESS OF FAILURE

2.3.1 Introduction

While section 2.1 discussed inter alia agronomic practices, international competitive pressures, the need to harness technological advances and Information Technology Systems, technical skills and managerial acumen as being critical in the battle of survival facing the farming sector, the following section explores the literature on psychological, cognitive and trait attributes to uncover relevant theories in this regard. Based on the views of various authors, it seems that while they may be easily cast aside as irrelevant, individual psychological attributes are among the chief determinants of SMME success. These attributes, although in certain instances having been referenced to different entrepreneurial settings, are also critical ingredients for success in the sugarcane industry. The section below refers in detail to some authoritative sources that espouse individual psychological traits as drivers of success in business.

2.3.2 Individual Motivation and Psychological Traits

Among the exponents of individual psychological attributes, Shane et al., (2003) reasoned that the importance of an entrepreneur at individual level not only in making a (conscious) decision to become entrepreneur. The authors further posited that such a decision evokes a self- evolutionary **process culminating in the individual's state of mind characterised by high awareness of opportunities**. According to the authors this individual evolutionary process is crucial in opportunity evaluation resulting in pursuit of those that promise the most returns and generally seeking and scanning these opportunities in order to exploit them for survival in the chosen field. [Shane, et al. \(2003\)](#) argued [that human motivation](#) is the [critical](#) influence behind these decisions, saying that people are differently endowed in their propensity and willingness to take these decisions, which naturally distinguishes their entrepreneurial proficiency from others. Of further importance is that notwithstanding the primacy these authors accord to human motivation, external factors play an important role in human/entrepreneurial action ([Shane, et al. 2003](#)). Among these external [factors](#) are [the status of the economy, the availability of venture capital, the actions of competitors and government regulations](#). The following phrase best sums up the view of the authors on the importance of human motivation, regardless of the role of external factors: "However,

environmental factors being held constant, we argue that human motivation **plays a critical role in the entrepreneurial process**" (Shane, et al., 2003: 2). Meanwhile, Gartner (1989) argued that psychological approaches in the form of personality traits have not sufficiently explained the phenomena of entrepreneurial success, and instead favours behavioural approaches as being more productive in explaining them. Yet numerous other authors argue in support of the predictive power of psychological approaches concerning success in the business enterprise arena. In their study of psychology as the underpinning force behind the phenomenon of new venture creation to enhance human understanding of how entrepreneurs arrive at decisions that result in creating new businesses, Shaver and Scott (1991) placed the person/individual at the centre of understanding the rationale behind the **decision making process and shaping an enterprise's fortunes. Confirmation of the overriding role of the individual in this regard is shown in the following extract: "Where anthropologists emphasize cultural influences on actions, and sociologists emphasize social structure and organization, psychologists concentrate on individuals. A translation of the Greek roots of the discipline's title would be "the study of human spirit or soul." Although there have been diverse, if not say contradictory, descriptions of human spirit, soul or mind might be like, psychology has always recognized that whatever the description, a mind exists within a single individual. Consequently, psychologists are predisposed to search for explanatory concepts that can be located within the person"** (Shaver and Scott, 1991, p. 24). Among the individual dynamics Shaver and Scott (1991) deem essential for success in new venture creation are deliberate choices that are made by individuals. In this regard they discerned two psychological states that underpin choices, which in turn influence the perception of control and the motivational process **based on two critical questions related to venture creation: "Can I make a difference?" and "Do I want to?"** The authors, similar to Shane et al. (2003), argued that while the importance of economic circumstances, social networks, marketing, entrepreneurial teams, finance and even public agency are important, it is the person in whose mind all of the possibilities come together. Shaver and Scott (1991) reasoned that individual characteristics and attributes have not received due attention in venture creation, which **prompted them to note that: "Through the years, more and more personological characteristics have been discarded, debunked or at the very least, found to have been measured ineffectively. The result has been a tendency to concentrate on almost anything except the individual"** (Shaver and Scott, 1991, p. 39). They concluded by arguing that it is at the level of the individual person, process and choice that we can gain deeper psychological insights into new venture creation. Cunningham and Lischeron (1991) similarly affirmed the role of individual psychological traits in entrepreneurship. The authors provided a detailed discussion of six different schools of thought that they believed explain entrepreneurship based on the trait approach. In their treatise on entrepreneurs and the theory of entrepreneurship, they identified the following schools of thought: ? The "Great Person" School of Entrepreneurship ? The Psychological School of Entrepreneurship ? The Classical School of Entrepreneurship ? The Management School of Entrepreneurship ? The Leadership School of Entrepreneurship ? The Intrapreneurship School of Entrepreneurship. As can be discerned from research by these authors, depending on which school of entrepreneurship one espouses, entrepreneurship can be explained through a wide range of attributes, skills, and assumptions. Among the definitions

associated with each of the preceding schools of [entrepreneurship](#), [Cunningham and Lischeron \(1991\)](#) postulated that [the Great Person Model](#) corresponds with the definition of entrepreneurs as, “extraordinary achievers”, the Psychological School with founder and controller over means of production, the Classical School with [creating value through the recognition of business](#) opportunities, [the Management School](#) with [risk-taking through](#) communication, [the Leadership School](#) with “social architect” through the promotion and protection of values, and the Intrapreneurial School with [those who pull together to promote innovation](#). The authors concluded their treatise by stressing that none of these schools is superior to the others. In a comparable study, Rauch and Frese (2000) tested for **McClelland’s well renowned theory of nAch**, which refers to an individual motivational state to determine its prevalence among entrepreneurs. The concept refers to a deep seated and intrinsic drive for success that is characteristic of some individuals. This source of motivation is sometimes **termed an “internal locus of control”, where the “inner self” is the driver of success** rather external factors. Indeed, Rauch et al. (2000) found that **entrepreneurs displayed a significant positive correlation with ‘Need for Achievement’**. Likewise, Johnson (1990), as cited by Shane et al. (2003), argued that there is a higher prevalence of the ‘Need for Achievement’ among entrepreneurs than others. On the other hand, Baum and Locke’s (2004) research findings supported [specific component variables of entrepreneurs’ traits](#), skills [and motivation categories](#) as being [significant direct](#) and [indirect predictors of growth](#). [Baum et al.](#) (2000) identified a collection of specific traits that enable individuals to survive challenges, including New Resource Skill, in combination with other personality traits such as tenacity and self-efficacy, as being direct or indirect predictors of venture growth. Shane et al. (2003) also argued that goal-directed energy sustained over time becomes persistence, and likewise self-efficacy/task specific confidence sustains effort over time. McGee, Peterson, Mueller and Sequira (2009) further supported the notion of ESE as an explanatory motivational variable in their study which dealt with the measurement thereof. Gagoitseope and Pansiri (2012) also found motivation for starting the business to be critical and a driving force behind success. The authors **noted that entrepreneurial motives had a positive effect on managers’** responses to environmental phenomena. Likewise, Alam, Jani and Omar (2011) found that internal motivation significantly contributed to success among women entrepreneurs in the southern region of Malaysia. In further support of the relevance of personality traits in this context are findings based on a study by van Gelder, de Vries, Frese and Goutbeek (2007). These authors observed both behavioural and psychological attributes of failed versus surviving businesses, which were the primary determinants of success and failure. In terms of these research findings, a higher degree of human capital correlated positively with success, while conversely, a lesser amount or lack of it was found in failed cases (Van Gelder et al., 2007). **Van Gelder et al.’s (2007) study distinguished successful from unsuccessful businesses** according to their attributes. Among attributes that correlated positively with success are the following: ? Managers of failing firms were found to be more prone to denying crises than their successful counterparts. ? Human capital (measured as education and development skills) was found to encourage the development of adequate mental models, which in turn enhanced entrepreneurship. ? Failed entrepreneurs were found to adopt complete planning less frequently and relied predominantly on reactive

rather than proactive planning strategies. In general support of this hypothesis, a study by D'Aveni and MacMillan (1990) found that managers of firms who survived bankruptcy during crisis found that crisis denial resulted in maladministration. Incidentally, the same crisis denial posture was found to be correlated with business failure by van Gelder et al. (2007). Likewise, the study by D'Aveni and MacMillan (1990) distinguished surviving managers from those that failed due to the former's enhanced focus on the external environment. In his critique of the trait approach, Gartner (1989) however noted that: "In the trait approach the entrepreneur is assumed to be a particular personality type, a fixed state of existence, a describable species that one might find a picture of in a field, and the point of much entrepreneurship research has been to enumerate a set of characteristics describing the entity known as the entrepreneur" (Gartner, 1989, p. 48). While this critique has some degree of truth a counter argument can be made, which is that research about traits, where it is undertaken, only seeks to ascertain/discern whatever psychological attributes tend to correlate positively/coincide with entrepreneurial success. This does not necessarily mean that without such attributes entrepreneurial success is unattainable, and neither does it necessarily mean a causative relationship. It is thus conceivable that such observed success is underpinned by a not immediately recognisable cause or other mutually reinforcing positive interplay between those traits and other underlying behavioural or situational factors and variables in a dynamic phenomenon, which is referred to as emergence in complexity theory. For this reason the argument is not necessarily one of causality insofar as that attribute of interest is concerned, but rather about correlation. Furthermore, these personality traits, contrary to what is alluded to in preceding the assertion, need not be fixed per se, but should rather form part of the entrepreneur's "arsenal" - a psychological and behavioural "tool-kit/tool-box" that they can rely on if the situation demands, typifying some sort of nimbleness on the part of those that exhibit such a trait as they ride the proverbial crest of the wave. Carsrud and Brannback (2011) defined motivation as motives and instincts that underpin behaviour that seeks to achieve success, to survive or simply to avoid failure. The authors further posited that motivation can be explained either in terms of drive theories (or intrinsic motivation), sometimes referred to as "push theories", and incentive theories (externally induced motivation), sometimes referred to as "pull theories". Supporting the relevance of individual motivational traits theory, Zahra, Korri and Yu (2005), like Locke et al. (2012), lamented the fact that research on entrepreneurial phenomena has tended to focus on the external environmental factors, whether they are macro, industry or firm specific. To correct this they postulated that the role of cognition on opportunity recognition and exploitation is an intra-personal process. Reiterating that the individual is the foundation of the phenomenon of entrepreneurship, the authors noted [that](#): "To be entrepreneurial, we believe an act should be preceded by sense-making that enables key organizational actors to view the external environment in a new light. In turn, this requires an environment with no [crystallized, rigid meanings and organizational actors without entrenched](#) organizational [models](#)" (Zahra et al., 2005, p.142). The potency of this statement insofar as it underscores the primacy of individuals in the entrepreneurial phenomenon cannot be over-emphasised. Firstly, it infers that entrepreneurs are not necessarily concerned about the complexities and ambiguities of the environment they operate in. On the contrary, they are endowed with unique sets of lenses through which they

are able to define and magnify even the smallest of opportunities. This further implies that unlike ordinary people they can readily harness the inner resources, resolve, resilience and capacity necessary to face whatever challenges may otherwise cause non-entrepreneurs to succumb. These **"tools" and inclinations make them gravitate towards and enjoy the challenge of entrepreneurship.** With regard to the innate ability to adapt, Cardon, Wincent and Drnovsek (2009) conducted a study on entrepreneurial passion (entrepreneurial motivation) in relation to business success. They **noted that passion facilitates an entrepreneur's effort to adapt and cope with environmental challenges.** Cardon, Wincent, Singh and Drnovsek (2009), meanwhile, claimed that three entrepreneur role identities, namely inventor, founder and developer, motivate entrepreneurial action. They noted that entrepreneurs need not necessarily have a single identity disposition, but if they have more than one they would be in a hierarchical pattern whereby one predominates and others follow. In the case where one salient role identity predominates, tasks that require a lacking role identity tend to elicit a strong negative passion, which is followed by strong internal resistance and rejection. Further evidence of the importance of entrepreneurial motivation is to be found in a study by Collins, Hanges and Lock (2004). These authors found that achievement motivations are a significant predictor of both entrepreneurial choice as well as performance. As expected, the authors explained that such personality factors are not necessarily the sole predictor of success. Given the substantial support for these personality traits being present in entrepreneurial research, their presence in a case being evaluated should engender a feeling of comfort to the researcher. Conversely, a lack of these traits among a sample should raise an alarm. It therefore stands to reason that personality traits are not to be discarded and at the very least have a complementary role (even if remote) to play in shedding light on the phenomenon of entrepreneurship. This is further supported in the following statement: **"This purpose of the first part of this research is to look at research based on the trait view of entrepreneurship and to show that this view alone is inadequate to explain the phenomenon of entrepreneurship" (Gartner, 1989, p. 48). This statement acknowledges the relevance of the personality traits approach to explain entrepreneurship.** It is thus logical to conclude that to succeed as an entrepreneur one should be endowed with different sets of mental models that enable one to encode information differently from other people. Zhao, Seibert and Lumpkin (2010) further confirmed that personality plays a role in the emergence and success of entrepreneurs. In a somewhat different angle, Santos, Curral and Caetano (2010) explored what they referred to as cognitive maps during early entrepreneurship stages. This study yet again supported entrepreneurial motivation as the bedrock for opportunity recognition and venture establishment. In conclusion, this section explored the role of motivation and individual traits as drivers of entrepreneurial behaviour. Despite some dissenting opinions, evidence from authoritative sources appears to highly favour the role of individual motivation and cognitive factors, in conjunction with skills and external factors, in enhancing the chances for entrepreneurial success. Evident among many authors is the notion of motivation combined with cognitive factors (knowledge, skills and ability - KSA) as being among the principle determinants of entrepreneurial success (Shane et al., 2003). Meanwhile, other authors espouse the role of motivation through self-efficacy and passion (McGee et al., 2009; Shane et al., 2009).

2.4 HIV AND AIDS IMPACT AND BSSSGs' VULNERABILITY

2.4.1 Introduction HIV and

AIDS poses a serious socio-economic threat to Ugu District Municipality (Ugu District Growth & Development Strategy: 2030, n.d.). As a district that has a comparatively high prevalence of this disease, it is deemed that this topic merits further exploration, which will be undertaken in the section that follows.

2.4.2 HIV and AIDS Potential Impact Apart from the general pressures facing the farming industry at large, KwaZulu Natal faces additional challenges in the form of HIV and AIDS (Northard, Ortmann and Meyer; 2004). Northard et al.'s study identified the HIV and AIDS pandemic as being one of the critical challenges facing small-scale sugarcane contractors in KwaZulu- Natal. While this alarming observation may not necessarily have been referring specifically to the current (Ugu) research setting, the statistics do show that the Ugu region and the rest of southern KwaZulu-Natal have the highest prevalence rate and are leading in the incidence of HIV and AIDS (Ugu Draft Growth and Development Strategy: 2030, n.d.). The impact of the HIV and AIDS pandemic is devastating on the small scale farming sector (Ortmann, 2005). Among these effects are high labour turnover rates; perennial recruitment and retraining of labour (to deal with a high attrition rate); and weakened capacity of farming households as a consequence of illnesses, which reduces the ability to till the land as **members' health deteriorates, ultimately leading to death. "Agricultural productivity, labour turnover rates and production costs on commercial farms are adversely affected by HIV/AIDS. Employers also have to invest more time in recruiting and training replacement workers at considerable expense to their business. The capacity of small-scale farming household is reduced as HIV/AIDS prevents them from utilising their land effectively as infected members are too weak to perform farming tasks and members with farmers skills become less productive or die" (Ormann, 2005, p. 294). Based** on the foregoing, it is clear that farmers within the research setting will have to contend with more than just the challenges that come with globalisation. The HIV and AIDS pandemic and the unique circumstances of KwaZulu-Natal and Ugu District Municipality in particular potentially place serious demands on the coping strategies employed by the farming sector, thereby placing an **added strain on the sector participants' mental models. The impact of the HIV and AIDS pandemic goes directly to the core of labour productivity, as can be seen from the empirical research findings in the preceding section. This ranges from a loss in production hours to a high labour turnover for those who succumb to AIDS-related sicknesses. Of even greater importance is that within a climate of high prevalence of HIV and AIDS (Nothard et al., 2004), all its associated problems attack the core of productivity and by extension international competitiveness. This stems from the fact that sickly employees and absenteeism - an immediate consequence and one of the inevitable manifestations of HIV and AIDS - negatively affect the bottom line. Besides these short-term detrimental effects, more medium to long-term effects are that labour attrition and turnover is likely to cause whatever little investment in human capital (given BSSSGs typically meagre resources) to move out of the system over time. The effect of this is an erosion of competitiveness of the local industry over time, exacerbating the already strained situation. Against this backdrop, it is important to note that unlike their global counterparts, the black domestic farming sector is also likely to face additional challenges associated with the capacity to raise funds, relatively low levels of proficiency in farming and a legacy of past discriminatory laws, all of which adversely affect their ability to compete. On the positive side the government does have an HIV and AIDS programme**

which is freely accessible, however there is no escaping the effect the pandemic has on productivity. In addition, the changes in lifestyle that are required to make a serious dent in the pandemic, as well as some degree of denialism, are still prevalent.

2.5 ECONOMIC ORGANIZATION.

The section below explores the role of coordination by the farming sector as they seek to leverage the power of pooling resources and collective effort in their quest to enhance their survivability. The section below shows that this strategy is an integral part of the measures that have been employed by farmers to enhance their survivability.

2.5.1 Economic Coordination and its Associated Impact

Economic coordination or agency among farmers has been employed to increase the chances of success and shield small farmers from vulnerabilities and challenges that they would otherwise experience as isolated entities. Transaction costs are a typical example of obstacles in this regard. Murphy (2012), Ortmann and King (2007), Church, Groom, Thomson and Dlamini (2008) variously support the practice of economic coordination as one of the strategies employed in the farming sector to enhance their survivability. This takes the form of either vertical or horizontal coordination.

Murphy (2012) reasoned that farmers engage in "agency" as one of their strategies. In her paper dealing with small farmers' adaptive strategies to the pressures of globalisation, Murphy noted that: "...the majority of analysis on commentary on agency among small-scale producers has focused on economic organization of producers in the form of cooperatives and cooperating to compete... agency extends well beyond economic organization of producers, to encompass the capacity of producers to organize and the ability to take effective action for self-determination" (Murphy, 2014, p.4).

Similarly, Ortmann and King (2007) recommended cooperatives as a form of producer organisation for small-scale farmers within Impendle and Swayimane in KwaZulu-Natal as an adaptive strategy to inter alia mitigate **transaction costs, which the authors term, "horizontal coordination"**. Further providing empirical evidence in support of horizontal coordination, Church et al. (2008) noted that small-scale farmers participating in the Dwangwa Cane Growers Limited and Kasinthula cooperatives benefited substantially from bulk purchasing discounts arising out of horizontal coordination. This is an example of farmers pooling their purchasing power and therefore increasing their bargaining power as an adaptive strategy, and wielding this to improve their position. The prevalence of transaction costs as a prohibitive force, ostensibly necessitating individual and/or collective action by farmers, was also echoed by Ortmann and King (2010) as being among those obstacles facing small growers. The authors proposed vertical integration as a mitigation measure in this case, and considered vertical integration to be a strategy to enhance access to market. In conclusion it is clear that under certain circumstances, economic organisation has the potential to enhance the survivability of farmers in general. However, [in the case of Ugu District Municipality](#), two observations [are](#) relevant. Firstly, in the case of sugarcane production, Illovo Sugar is the only market and the economies of scale required are too prohibitive to consider establishing an alternative market, which negates vertical coordination. On the other hand, fragmented individual cane growers, without some institutional arrangement that lobbies on their behalf, remain vulnerable and price-takers of an international commodity. For this reason vertical and horizontal strategies are much more likely to help farmers leverage the power of numbers. Forming themselves into cooperatives will at least help them purchase raw materials, reduce transportation costs and access accounting services so that they can obtain

bulk buying discounts. [In this context it is important to note that the](#) KwaZulu-Natal provincial government sees cooperatives as being vital to alleviate poverty as well as to achieve BBBEE. Consequently EDTEA, KZNDARD and DRLR are at the forefront of efforts to develop cooperatives in the province, which includes the research setting. In addition, DTI readily provides access to finance for cooperatives through its CSI. Over and above this, there are government-linked institutions such as SEDA and a local FET College that prioritise cooperative training. This implies that in theory, farmers are guaranteed institutional support should they want it. To what extent then, does horizontal and vertical integration feature as part of survivability? Finding answers to this question will provide the necessary insight into the effectiveness of cooperatives and a justification as to whether the budgets extended to achieve this are well directed.

2.6 FARM SIZE PRODUCTIVITY AND THE IR

The [relationship between farm size and productivity is](#) an intriguing [one](#). It would appear that the bigger the size of the farm, the more productive it should be and the more profitable it would be. Yet several scholars have studied this relationship and reached very anomalous conclusions in this regard. In the majority of cases authors tend to conclude in favour of a prevalence of IR between productivity and farm size. The section below is dedicated to a discussion on the IR phenomenon, looking at both its proponents and exponents and the potential reasons for the phenomenon.

2.6.1 Inverse Relation [between Farm size and](#) Productivity

While [there is](#) overwhelming support for [an inverse relationship between farm size](#) and productivity based on empirical research findings (Assunção and Ghatak, 2003; Heltberg, 1998; Barret, 1996; Barret, Bellemare and Hou, 2010; Reddy, 2003), consensus remains elusive on its fundamental causes. Authors such as Barret (1996) contend that it is not the farm size that is behind the inverse relationship, but rather market failure or mis-measurement of some other yet to be known underlying variable. Making a crucial observation in this regard, he noted that if the inverse relationship were to be explained purely on farm size alone, it would provide a strong argument for the sub-division of farms handed over to land redistribution recipients due to **"inherently greater efficiencies" associated with smaller farms**. For South Africa, this phenomenon would hold significant relevance given the fact the country is grappling with the problem of land redistribution amid discouraging results on productivity and other fronts. With reference to the IR proposition, Barret et al. (2010) cautioned against potentially misleading policy conclusions in the following statement: **"From a policy perspective, one may be tempted to naively interpret the existence of the inverse relationship as prima facie evidence in favour of land redistribution. If small farms are more productive than larger farms, it should be sufficient to redistribute land from the latter to the former in order to increase total agricultural productivity and food availability, simultaneously reducing asset and income inequality" (Barret et al., 2010: 88)**. One general observation to make about the [inverse farm-productivity relationship is](#) that it challenges [the](#) notion of economies of scale, which postulates that as businesses grow they are able to better leverage internal capacity, which results in greater productivity. On the other hand, it supports the theory that bigger businesses tend to be more efficient compared to their small sized counterparts. It is important to acknowledge that both the two positions occur in practice. There are numerous examples where the sheer size of a business has acted as a barrier to effective competition, which has led to decisions to unbundle or even shed some of the functional departments in

favour of a much leaner organisation. This was seen in several cases when South Africa opened its doors for international trade at the onset of democracy. Privatisation partially espouses this position in that when the public sector is replaced by private capital, there is **more incentive to “cut excess fat” and to prime organisations so that they attain some degree of nimbleness**. Yet it is folly to think that this is always the case; sometimes big businesses have gained so much knowledge that it is ill-advised for novices to consider entering that space. Such businesses are likely to have gained such traction in their respective markets, based on their sheer size, that this position quashes any form of entry into that market. Whether this IR phenomenon is prevalent among farms that have reached and passed the stages of economies of scale to the declining stage (otherwise experiencing diseconomies of scale), is hard to tell from the existing literature. Van Zyl, Binswanger and Thirtle (1995) provided a crucial insight regarding the myth **about efficiency that is intuitively assigned to large farms: “International evidence indicates that a large-scale mechanized farm sector generally is inefficient, especially when compared to small-scale family type farm models. Although there may exist very real economies, they are mostly ‘false’ because they are usually the result of policies which favour large farms over small farms” (van Zyl, et. al., 1995:1)**. Evidence of the counterintuitive nature of the IR can be seen in the following observation: **“The inverse relationship is at odds with textbook economic theory, which holds that factor productivity should be equal across farms, otherwise the land market would allow land to be sold or leased from lower marginal productivity to higher marginal productivity households. Similarly, within a farm operated by a single household, factor productivity should be equalized across plots else the household could reallocate inputs to increase output” (Barret et al., 2010: 88)**. Yet Le Gal and Requis (2002) disputed the IR phenomenon, saying that small farmers are significantly less productive than **their large counterparts: “...small-scale growers’ yields are usually poor (30 to 50 t/ha vs 50 to 80 t/ha) for the large-scale growers, and their harvesting system poorly organized, there is a growing concern in the industry to improve their technical and economic performances” (Le Gal and Requis, 2002: 83)**. Heltberg (2010) reasoned that in a world characterised by constant returns to scale and perfect markets there would be no incentive to apply variable inputs and factors production differently. He therefore advances, either of economies of scale, efficiency differentials between large and small farmers, and market asymmetry as the driver of the inverse relationship (IR). The author found significant and strong evidence of IR, and most importantly, confirmed strong support for market imperfections as the root cause. However, notwithstanding the obvious consensus on the prevalence of the IR phenomenon, consensus on its root causes remains elusive. Various authoritative sources such as Barret (1996) explore different potential driving forces behind this phenomenon. He conjectured that the IR might be explained through differences in locality/village differentials in productivity, not necessarily the small size of farms. To this end, he offered three explanations, the first of which is that IR might be caused by small farms being in food deficient regions as opposed to large farms being in food surplus regions. He posited that through the forces of supply and demand, deficit regions experience price escalations which start a chain of reactions that reinforce the status of small farms as being more productive. The second alternative is that a high level of soil fertility might cause high farm density, which in turn dictates the subdivision of farms. This process results

in many relatively small and highly efficient farms being created, compared to their large counterparts (Barret, 1996). The third explanation offered by Barret (1996) is that small farm region households might surplus producers of labour, and consequently when such labour is applied into farming enterprises in these regions it becomes relatively cheaper (again the forces of demand and supply come into play here). This translates into these farms being productive because of advantageous labour costs, and because given this advantageous labour position these farm regions will tend to apply more labour units to take advantage of the situation. These hypotheses, while to some degree plausible, still raise more questions than provide answers. For example the second explanation would mean that IR would have to be prevalent among a cluster of closely knit small farmers. In that case it would be very easy to prove/disprove this hypothesis because only small farms that exhibit cluster characteristics would exhibit the IR phenomenon. In addition, with the current advances in science and technology it should be easy to isolate soil-related characteristics and the extent to which they confer an advantageous position to these farms. Likewise, the first explanation merely **labels the small farms as being in "food deficit" regions and the other farms in "food surplus" regions, yet it remains unclear what causes these farms to have different food statuses to begin with.** Even the issue of labour surplus is open to debate. Could labour advantages really confer on small farms such competitive edge as to cause for the existence of the IR? If so, what is it the relative weight of labour costs to other inputs in the production equation in respect of farming operations? If the relative weight is substantial, effects of labour advantages are likely to have a telling effect and perhaps contribute to the IR. However if the contribution of labour is only marginal, which is more likely the true scenario given the speed with which farmers are ready to jettison labour in favour of machinery, then it may be far-fetched to attribute the IR to labour advantages. Consequently, Barret (1996) isolated **differences in households' marketable surpluses under conditions of price uncertainty** as a chief explanatory variable. With regards to variations in soil quality, **Heltberg's (2010) findings are at odds with Barret's (1996) earlier hypothesis**, as he found strong evidence of the prevalence of the IR even under conditions when soil is controlled for. Going back to van Zyl et al. (1995), these authors found not only overwhelming support for the IR phenomenon, but they also found IR prevalence to be more accentuated as more policy distortions were removed. The important observation about the prevalence of the IR was that it persisted regardless of the methodology employed. The preceding analysis shows that the size of a farm does matter, however the manner in which size matters in the analysis is anomalous. The analysis of extant literature in the foregoing section shows that the IR phenomenon enjoys support from the majority of scholarly opinion, yet despite this overwhelming support on the IR prevalence, the views appear to be divergent in terms of the fundamental causes. However, notwithstanding disagreements in this regard, IR remains an important topic whose prevalence or otherwise holds important promise for farming, especially within the research context.

2.7 LAND TENURE SYSTEM, INVESTMENT APPETITE AND CREDIT ACCESS

Basic economic theory holds that land, **together with capital, labour and entrepreneurship, is part of a vital "quartet"** that is essential for production. For this reason, while various other authors concern themselves with farm size as regards its crucial importance in the productivity equation, others are interested in land tenure and its effect on productivity. For the latter group the issue is the extent to which land tenure

can be an inhibitive/enhancing force for the farmers, especially amongst those who are emerging and who largely use their land as a single source of eking out a livelihood. To this end it needs to be pointed out that within the South African context there are two types of land tenure systems, namely the freehold tenure system which secures individual title ownership (through title deeds) and the communal tenure system, where inhabitants are not assigned individual title and are therefore not guaranteed security of land ownership. While in the former case title owners enjoy free rights to mortgage land and are therefore able to offer it as security to raise capital, the latter land tenure system does not readily allow such a practice. Even in cases where this does happen, it is an exception to the rule rather than the norm. In the case of the communal land system, the ITB is the legal custodian of land, which is the land tenure under which most BSSSGs farm. This ability to mortgage land is at the centre of the discourse about whether land tenure can aid or inhibit development indirectly through investment appetite. The following section explores the literature relating to land tenure and its impact on development in general and farmer survivability.

2.7.1 The Impact of Land Tenure on the Farming Sector Reddy (2003), in his study of Fijian farmers, found that the majority of farm operations were located on land leased and owned by the Native Land Trust Board. There are obvious similarities in land tenure systems between the Fijian study and Ugu, where the majority of BSSSGs operate on land under the Ingonyama Trust Board as opposed to having freehold title tenure. In the case of Fiji, the author found that the land tenure system posed challenges of tenure uncertainty and a resultant inability to obtain mortgages, which caused a decline in investment that in turn undermined confidence in the whole industry. Likewise, Ortmann (2005) with reference to the South African context noted that: **"In communal areas, insecure land tenure and free rider problems discourage investment in agriculture and hence diminish the competitiveness of this sector. Improving land tenure security would promote access to credit, strengthen incentive to improve land and adopt new technologies and facilitate allocative efficiency and equity through rental transactions in cropland"** (Ortmann, 2005: 310). Carter and Olinto (2003) supported the notion of property rights as a factor in development, and further cautioned that land reform in property rights is only likely to benefit small farmers where legally insecure property weighs more heavily in favour of low income households. Otherwise, if these property rights reforms fail to remove the constraints that limit small farmers, the authors predict they would benefit medium and large-scale farmers to the exclusion of the small farmers. The authors base this argument on two observations based on their study of the Paraguayan experience: ? The credit supply effects of tenure security are nonexistent for the smallest farms and only become large for farms in excess of 15 hectares of land. ? Tenure security thus induces a shift in portfolio composition of capital for the smallest farms (toward more attached capital); only for larger farms is it estimated to enable an unambiguous increase in total capital stock (Carter and Olinto, 2003:185). On the other hand, when discussing land tenure in the context of urban development notes, Payne (2000) noted that despite the popular perception that security of tenure is a precondition for households to invest in housing construction, other investments are possible simply through an official statement that the settlement will not be removed, by the provision of services or through the issuance of certificates of use. He further argued that contrary to popular belief it is not collateral security that detracts banks from giving loans to the poor, but rather high

transaction costs and the failure to meet repayment obligations/affordability. He further cautioned against (blindly) regulating land tenure because of the unintended negative consequences that this may bring about. To this end he cited the example whereby turning squatter camps into legal titles might send a signal to large land owners that there is more money to be made by subdividing land. Likewise, it would encourage illegal land occupation (Payne, 2000). Conversely, according to the Ferder and Feeny (1991), communal rights may best be appropriate in instances characterised by limited [opportunities to invest in quality](#) land when [the community is small](#) and [land is sufficiently scarce to](#) warrant an automatic exclusion of outsiders. In this regard, the Review further noted that if the size of the community changes, a mechanism for enforcing [restrictions on individuals' land use patterns](#) may be counterproductive and serve as a disincentive. In support of mainstream thinking on the disincentive effects associated with communal land rights, **the Review points out that: "when new market opportunities arise or new technologies provide large benefits from investments, communal rights may no longer provide sufficient incentives" (Ferder and Feeny,1991:140).** The Review further confirms the utility of security of tenure (individual title ownership) for collateral purposes in credit advances to reduce uncertainty and moral hazard problems for credit providers (Ferder and Feeny, 1991). In conclusion, the preceding analysis of the land tenure system and its effect on investment weighs heavily in favour of freehold title as being more conducive to development. This is because financial institutions prefer land as a form of collateral/security for their loan advances, and communal land, unlike land under freehold title, does not readily lend itself to mortgages. Furthermore, it is not only the refusal of financial institutions to provide the sometimes much needed capital under this land tenure system, but the farmers themselves are not secure in the sense that continued productive utilisation of land can abruptly end, either because permission to utilise land can be abruptly withdrawn without any legal recourse, or because of other problems associated with a lack of exclusive rights to this type of land. As a result, it is possible that people/neighbours who might not have thought of the asset as being of any worth, notice that it is transformed into production and start making claims, whether justifiable or not. This adds to the list of disadvantages that BSSSGs are likely to contend with and begs the question, to what extent do BSSSGs perceive land tenure as being a hindrance to their situations, if at all? What measures, if any, do they employ to enhance their survivability in the face of this hindrance?

2.8 CREATIVE LABOUR STRATEGIES

In the preceding section labour is mentioned as one of the factors of production along with three others. Against this backdrop, some degree of control of labour costs, along with an overall improvement in quality/productivity, undoubtedly goes a long way to improving profitability and survivability. In the case of emerging businesses like small farmers, who typically rely on labour intensive methods because of the financial costs of automation which might be prohibitive, this becomes more pertinent. This section explores creative practices for controlling this crucial production factor.

2.8.1 Creative Labour Strategies as a Potential Cost Mitigation Strategy

Creative labour solutions, or more precisely reliance on family labour as opposed to hired labour, has been touted by some authors as a viable strategy to enhance survivability. Incidentally, [there is a strong positive correlation between](#) small farm size [and](#) family farm enterprise ownership, as discussed under section 2.6.1 above. From a practical perspective, the substitution of hired labour with family labour is deemed to

have dual benefits in that transaction costs such as supervision and other wage related costs are greatly reduced, and wage earnings are kept within the family. This practice of substitution of family labour for hired labour was also observed by Reddy (2003) in his study of the Fijian sugar industry, and was confirmed elsewhere by Olawale and Garwe (2010) and McLean-Meyinsse and Brown, Jr (1994). Furthermore, creative labour strategies may partially be responsible for the IR. Referring to the phenomenon of creative labour strategies and the resultant advantages that possibly explain [the inverse relationship between farm size and productivity](#), Wiggins, Kirsten (2010) [and Llambi](#), conjectured that: **“On small farms much of the labour comes from the household: Self-supervising, motivated to work with care, and flexible to accommodate the unpredictable timing of some farm operations. Large farms, on the other hand, often depend heavily on hired labour that needs to be recruited and supervised, thereby raising transactions costs and thus the implicit costs of labour. Instead small farms typically apply more labour per land unit than large farms, and consequently obtain higher yields per hectare” (Wiggins, et al., 2010: 1343).** Creative labour strategies are of special interest to the BSSSGs and may hold the key to success, as the South African context is generally ravaged by labour unrest and resultant loss of production. It is often lamented by economic commentators such as Ortmann (2005) that the South African labour market is highly regulated, which renders it inflexible with dire consequences for international competitiveness. Consequently, labour productivity in the South African context is low (with a possibly comparatively lower work ethic), which is further exacerbated by a highly regulated labour market. Evidence of the proliferation of regulation is evident in the recent BCEA Number 75 of 1997: Sectoral Determination 13 which caused a significant increase in labour costs and in turn adversely affected farm profitability. As Ortmann (2005) noted: **“Although these laws benefit employees, they result in higher transaction and wage costs for employers in the agricultural sector by, for an example (i) raising the cost of dismissing and /or downsizing the workforce, (ii) increasing the cost of labour by requiring employers to pay higher rates for work performed on public holidays and Sundays”**(Ortmann, 2005: 293). A further dilemma to this is what economists generally argue to be the resultant substitution effect of labour by machinery - a natural adaptive strategy - which further drives up unemployment in the long term. For BSSSGs, wages payable alone, aside from other conditions attached to Sectoral Wage Determination, may prove to be too high and therefore detrimental to their immediate survival. How common, then, are creative labour strategies among BSSSG farming practices as a mitigation measure? In conclusion, the preceding section pointed to the practice of creative labour strategies among the farming community to ease the costs associated with labour in an effort to improve business survival. Such is the importance of this practice that some authors conjecture that it may explain the IR. While evidence linking creative labour strategies with the IR may not be conclusive, it is quite clear that this strategy can have enormous economic benefits that extend beyond the two that were initially mentioned under this section.

2.9 INCOME DIVERSIFICATION STRATEGIES

In business in general, diversification of income sources as opposed to specialisation is preferred as risk is spread across multiple platforms. The section below explores whether or not such a practice extends to the farming sector and to determine the extent to which it prevails, if it indeed occurs.

2.9.1 Diversification Practice within the Farming Sector

Aliber and Hart (2009) found a prevalence of this

behaviour among black farmers to mitigate the adverse effects of changing circumstances, i.e. they adopted diversification which is a natural adaptive behaviour. Beckford et al. (2007) observed the same behaviour among **domestic food producers in Jamaica. They called this "Farm Fragmentation as adaptive sustainable resource use". The obvious benefit that accrues to this practice is that farm plots are spatially dispersed over a wide area, which results in isolated non-contiguous individual plots. This hedges against diseases and ensures that fields are somewhat protected from pest attacks. "However, it (farm fragmentation) is also a deliberate strategy to rationally allocate resources in response to spatial variations in environmental conditions and to spread risk and diversity of operations. Fragmentation therefore occurs as farmers attempt to exploit different and specific ecological niches and make use of local soil conditions and microclimates"** (Beckford et al., 2007: 281). Perhaps to occur the importance of farmers constant battle to adapt to changes, is best exemplified in Eakin, Tucker and Castellanos (2006) in their study of adaptive responses by Mexican, Guatemalan and Honduran small holder coffee farmers to the coffee crisis in these countries, which was occasioned by economic liberalisation. Here the authors noted that apart from farmers diversifying crops or instituting multi-cropping, as referred to by Beckford et al. (2007), as a principal adaptive strategy, another important aspect of adapting is the creation and development of local networks among farmers, service providers and information sources as a means of facilitating adaptation within the context of economic liberalisation and globalised agriculture. Among other forms of adaptive behaviour observed in the study relating to Mexico was income diversification, other forms of collective and household organisation (similar to horizontal and vertical coordination), and in severe cases migration or the complete abandonment of farming. With regards to Guatemala, a similar role played by cooperatives in Mexico was assumed by non-governmental organisations. Reardon and Taylor (1996) observed income diversification among South Asian farmers and noted that non-farm income is used to offset shortfalls in farm income. Similarly, Bryceson (1999) supported the notion of income diversification as being central to rural livelihood approaches, which has become more prominent in the era of Structural Adjustment Policies (SAP). To this end, Bryceson (1999) conjectured that the removal of subsidies and the decline in marketing services as a result of SAPs left the rural peasant farming community more vulnerable and their farming operations unviable, warranting diversification of income to other sources. According to Barrett and Reardon (2000), income source diversification is endemic among African rural households, with non-farm income as high as 45%. Meanwhile Barrett, Bezuneh, Clay, and Reardon (2000) compared data on behaviors in three agro-ecologies on the African continent, which were stratified according to arid-to- semi-arid (North Central Kenya and highland Rwanda) and humid-to-**submit Cote d'Ivoire, and** found that livelihood strategies associated with non-farm activities offered the most income. The implications of this observation suggests that income from farm activities might be eroding and that policy interventions that centre around farm activities need to be considered circumspectly. In their study dealing with adaptive strategies, Metz, Wadley and Christensen (2005) confirmed the prevalence of income diversification, where Indonesian farmers interchanged between cash cropping and rubber production. In conclusion, the preceding analysis shows that diversification of income is a widely practiced strategy that is employed either as a natural adaptive

(somewhat sub-conscious, automatic and unwitting) response to supplement subsistence incomes or as a proactive strategy that ensures that a greater crop variety is produced not only based on different harvest periods, or as a practical (conscious/witting) strategy to mitigate dependence on a single crop. The basic idea here is that if returns are negatively affected, whether these emanate from the market or drought or some other adverse conditions, the spread of economic activity cushions the farmer from the resultant effects. This is the same strategy that is followed within financial investment portfolios, whereby risk is spread between various portfolios to enhance returns and to reduce the risk associated with a single portfolio.

2.10 SUMMARY REGARDING SURVIVABILITY AS AN IMPERATIVE AND CRITICAL SUCCESS FACTORS The foregoing literature review clearly shows the plethora of challenges that contemporary farming faces. While some emanate from economic globalisation via SAP (Eakin et al., 2006, **Leichenko and O'Brien, 2002; Bryceson, 1996**), others stem from a lack of access to capital and markets, extreme weather patterns with attendant effects on infrastructure, or severe drought causes. Further challenges, particularly in the case of South Africa, include imports of capital goods and input which make the domestic farming sector susceptible to currency fluctuations. Over and above these adverse factors, the literature has exposed the paucity of technical and business acumen among especially the emerging farming community, which is characterised by an across the board high rate of business failure, all of which points to endemic weakness in the farming sector. This section dealt with the numerous adaptive strategies available to farmers, among which are economic organisation, income source diversification and creative labour strategies. It is evident from the literature review that adaptability is crucial under the circumstances of economic liberalisation, especially among small scale farmers. This is further amplified **in the following phrase by Eakin et al. (2006): "Smallholder farmers have been singled out as particularly vulnerable to market fluctuations and global economic change, based on the observation that the impacts of global economic volatility are often felt more severely among the world's peasant farmers"** (Eakin et al., 2006, p.156). This observation is particularly pertinent for the Ugu BSSSGs, who by all accounts have farm operations that are under siege from international globalisation and whose meagre farm sizes mirror the situation of the world's peasant farmers. From the study by **Leichenko and O'Brien (2002)**, it is worth noting that **economic liberalisation** is not the only source of adverse exogenous changes that small farmers are exposed to, as they are exposed to adverse changes caused by climatic changes as well. These changes in weather patterns, which may manifest in severe and prolonged droughts as well as flooding, place a further strain on **farmers' adaptive capabilities and resources. Leichenko and O'Brien (2002)** also made an important assertion with **reference to the concept of "dynamic vulnerability" to climate change as opposed to "traditional vulnerability"**. In terms of the former concept the authors noted that traditional indices may be insufficient over time to correctly measure vulnerability to climate change, and the fact that those farmers who were deemed to not be vulnerable using traditional indices might be deemed vulnerable using dynamic vulnerability indices. A combination of economic liberalisation and global changes as a result of changing weather patterns place a burden on farmers to adapt failing which they are likely to perish. It is also important to note that pressures to adapt are not only limited to the international arena, for instance it can be noted that wage determinations, which are a domestic

phenomenon, can have an equally devastating impact on farmers. This section has extensively explored the literature relevant to adaptive strategies, inner capacities and psychology, which are imperative to determine a picture that mirrors how adverse effects of inherent volatilities that BSSSGs are exposed to may be mitigated. It is clear from the literature that a strategy for survival should be multi-pronged, it has to take place at the farm level in the form of agronomic and micro-economic farm practices; at the level of internal resources of the business which extends to capital raising ability and leveraging of technology; and at the level of industry in terms of support networks and the dynamic nature of the market. It is a mental and psychological test of the will and resolve of the farmer as an entrepreneur and manager of his/her own business. It therefore requires that BSSSGs are fully aware of, and adaptive to, the environment that they operate in.

CHAPTER 3 3.1 RESEARCH METHODOLOGY This chapter focuses on the methodology used, the rationale behind the choice of the methodology within its ontological, epistemological and axiological assumptions, the sampling technique chosen, types of questions employed in the study, the data collection method, informed consent and ethical clearance, and data analysis and interpretation. The chapter concludes with a brief section on the reliability and validity of the study. All of these aspects of the research are discussed with reference to the set of assumptions regarding the worldviews each of the assumptions espouses. The chapter is structured such that the discussion of the methodological aspects is ordered as follows: Research Objectives, Research Design, Research Instrument Design, Sample, Data Collection Method, Ethical Considerations, Data Analysis, Reliability and Validity, and the conclusion of the chapter.

3.2 RESEARCH AIMS AND OBJECTIVES The main aim of the research was to explore factors that account for the survivability of BSSSGs in Ugu District Municipality in the face of the serious challenges that beset the district's sugarcane industry. The study was broken down into the following **objectives:**

- ? Understanding BSSSGs' perceptions of the overall sugarcane industry.
- ? Understanding BSSSGs' perceptions of the farm-specific/micro-economic attributes that make them susceptible to failure.
- ? Determining whether BSSSGs employ deliberate strategies to counter the causes and/or the effects of the decline in the industry.
- ? Examining BSSSGs' perception of own farm size and land tenure in terms of whether these enhance or inhibit survivability.

It is anticipated that knowledge gained through this study will uncover insights into the state of survivability or otherwise of BSSSGs.

3.3 RESEARCH DESIGN Several authors (Lee, 1999; Chen, Shek and Bu, 2011; Mustafa, 2011; Petty, Thompson and Stew; 2012; Ponterotto, Mathew and Raughley, 2013) have identified three different kinds of realities as espoused in three different types of assumptions that distinguish the two design types. The authors refer to ontological assumptions which relate to the nature of reality (i.e. single (objective) versus multiple (subjective) views of the world). This categorisation of world reality is consistent with the dichotomy between the non-positivism versus the positivism or post-positivism domains (Lee, 1999; Chen et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). Within the non-positivism domain is constructivism or interpretivism, as well as advocacy paradigms (Lee, 1999, Ponterotto et al., 2013). The second categorisation relates to epistemological assumption (Lee, 1999; Chen, et al 2011; Mustafa, 2011; Petty, et al. 2012; Ponterotto, et al, 2013). This refers to the role the researcher plays in the research process (Lee, 1999; Chen, et al. 2011; Mustapha, 2011; Petty, et al. 2012;

Ponterotto, et al, 2013), the third reality relates to axiological assumptions (Lee, 1999; Chen, [et al 2011](#); Petty, [et al 2012](#); Ponterotto, [et al.](#) 2013; Mustafa, 2013). These assumptions view the role of the researcher in terms of a value system and how this influences the study in question (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013). The following section discusses the Research Instrument Design. 3.4 RESEARCH INSTRUMENT DESIGN Ontological, epistemological and axiological assumptions further influence the choice of research instrument design (Lee, 1999; Creswell, 2009; Chen, et al. 2011; Mustapha, 2011; Petty, et al. 2012; Ponterotto, et al. 2013). This stems from the fact alluded to in the preceding paragraph, whereby assumptions related to the world view perspective, the role of the researcher in data collection, and the values of the research are of importance to the respective paradigms. Authors further distinguish between two types of research designs, namely quantitative and qualitative designs, which are in themselves aligned to each ontological, epistemological and axiological assumption (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013). Given their positivist orientation, quantitative designs employ a methodology that is strictly value-free and completely free from the bias of the **researcher's pre-existing** values and opinions (Lee, 1999; Chen et al., 2011; Mustapha, 2011; Petty et al., 2012; Ponterotto et al., 2013). In the case of quantitative design, the ontology aligns with the positivist and post-positivist paradigms and is consistent with a single objective world view (Lee, 1999; Chen [et al. 2011](#); Pety, [et al., 2012](#); Ponterotto [et al.](#) 2013). Likewise, the epistemology assumes a value-free approach by the research, where the aim is to uncover the absolute and objective truth about a phenomenon (Lee, 1999; Chen et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). Meanwhile axiological assumptions applicable to quantitative methods assume the value-free role of the researcher, whereby cold scientific facts relay the message about the phenomenon being studied (Lee, 1999; Chen, Shek and Bu, 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). By contrast, qualitative designs espouse an ontological assumption that is based on the multiplicity of equally valid world viewpoints depending on the subjective viewpoint of the holder (Lee, 1999; Chen, et al., 2011; Mustafa, 2011; Petty et al., 2012; Ponterotto et al., 2013). In addition, qualitative design is predicated on an epistemological assumption, whereby it deems that the researcher is an instrument of the research and consequently in terms of axiological assumption empowers the researcher to use his/her own value systems in the research process (Lee, 1999; Chen, et al., 2011; Mustafa, 2011; Petty et al., 2012; Thompson and Stew, 2012; Ponterotto et al., 2013). A third design is a mixed methodology, which is essentially a hybrid of qualitative and quantitative designs (Creswell, 2009; Ponterotto et al., 2013). Based on assertions by several authors (Creswell, 2009; Tuli, 2010; Leung and Shek; 2011; Ponterotto et al., 2013; Leedy & Ormrod; 2014), table 3.1 illustrates some of the ways in which qualitative, quantitative and mixed designs differ further. Quantitative Design Qualitative Design Mixed Method Applicability and transferability of research results ? Results are generalisable to other situations because of inferential statistics. ? Results setting specific and therefore not generalisable outside the study. ? Mixed methods utilise both qualitative and quantitative design attributes and therefore depending on the decision of the researcher external validity can be attained. Strategy enquiry of ? Hypothesis testing and deductive logic is used to underpin the study resulting in theory verification. Reductionism

underpinned. ? Hypothesis testing anomalous to this type of design and inductive logic used. Study may result in theory generation as opposed to testing. Complexity underpinned ? Mixed methods depend on the choice of the researcher who takes advantage of both inductive and inductive logic within the same study. Pragmatic and therefore careful embrace reductionist tools whilst complexity underpinned. Nature phenomenon study of ? Enquiry strategy more suitable for explaining relations between variables based on a priori assumptions about these variables. ? Strategy of enquiry more suitable for complex problems where little is known regarding the phenomenon. ? Depending on the decision of the researcher, the inquiry strategy may incorporate both correlational studies based on a priori assumptions about a phenomenon and studying a phenomenon in depth to understand all its facets unfettered. Numerical and scientific orientation ? Enquiry strategy is typically more numerical- oriented with data reported ? More qualitative information is extracted through this inquiry where the overriding purpose is depth ? Based on the decision of the researcher, the design blends both numerical in categories based on the cause-effect analysis to the phenomena under study. with no constraints being placed on the research. orientation **and rich text oriented reporting on findings. Researcher's interface with the study** ? Inquiry strategy does not require close contact with the phenomenon being researched and may take place in a contrived setting. ? Inquiry strategy requires close contact with the research setting and may not take place in a contrived research setting. The research process is iterative. ? **Based on the researcher's decision, closer examination of the phenomena** being studied can be adopted and triangulation of findings for verification using more than one enquiry strategy can be applied. Table 3.1: Differences between qualitative, quantitative designs and Mixed Methods Source: compiled by the researcher Creswell (2009) conjectured that based on their deterministic nature, quantitative designs are reductionist-oriented. On the other hand, based on their espousal of multiple viewpoints, qualitative designs are akin to complexity theory (Creswell, 2009). 3.4.1 Case Study **Ghuri and Grøhhaug (2002) identified three qualitative design typologies**, namely Historical Reviews, Focus Groups and Case Studies. Other authors, however, extended these typologies to include any or all of Ethnography, Grounded Theory, Phenomenological Studies, Content Analysis and Narrative Research (Lee, 1999, Leedy & Ormrod, 2005; Creswell, 2009; Leedy and Ormrod, 2014). In line with the interpretivist paradigm, a case study was chosen for this inquiry. In choosing this enquiry strategy, due consideration was given to the fact that the intention of the researcher was to assess the **industry based on its participants' subjective perspectives; and that as far as** the researcher was concerned a study of this nature had not been conducted before on BSSSGs to the depth that the researcher sought to undertake. In addition to this, the researcher was cognisant of the fact that this was the first study of its kind that sought to ascertain the survivability of BSSSGs and therefore it was venturing into uncharted terrain. To this end it is **noteworthy that several authors (Ghuri and Grøhhaug, 2002; Leedy & Ormrod, 2005; Creswell, 2009; Leedy and Ormrod, 2014) posited that case studies are more suitable in instances where the phenomenon under study is poorly understood.** In describing the research design enquiry, Ghuri and Grøhhaug (2002) posited that in a case where the researcher's questions concern "how many" or "how much" as an inquiry departure point, surveys are among the better tools to choose from. By contrast, if the researcher is concerned with "how" and "why", a case study method is a research strategy

that is appropriate. As can be seen from the research objectives, the **researcher's** intention was to elicit information on whether BSSSGs are surviving or not, and if so, to what extent and how, including understanding their rationale for selecting certain survival strategies. All of these and other relevant factors associated with the interpretivism paradigm as alluded to in **table 3.1 influenced the researcher's decision in favour of the chosen inquiry strategy.**

3.5 THE SAMPLE The dichotomy between qualitative and quantitative designs, which by themselves derive from ontological, epistemological and axiological assumptions as alluded to in the preceding section, further dictate the sampling procedures and data collection tools to be followed in any study (Lee, 1999; Creswell, 2009; Tuli, 2010; Leung and Shek, 2011; Mustafa; 2011; Leedy and Ormrod, 2014). The reason for this has to be found in the fact non-positivist philosophy embraces multiple worldviews meanwhile a positivist and post-positivist paradigm (i.e. the quantitative research paradigm) searches for an absolute and single objective truth, while a non-positivist paradigm embraces subjective multiple view points as alluded to in paragraph 3.1. It therefore follows that based on its interpretivist/constructivist characteristics, non-positivist research will rely on research instruments that are suited for this purpose. Likewise, quantitative designs require research tools that are amenable to an objective assessment of reality (Ponterotto, 2010; Tuli, 2010; Chen et al., 2011). Figure 3.2 illustrates the dichotomy between positivist and non-positivist research paradigms, and furthermore shows how each one of the paradigms in turn influence research design. Figure 3.2 makes it clear that further choices relating to a methodology are constrained by the dichotomy. Consequently, the sample is chosen based on this principle, and as such in the case of this study it can only chose from the left-hand side of the diagram which relates to the interpretivist/constructivist paradigm. Further to this, a two-stage sampling procedure was used whereby the first two respondents from within streams A and B were chosen by convenience sampling until a total of 15 respondents, made up eight and seven respondents from streams A and B respectively. In this regard, two areas where sugarcane is grown within the district, namely Minini-Mfume Farmers Association (which has a membership located mainly on the North East of Ugu District along the coast in the Vulamehlo municipality) and Qhubekani Farmers Association (whose membership is located inland along the P68 Corridor Road and whose members come from both the Umzumbé and Hibiscus Coast Municipalities) were designated as streams B and A respectively to account for geographic variations. A manageable sample size of 15 respondents was selected in consideration of the fact that qualitative designs typically delve deeper into a phenomenon under study, which requires relatively more time (Bahari, 2010; Ponterotto, 2010; Leung and Shek, 2011). In making the decision on size, the researcher was cognisant that this sample would be manageable and thus ensure completion of the study within the time-frame limitations. Another aspect of this sample is that a non-probabilistic sample was chosen in line with this type of design which does not require statistical inference and external validity (Creswell, 2009; McGregor and Murnane (2010); Tuli, 2010; Leung and Shek; 2011; Ponterotto, et al. 2013; Leedy & Ormrod; 2014).

RESEARCH PROBLEMS

POSITIVISM

INTEPRETIVISM

Reflection on Ontological, Epistemological and Methodological Perspectives", Ethiopian Journal of Education and Sciences, 2011.">*Philosophical school of Constructionist*

Reflection on Ontological, Epistemological and Methodological Perspectives", Ethiopian Journal of

Education and Sciences, 2011.">thought world view Ontology Interpretivist epistemology Realist/Objectivist Ontology Empiricist epistemology Quantitative Methodology Qualitative Methodology Methodology Methodology Flexible Design Design Fixed Design Interview Focus Group Discussion Observation etc Non-numerical analysis Instruments/ Method Questionnaire a Tests Inventories Statistical analysis **Figure 3.2: Dichotomy between positivist and non-positivist research philosophies** Statistical analysis Source: Tuli (2010, p. 124)

3.6 DATA COLLECTION METHOD Data collection instruments, like all other aspects of research, flow from ontological, epistemological and axiological approaches, which is clearly indicated in figure 3.2 by Tuli (2010) and echoed in Creswell (2009), Bahari (2010), Ponterotto (2010) and others. Lee (1999) identified three types of interviews, namely completely structured, completely unstructured and semi-structured interviews. Given that this inquiry was a case study which falls within a non-positivist paradigm and therefore was interpretivist in character, it was crucial that facets of the phenomenon were studied in greater detail to obtain the necessary insights into the perspectives of the target group. This paradigm also afforded the researcher greater intimacy with the process, as opposed to dualism between the researcher and the process which is typical of a positivist approach (Ponterotto et al., 2013; Leedy and Ormrod, 2014). Unstructured interviews typically anchor on an overarching topic which is broken down into pre-planned questions. In this type of interview the primary role of the researcher is to facilitate a conversation, and where necessary, probe the respondent for a deeper understanding of meanings assigned to the phenomenon whilst simultaneously recording emerging themes and issues (Lee, 1999). Semi-structured interviews are in essence a hybrid between structured and completely structured interview protocols. Similar to unstructured interviews they typically have an overarching topic, general themes, target issues and specific sequences (Lee, 1999). Over and above this, semi-structured interviews, similar to unstructured interview protocols, accord the researcher a degree of latitude to pursue emerging topics insofar as they relate to the phenomenon under study. Ghauri and Gróhhaug (2002) distinguished between unstructured and semi-structured interviews in that in the former case respondents enjoy full liberty to discuss their perspectives on the matter at hand, with the researcher's role being only to lead and record the respondents for the information to be analysed at a later stage in order to understand the rationale for the responses. Semi-structured interviews differ however, in that questions, their sequence and the interviewees are typically planned beforehand (Ghauri and Gróhhaug, 2002). Lee (1999) referred to conversational interviews and posited that in qualitative research these are typically held in a semi-structured format. He added that on a continuum, a semi-structured interview tends more towards an unstructured than a structured format (Lee, 1999). Consequently, the Interview Protocol (IP) (refer to Appendix A) chosen for this study was an open-ended, semi-structured one that intended to extract as much data as possible from the research participants. Consistent with the preceding, flexibility in the sense that this protocol is not constrained both in terms of adapting procedure during the data collection process and the fact that the nature of questions asked are not restricted only to predetermined ones supports the objective of the study.

3.7 ETHICAL CLEARANCE CONSIDERATIONS Prior to the research being undertaken, an Ethical Clearance Certificate (refer Appendix C) was issued by the university which inter alia stressed the importance of informed consent, anonymity,

confidentiality, voluntary participation and the right of participants to withdraw from the research should they feel like doing so at any stage of the research without prejudice. Before the commencement of the interviews, a general protocol was followed whereby the researcher introduced himself and the study, and thereafter read/explained the Informed Consent Form (refer Appendix B) and gave all the particulars of the relevant person at the university to direct questions to should the respondents feel the need. Thereafter, the respondent was requested to sign his/her consent form, after which the interviews commenced. Included in this preliminary protocol, the researcher always sought respondents' permission to record the interviews. Generally the interviews lasted between 45 minutes and an hour, depending on the level of depth that emanated from the discussions and the distractions that would occur to interrupt the interviews. One major problem that tended to sidetrack the interviews at times was that the research coincided with disputes involving Illovo, the KZN Provincial Government and the farmers associations around the implementation of the recent small grower programme. There was so much dissatisfaction in some instances that there were at times attempts made to hijack the research by one or 67 two respondents. On the other hand, in some cases (two in particular), interviews took longer because of the passion and enthusiasm that a particular respondent had for farming.

3.8 DATA ANALYSIS

From the assertions of various authors it is evident that the choice of research design affects the data analysis and data interpretation (Ghauri and Gróhhaug 2002; Bansal and Corley, 2012; Leedy and Ormrod, 2014). This is not surprising considering that each type of design not only elicits different types of information, but in addition each has a different ultimate goal. With quantitative designs, the nature of information can be easily manipulated given that answers from respondents are typically limited strictly according to the predesigned questionnaire. Confirming the point about qualitative research placing greater demands in terms of data analysis compared to quantitative research, Bansal and Corley (2012) remarked that data emanating from such designs cannot be easily synthesised or reduced into tables, which requires qualitative researchers to approach the task creatively. Supporting this, Leedy and Ormrod (2005) asserted that qualitative designs are fundamentally interpretive, i.e. they typically elicit limitless response possibilities and with this comes greater tedium in analysing the data. The main consideration is that the questions associated with these designs are open-ended, semi to unstructured, and are designed purposely to stimulate a deep conversation with interviewees. Drawing attention to some of the critical considerations of qualitative designs, Leedy and Ormrod (2014) posited that with the large amount of data typically associated with such designs it is incumbent upon the researcher to delve through the information, sort it and through inductive reasoning identify abstract underlying themes. Leedy and Ormrod (2014) further remarked that while in the case of quantitative research data interpretation and analysis are generally separate steps followed by statistical manipulations, qualitative designs interweave the process of interpretation and analysis. Interpretation is particularly at the heart of a qualitative research design (Leedy and Ormrod, 2005), whereby the design type imposes no bounds to such an extent that subjective interpretation is permissible. Ghauri and Gróhhaug (2002), like Leedy and Ormrod (2005), echoed the point about data analysis being interpretive. Meanwhile, Miles and Huberman (1994), as cited by Ghauri and Gróhhaug (2002), identified the following three stages as being

integral to [data analysis in qualitative research - data reduction, data display and conclusion drawing/verification](#). Making use of this approach, the researcher first translated the data from the interviews and transcripts of the field audio recordings into narrative text. These were further collated and arranged so that similar type responses were aggregated while outlier responses were sorted. The next stage was to analyse data in search of underlying themes and patterns, which were interpreted for meanings using research objectives as a prism. In line with the data display phase as proposed by Miles and Huber (1994), information was then organised in a manner that enabled conclusions to be drawn. A separate response analysis spreadsheet was created for this purpose, which allowed for further review and coding of the responses to discern underlying themes and the extent to which particular feelings were expressed by the respondents. The next stage was that of drawing conclusions about what the respondents were saying that was pertinent to their survivability, which was the main goal of the research. Furthermore, given that this is a qualitative study with analysis challenges that are unique to this design, careful attention was paid to ensure that the process of transcribing and analysing data was free from bias. Following Bansal et al.'s (2012) guidance, the researcher as much as possible abided by the following guidelines: ? Data must be shown, not merely described, so that the reader can connect the raw data with the analysed data, and the analysed data with the emergent theorising. ? The data must transport the reader into the context to provide a personal experience of the focal phenomenon and support for the emergent theory (Bansal et al., 2012, p. 511). Taking cues from these authors, the researcher took every precaution to be rigorous in his data analysis and analysed the data repeatedly to eliminate any biases and distortion. In line with Kitchin and Tate (1999), the basic approach was to broadly to describe, classify and discern data interconnections in an iterative process.

3.9 RELIABILITY AND VALIDITY OF RESEARCH FINDINGS

The fact that qualitative research designs tend more towards subjective opinions and are not primarily focused on measurable data may cause an erroneous belief that validity and reliability are discarded in this type of design (Morse, Barret, Mayan, Olson and Spiers, 2002; Merriam, 1995). However, despite the lack of consensus in this regard, there is enough support among scholarly opinion, notably Lee (1999) and Ghauri and Gróhhaug (2002) that these concepts apply equally to this type of methodology. Meanwhile, Mays and Pope (1995) posited that one of the ways in which qualitative and quantitative designs fundamentally differ from each other is [in their ability to ensure validity and reliability of their findings](#). In defense of the presumed inferiority of qualitative research in this regard, the authors noted that these designs differ in subjectivity/objectivity only in degree. While they concede that quantitative designs are more akin with scientific procedures and statistical inferences, they still point out that both designs are equally susceptible to failure in this regard, as they both depend to some degree on the judgement and skill of the researcher. According to these authors [all research is literal and selective - there is no way that the researcher can in any sense capture the literal truth of events](#). On the other hand, Merriam (1995, p. 51) argued that questions referring to a lack of "generalizability of findings emanating from small", "non random samples", "...whether a different researcher would arrive at the same or different conclusions" and "the question relating to whether a researcher, deemed a research instrument in the research process, to what extent can they be deemed a valid and reliable instrument", reflect cynicism as they

represent an attempt to impose positivist thinking in a non-positivistic paradigm, which is totally unfair. Merriam argued instead that validity and reliability must be addressed within the paradigm the study falls into. Similarly, Morse et al. (2002) identified the following key verification strategies as they apply to qualitative data, which they deemed critical for improving research validity and reliability, namely methodological coherence, sample appropriateness concurrent collection and analysis of data, thinking theoretical and theory development. With regard to the former three strategies, these were followed during certain stages of the research as attested to in the relevant sections. With regards to theory development, this inquiry was approached with an open mind, with inductive logic being adopted rather than a preconceived framework being imposed on the process. Given the time and cost constraints involved, the method chosen by the researcher was the one that allowed for communicating the results back to the respondents for confirmation. With regards to external validity, the results of this study do not necessarily lend themselves to generalisability. The main reason for this is that the study is qualitative and the manner in which the sample was drawn (refer to the relevant section above) is not amenable to this process.

3.10 Conclusion

This chapter dealt with the Research Objectives, Research Design, Research Instrument Design, Sampling Procedure, Data Collection Method, Ethical Considerations, Data Analysis and Reliability and Validity. Using extant literature it became evident that ontological, epistemological and axiological assumptions leading to whether the study follows an interpretivist/constructivist approach versus a positivist research paradigm negates subsequent decision about the nature of sampling, data interpretation, proximity and depth of the research, data collection method and even reliability and external validity. This chapter noted that a qualitative design was chosen for this study, as were non-probabilistic sampling, an interpretivist approach, an unstructured IP protocol as well as a data analysis approach. Reliability and validity were also discussed, along with the dichotomy imposed by ontological, epistemological and axiological assumptions. To this end the chapter covered the steps that were employed during the research process to mitigate any bias.

CHAPTER 4

4.1 RESEARCH RESULTS

This chapter deals with the heart of the study, which is reporting on the research findings. To restate, the study sought to determine the survivability of BSSSGs in an industry that is facing an onslaught from forces related to global competitiveness as well as domestic socio-cultural and legal factors. The main goal of the study was broken down further into four objectives, namely examining BSSSGs' perceptions of the overall sugarcane industry, understanding BSSSGs' perceptions of the farm-specific/micro-economic attributes that make them susceptible to failure, ascertaining whether BSSSGs employ deliberate mitigation strategies to counter the causes/effects of the industry decline, and whether BSSSGs perceive farm size and land tenure as having any effect on survivability. The chapter is structured as follows: Section 4.1 reports briefly on demographic and other measurable data to illustrate the profile of the BSSSGs. Although this study is qualitative, demographic information such as the age profile, generation of farming, education and farming experience were used as proxies and therefore a basis for speculation on the typical industry participants and by extension its future. This does not in any way detract from the research design being qualitative in nature; rather the researcher deems that this information makes the study richer. Table 4.1 tabulates the demographic profile of the BSSSG respondents. In keeping with the principle

of anonymity, the respondents were identified as A1 or B1 etc. in ascending number sequence, with either A or B referring to the stream from which the respondent was drawn, and the number next to the letter referring to the chronological number sequence in which the interviews were held. As indicated in chapter 3, respondents belonging to Qhubekani Farmers Association were designated Stream A and those that belonged to Mnini-Mfume Association were Stream B.

4.2 BSSSGs' DEMOGRAPHIC PROFILE ANALYSIS

Table 4.1 tabulates all the demographic information pertaining to the respondents. This is followed by additional sections that discuss other demographic information further where the researcher deemed it necessary.

A1 55 15 ha No Male 2 years Std 10 R350k 1st Generation Yes 300 in the season Aug-Oct Respondent No Age Hectares Profitable Gender Farming experience in years Highest standard in education Estimated annual turnover 2nd other generation farmer Other business interests unrelated to cane farming Number of people employed 1st , 2nd or A2 45 5 ha Yes Female 4 years Std 9 R600k Generation 2nd Yes Farming done through contractor scheme A3 64 2 ha Yes Male 8 years Std 2 R672 Generation 1st No Farming done through contractor scheme A4 80 4 ha Yes Male 22 years Std 10+ R26k No Farming 73 A5 60 20 ha Yes Male 32 years Std 8 R50k 1st Generation No Farming done through contractor scheme Generation 2nd done through contractor scheme A6 62 3 ha Yes Male 1 year Std 10 Not available Generation 2nd Employed Fulltime elsewhere Farming done through contractor scheme A7 57 25 ha Yes Male 10 years Std 10+ R40k Generation 1st Taxi and Fulltime employment elsewhere Farming done through contractor scheme A8 64 4 ha Yes Male 1 year Std 2 Figures not Taxi As above 74 B1 53 35 ha Yes Male 31 years Std 8 R300k Generation Taxi 13 employees available Generation 1st B2 64 4 ha Yes Male 24 years Never attended School R100k 1st 1st Generation Spaza Shop & Shebeen None (because of season) B3 71 12 ha No Male 20 years Std 6 Don't know Generation 2nd None Farming done through contractor scheme B4 44 5 ha Yes Male 12 years Std 10 Don't know 1st Generation Fulltime employee elsewhere As above B5 71 3 ha Yes Male 11 years Std 6 R8k Generation 1st None None at present due to season B6 54 3 ha Yes Male 17 years Std 8 R18. 3k Gum Tree None at 75 Generation Felling, Piggery Farming present due season to B7 66 5 ha Yes Male 17 years Std 10 R36k Generation Vegetable farming veggies (7 to 8 for cane) 4 for 2nd

Table 4.1: Demographics of Respondents

4.2.1 GENDER DISTRIBUTION Figure 4.1 below shows that BSSSGs are predominantly male, with this gender group having a significant 93% representation. This could be as a result of the patriarchic nature of the research setting. Notwithstanding the effect of the socio- cultural dynamics, proponents of transformation and gender representativity may find this situation unacceptable.

Figure 4.1: Gender distribution of respondents.

4.2.2 AGE ANALYSIS OF THE RESPONDENTS Figure 4.1.2 depicts the age distribution of the respondents. This figure shows a preponderance of the age bracket 60-69 years among respondents, which on its own accounts for 40% of the group. A further 13% of the respondents fall within the age bracket 70-79 years, with a further 7% belonging to the age category 80-89 years. This accounts for a total of 60% of the respondents. This age distribution raises questions regarding the present and medium term future of farming if the majority of farmers tend to retirement age of 65. In addition, one farmer indicated during the interviews that physical exertion required by farming was very taxing on his body. Against the backdrop, where comparatively low levels of mechanisation were

noted, this observation about age becomes problematic. On the other hand it may have its own positives in the sense that these farmers are highly experienced in what they are doing. Figure 4.2: *Age analysis of the respondents* 4.2.3 **EDUCATIONAL LEVEL OF RESPONDENTS.** Figure 4.3 below depicts the respondents' education levels. This figure shows that 67% of the respondents fell within the category of Standards 6-10. A further 13% of respondents had achieved an educational level above Standard 10, whereas the other 13% had attended schooling below standard 5. Interestingly, 7% had never attended school. The comparatively low levels of education raise questions about the adaptability of respondents, especially regarding the sophisticated decision tools and agronomic practices that seem to be demanded in contemporary farming as alluded to under the relevant section in Chapter 2 of this study. This aspect will be revisited under Chapter 5 when the results are discussed further. Figure 4.3: *Educational level of respondents* 4.2.4 **FARMING GENERATION** Figure 4.4 depicts the respondents in terms of their farming generation, with 40% being second generation farmers. This is positive in the sense that if this trend persists, it may mean that there is a likelihood of a family member taking over the family farm from current BSSSGs in the event of retirement or death. Furthermore, the other 60% could be an indication that the industry is attractive enough to entice new farmers. Figure 4.4: *Distribution of respondents according to farming generation* 4.2.5 **INCOME DIVERSIFICATION** Figure 4.5 depicts the extent of income diversification among respondents. At 67% it can be seen that there is significant income diversification among the respondents, however it needs to be pointed out that diversification could lend itself to various interpretations, e.g. it may mean that sugarcane as a business in itself cannot be relied upon solely as a means for eking out a living. In support of this conjecture, one can see from the table that turnover figures point more towards the lower side if one excludes the study's top income earners. On the other hand, one respondent indicated that his motivation to go into farming was because he saw people who were sugarcane farmers earning a decent living. In addition to this, other respondents credited sugarcane farming with being able to put their children through schooling up to tertiary level. Ultimately, one has to question whether this is a perception or reality, and whether it is based on historical or current performance. There is no doubt that historically people would have made much more money from cane farming when conditions were more favourable and returns in the industry were higher prior to the era of international competitiveness. This prompts the question, is this attraction simply a false lure? Diversification may also be attributable to the individual farmers in terms of how resourceful they have been over the years in terms of adapting to and stemming the import tide (rather than it purely being a case of sugarcane farming). Ultimately diversification is commendable as a mitigation strategy, as was extensively discussed in the literature review as one of the survivability strategies associated with farmers as they negotiate adverse conditions. Contrary views notwithstanding, however, an overwhelming majority of respondents rated the industry as being profitable. The last point about diversification is that it could be an intention amongst some to phase themselves out of cane farming. In two cases this was said to be a certainty and in another case the respondent was more speculative, saying that the final decision rested on comparative returns between cane and alternative crops. Figure 4.5: *Income diversification prevalence among BSSSGs* 4.2.6 **EMPLOYMENT CREATION**

CAPACITY Table 4.1 shows the extent of employment created per respondent at a particular time. The first observation to make about employment trends is that they are seasonal and only last during the farming and harvesting season. The second and most intriguing aspect is that in 53% of the cases, no employment was recorded. The reason for this is that the farming is done through a third party contracting under the government-sponsored scheme. This has given rise to the phenomena of passive farming, which will be discussed further in chapter 5. Interestingly, table 4.1 does show one stand-out case where a farmer employed 300 people during one season. Apart from the stand-out case these figures may give rise to concerns that the expectation of creating employment through BSSSGs may prove to be a fallacy. This may have adverse implications for policy considerations and interventions intended at targeting this sector as a potential source of employment generation. Passive farming as a result of indiscriminate farmer support was widely blamed for contributing to the industry decline by respondents. This aspect will be revisited in Chapter 5 under the section dealing with entrepreneurial capacity. An analysis of turnover figures as illustrated in figure 4.6 below reveals that 46% of BSSSGs earn an annual income of between R0 and R150,000. A further look at figure 4.1 reveals that if one excludes income from the four top earners from the calculations the average income per respondent falls drastically to R4,166 per month with the majority of these respondents earning R50,000 or less per annum. A further concerning aspect revealed by these figures is the number of cases where non-availability of data was recorded, calling into question the farmers' ability to manage the microeconomic aspects of their businesses. Overall, the figure depicts an income distribution that indicates that BSSSGs could in the main be struggling financially. Figure 4.6: Estimated Annual Turnover for BSSSGs

4.3 RESEARCH RESULTS This section reports on the BSSSGs' responses to questions posed in the study. Reporting on the findings will follow the same sequence as the way in which the questions were set in the Interview Protocol. This section is structured such that the following broad questions are dealt with: responses to the question that sought to elicit the BSSSGs' overall perception of the sugarcane industry; the BSSSGs' perception of micro-economic/ agronomic practices that prevent their businesses from failing; responses relating to whether BSSSGs employ deliberate mitigation strategies to counter the decline of the industry; and responses related to the question that sought to determine whether BSSSGs perceive land tenure and farm size to be a factor in their businesses.

4.3.1 BSSSGs' PERCEPTION OF THE OVERALL SUGARCANE INDUSTRY The first question dealing with the BSSSGs' assessment of the industry presented the researcher with mixed results, based on the fact that a total of six respondents (40% of the sample) assessed the industry as being on the decline as opposed to five (33% of the sample) who felt the industry was stabilising. This difference in the correct assessment of the industry assessment is cause for great concern. It may also mean that there is none to deal with the stagnation/decline at farm level. What was also interesting to note is that apart from the remaining two respondents who assessed the industry as being "stable", the remaining two did not know or were undecided. Overall, there is an urgent need for the BSSSGs to become more aware and appreciate the gravity of the situation the industry is facing.

4.3.2 BSSSGs' ADOPTION OF ADAPTIVE STRATEGIES OVER THE 10 YEARS PRIOR TO THE RESEARCH The second question under this objective sought to elicit whether BSSSGs implemented adaptive strategies over the 10 years prior to

the study. The rationale for this question was to ascertain the extent of evolution of farming practices in response to the adverse changes to discern any deliberate measures by BSSSGs to counter the industry decline. Choosing the last 10 years was crucial because the first documented decline traces the phenomenon to around 2005. Responses to this question were again varied. A significant number of respondents (71%) in Stream B indicated that their farming had evolved from using a span of oxen to a fairly mechanised state. Interestingly, one farmer indicated that he still uses a span of oxen in undulating and muddy terrain. Other changes in the farming practices related to the adoption of scientific farming methods, forging partnerships with white commercial farmers, and in one case of venturing into alternative products such as vegetables as a direct survival strategy to counter the decline. The farmers in Stream B appeared to be more inclined to adopt adaptive strategies than those in Stream A, where only two farmers indicated that they had formulated some kind of strategy to deal with industry problems. The reason for this became clear during the study when the respondents indicated that in the area that fell under Stream A, sugarcane planting had completely stopped in the eight years or so prior. The majority of respondents in this stream were thus only participating in the sugarcane industry (as a distinct concept from farming) because of the incentive scheme created under the Recapitalisation Plan, which itself proved to be great source of discontent among farmers. This point will be further discussed in Chapter 5 with regards to its implications for entrepreneurship and other aspects [from the extant literature. Based on the responses from the question seeking to understanding mitigation strategies implemented by respondents it became apparent that the Stream A respondents were in the main caught up in the negativities of the Recapitalisation Programme and apportioned blame and accused Illovo Sugar of impropriety. These respondents also showed less of an inclination to resolve the farming problems and felt that the Recapitalisation Project should provide solutions to their farming challenges. However the Stream B area was also benefiting from the Recapitalisation Programme and respondents were also unhappy with the programme, but sugarcane farming never stopped. This aspect will be dealt with again under Chapter 5 when a phenomenon of passive farming is discussed, which arose unintentionally from the Recapitalisation Programme.](#)

4.3.3 BSSSGs' INTENTION TO EXPAND OR DECREASE SUGARCANE PLANTING IN THE NEAR FUTURE AND THE UNDERLYING RATIONALE FOR SUCH A DECISION

The next set of questions posed to respondents sought to determine their outlook on the industry by determining their appetite for expanding their investment in farming and the rationale for this decision. By asking these questions, the researcher sought to firstly gain insight into whether the situation was bad enough that BSSSGs are contemplating exiting the industry, and secondly whether if this is indeed the case, do they directly attribute this in some way to the decline. The two questions posed were thus: "Do BSSSGs intend to expand or decrease sugarcane farming in the foreseeable future?" and "What is the rationale behind this decision?" Surprisingly, an overwhelming number of BSSSGs (80%) indicated their plans to increase sugarcane planting, with Stream A's response rate in this regard being 88%. Within the context of an overall industry that is ailing this observation is encouraging, and at face value shows a guaranteed participation of BSSSGs in the foreseeable future. A further question regarding the rationale for the optimism revealed varied responses, with the key one being profit motive. Another reason that was

mentioned more than once was to turn fallow land over for economic use, and in a single instance one respondent stated that he was doing this expansion to prevent his land from being taken by a local Inkosi who is notorious for taking away people's vacant land and re-assigning it without owners' consent. Whilst there is no denying that there are three stand-out cases where BSSSGs had made substantial profits based on the assets that they had acquired over the years, it is noteworthy that all three of them fell into the group of BSSSGs who had made the most tangible strategic adaptation over the years, i.e. they had constantly adapted to industry adversities, and they had been in the industry long enough to understand its intricacies and were therefore adept at withstanding every challenge that came their way. Interestingly, one among these three respondents indicated that he did not intend increasing cane plantation. Furthermore, it is well documented that in earlier periods the industry was very profitable and it is only within the last ten years that profits appear to have dwindled significantly, casting serious doubt on the claim to the contrary by new industry entrants. Furthermore, turnover figures discussed under 4.1.7 seem to suggest otherwise.

4.3.4 BSSSGs' PERCEPTION OF FACTORS THAT EXACERBATE FACTORS THAT EXACERBATE THE DECLINE LEADING TO FARMS GOING BANKRUPT

An analysis of the responses revealed that there is a strong apportionment of blame among BSSSGs for the manner in which the government and Illovo Sugar handled the program. For the government further criticism was leveled at it by respondents through its implementation of other programs [such as the Reconstruction and Development Programme \(RDP\)](#) and [the Land Restitution Programme](#). For example, 27% of the sample (three-quarters of which emanated from Stream B) blamed the government and Illovo Sugar for the Recapitalisation Plan and the Contract Farming Programme, with all of the BSSSGs alleging misappropriation of funds intended for this programme. Similarly, 27% of the respondents blamed land restitution and competition from other farming sectors, which according to the respondents were responsible for the declining share of sugarcane in land allocation. Surprisingly, these respondents limited this divestiture to the forestry sector and the government's RDP Programme, or simply cane land that they observed being turned into residential use, either through formal proclamation or informally. One such case is the Ilovu residential area, located east of Amanzimtoti and Isipingo, which one respondent noted in 1980 was large tracts of cane fields. Another example, although relatively small, is a respondent who claimed that he was forced to sell 10.9 hectares of prime cane land to give way to a soccer field. Of critical importance about this lost land is that it is not replaced. Of further interest is the fact that respondents only cited forestry as a farming alternative. This is against the trend noted in the Ugu Sugar Industry Report (2010), which states that the divestiture trend tends to favour high value crops such as macadamia nuts and tea tree essential oils. This group of respondents was equally split between the two streams. The next group of stand-out responses to this question referred to cost competitiveness, import effects and the fact that the industry structure favours everyone from the contractor to the cane hauler, transporter and the mill, with instances where the farmer gets nothing out of the harvest being a reality. This group of respondents accounted for 20% of the interviewees. One-third of the respondents from this group emanated from Stream B. Other notable responses to this question were a failure by BSSSGs to reinvest in business, government dependency by BSSSGs (characterised by unfulfilled expectations in this

regard), a lack of farming skills amongst BSSSGs, and high transport costs.

4.3.5 BSSSGs' IMPLEMENTATION OF MICRO-ECONOMIC MEASURES THAT MITIGATE THE DECLINE An analysis of the responses to the above question revealed a surprise in that two respondents claimed that they were not aware of the industry's decline. Upon further probing this it became a cause for concern when it appeared that one of the respondents was actively involved in and sits on various committees that deal with matters pertaining to the sugarcane industry in the district. His claim was that all the discourse that he is exposed to in these committees indicates that the industry is on an upward trend. The responses did, however, indicate a significant adoption of improved agronomic practices. It is also interesting that Illovo Sugar was mentioned by at least one respondent as playing a pivotal role in the propagation of new seedlings and as being responsible for research into improved cane cultivars with direct benefits to BSSSGs. One respondent claimed that he did not implement any agronomic practices because there was nothing wrong with the industry, but that the problem lies with Illovo and the government around the Recapitalisation Programme which they claimed would take care of all problems. Yet this respondent was responsible for the most employment created in one season and his turnover figures place him in the top earning income bracket. For this reason he is probably implementing improved agronomic practices, and his answers may only be a reflection of an obsession and anger about the Recapitalisation Programme. The researcher is of the opinion that the farmers still retain the ultimate responsibility for any improvement in agronomic practices as business owners, irrespective of outside interventions such as the Recapitalisation Programme. A significant number of respondents claimed to be implementing agronomic practices and their answers in this regard were backed with a certain degree of conviction. This group constituted 60% of the sample. A further analysis of this group shows that the majority of its respondents (63%) emanated from Stream B. More interestingly, among this overall group, some respondents displayed positive turnover figures and a propensity for income diversification, with three of the farmers in this category having gone out and forged relationships with established White commercial farmers who they credited with the improvements they subsequently achieved. Of these three respondents, two came from Stream B. The last notable group of responses elicited under this question revealed a "passive" farming phenomenon. These respondents are the current recipients of the Recapitalisation Programme, where farming is done on their behalf by a third party 87 who is paid by the government via Illovo under the programme. This group constituted 40% of the sample. This group is a source of great concern given that in the main they are hardly distinguishable from landlords who offer land for commercial activity and in return receive money, without being hands-on in the actual business. One encouraging aspect of this is that one respondent appeared to be very knowledgeable about the agronomics of farming and she was actively attending training to improve her technical farming skills. It was also interesting that Illovo, despite receiving much criticism, also received praise concerning the propagation of a new variety of seedlings, which not only are easier to plant thereby cutting production costs substantially, but also have a shorter harvest cycle. Furthermore, these respondents claimed that these varieties are resistant to numerous cane diseases. For those farmers who reported an improvement in agronomic practices, 47% overall, (57% from Stream B and 38% from Stream B) in 38% of these case these did not just

appear to be superficial but characterised by some level of depth and in the process discerning entrenched use of scientific methods of farming. Evidence of this can be seen in the following responses: "Relied on expertise from commercial farmers and followed strict regime of fertilisation, matching soil type to fertilizer and soil testing" (Respondent B1). "Applied stricter fertiliser regime for surface and underground soil, and proper and regular use of pesticides, propagation of new seedlings by Illovo Sugar" (Respondent B7). "Obtained assistance from white commercial farmers which resulted in adopting more sophisticated agronomic practices" (Respondent B6). "Planted new variety of seedlings and did propagation assisted by white commercial farmers" (Respondent A4). Two conclusions can be made about this behavior - one is that a significant number of respondents (47%) are implementing sound agronomic strategies which deserves praise, with the other being that the remaining 53% are not keen to embrace agronomic practices. Of more concern is that fact that these BSSSGs have apportioned blame on the government and Illovo, and place the responsibility for correcting the industry problems on these institutions.

4.3.6 MAJOR CHANGES IMPLEMENTED BY BSSSGS IN THE LAST 10 YEARS

The above question sought to ascertain the BSSSGs' responses regarding noticeable changes that they had effected in the 10 year period prior to the study, and whether these changes were deemed to have impacted on the survival of their businesses. This is based on this period being deemed to have been the most turbulent in the history of the industry. The two questions that the respondents were required to answer were, "What are the most major changes that BSSSGs have effected in the last 10 years", " what was the underlying rationale for these changes", and whether the respondents consider these changes to be critical for business survival. Interestingly, the respondents gave similar answers to those they gave for the preceding question dealing with agronomic practices and to the earlier question which sought to determine which adaptive strategies had been effected in the last 10 years. Although these questions are superficially somewhat similar, with regards to agronomic practices, the researcher sought to establish any adoption of changes insofar as they related to practices associated with the internal productivity function, including the extent of use of technological advancements. These would range from the applications of computer technology and modeling as a business aid to the adoption of scientific methods of farming practices. The first question about adaptive changes effected over the last 10 years related more to the evolution of farming practices in general, which may or may not relate to the difference between surviving or failing as not all changes made over time mean the difference between survival and failure. To this end, the last question related to changes that are directly related to survival, while the former question related to more general, organic and evolutionary changes. The rationale for the second question was to engage respondents in a more critical assessment of the changes effected and to perform some subtle weighting of those changes, so that even if numerous changes occurred, the BSSSGs could distinguish the one that was most important. 89 Despite this, the answers centred mainly around profitability. On the other hand some respondents felt that they had implemented changes to achieve higher productivity, while others rationalised this as means to counter imports and/or the decline. Concerning Stream A respondents, the fact that no stand-out answers were forthcoming is understandable, given that sugarcane farming had completely stopped in this area for almost eight years prior to

the study. Apparently these farmers were lured into cane farming by the Recapitalisation Programme, which incidentally has gained notoriety due to allegations of fund misappropriation and a now infamous contractor growing scheme. Regarding the question which sought to determine how BSSSGs consider which changes are critical for survival, those that did make changes indicated some business improvements that were critical, especially during the decline, but interestingly did not necessarily claim that these improvements prevented their businesses from failing. This made it hard to discern if these changes were business-saving or normal evolutionary ones. Others in the same group believed that they would have gone under had they not made the changes. In support of this assertion they indicated that they had seen numerous other BSSSGs whose businesses had gone under over the years, which had spurred them on to make these critical adjustments. Overall, these changes are not markedly different to enhanced agronomic practices as discussed earlier, therefore these will not be repeated under this section. Interestingly, even those farmers who claimed they were not aware of the decline and those that strongly felt that the mill or the government was responsible for the decline did not exhibit any different agronomic practices to the group that made adjustments. Lastly, while sugarcane farming had completely stopped in areas under the Qhubekani Cane Farmers Association (Stream A) for at least eight years prior to the study, farmers belonging to Mnini-Mfume Farmers Association (Stream B) had persisted. One of the respondents who plays a pivotal role in mobilising cane farmers indicated that whilst the Illovo Mill was experiencing a decline overall, the association of which he is a member was the only one that was experiencing an exponential increase in tonnage. This has led to the area receiving accolades and being visited by mill representatives from Mount Edgecombe, who heaped praise on them for the significant contribution they made amid the declining feedstock supply. A further question regarding the tangible effects of changes revealed some notable positive ones. In one instance in Mnini-Mfume, the same respondent indicated that his cane production in 1993 was less than 300 tons a year, but currently stood at 3,400 tons – a 1,133 % increase – and was still on an upward curve. What was also interesting to note was that an illiterate farmer who claimed not to have attended school noticed an increase in his harvest based on improved agronomic practices. When asked how he measured this increase (given his illiteracy), he indicated that he determined this through the increase in the number of trucks harvested without an increase in the hectares planted. This is one notable case of how a farmer who lacked any formal schooling belonged to the three top performers. Despite this reported increase in sugarcane volumes, a significant number of respondents reported an improvement in cane quality and profitability as well.

4.3.7 EFFECTS OF FARM SIZE ON SURVIVABILITY

The next question dealt with effects of farm size on survivability. A comprehensive discussion of the [inverse relationship between farm size and profitability in the literature review](#) showed an overwhelming prevalence of the phenomenon. Accordingly the expectation was that the responses would confirm this. Furthermore, the researcher sought to ascertain whether farm size was credited by the respondents in any way for either enhancing or inhibiting success. An analysis of the responses in this regard showed that 40% of respondents were neutral with respect to farm size as a factor in survivability. A further 47% of respondents felt advantaged by their small size farm in one way or another. The remaining 13% respondents felt disadvantaged by their small farm size. The

latter group of respondents generally associated small farm size with lower profitability, while others in the same group indicated that it posed constraints in terms of expanding, which there was a definite appetite for among BSSSGs as evident in the question that dealt with industry outlook. Superficially, this might lend itself to the interpretation of the non-existence of an IR. This aspect of the study will be dealt with again in Chapter 5. 91

Figure 4.6: Size effects on Farming Operations

4.3.8 EFFECTS OF LAND TENURE ON SURVIVABILITY

On the question of land tenure, 53% of the total sample had no opinion on the land tenure effects on survivability. Interestingly, all respondents were farming under the ITB land with the exception of two who had a title deed. Five (33%) respondents indicated that they were impeded by the land tenure. The remaining two indicated the land tenure system was beneficial - among the benefits they stated were the close proximity of the farms to their residences and the flexibility this provided, which in turn improved profitability. Further to this they stated that not having to pay rent was a positive. One respondent whose farm has a title deed complained that he was excluded from benefiting from the government assistance directed at BSSSGs. This concern is valid as the only thing that differentiates this respondent from the other BSSSGs is his form of title ownership, otherwise he faces the same challenges as his counterparts. What makes the concern more valid is that the other farmer whose farm is on title deed, which is also within Stream A some five kilometers away, does receive assistance from the government. Among the group that felt disadvantaged by the ITB land tenure system, the negative responses varied from an inability to expand since land is allocated for residential land use only, to jealousy from fellow communal land residents leading to them setting cane fields on fire, livestock invasion, and insecurity of tenure as a particular Inkosi has a tendency to take away portions of land without existing owners' consent. In these instances the result is a disincentive to invest in such land tenure, however when looking at the responses, at first glance it may seem surprising that 54% of respondents were neutral with respect to land tenure. Viewed against the extant literature, credit access is among the main reasons why land tenure is a factor in production. Yet close examination of the responses show that external credit access was for some reason not an issue that was raised. This gave the impression that BSSSGs were not active solicitors of external credit. Among the possible reasons for this are that the majority of BSSSGs are engaged in "passive" farming, or that those who had been in the industry for years had found more creative and non-conventional substitutes for external credit access as a way of adaptability, given the fact that the conventional doors of access to finance are closed for them. Interestingly, even the two respondents who possessed title deeds did not seem to appreciate the fact that their land title made it possible to access finance. Nor did they indicate that they felt more advantaged generally from the security of tenure that comes with a freehold title. To this end, respondents appeared to generally self-fund their assets, with only a few cases reporting that external financing was involved. For those that did indicate they had difficulties in acquiring machinery at one point or another, white commercial farmers had been instrumental in helping them access finance without necessarily going the conventional route. Also noteworthy is that where respondents felt impeded by the land tenure system, it was only because of the previously mentioned constraints. Some respondents who belonged to the best performing category as per annual turnover indicated that they had outgrown communal land farming, which

they considered to be a "training ground" to graduate to more large scale farming. These farmers indicated that while they felt ready to take over farms under the land restitution programme, they felt the processes was not fair and worked through political connectedness rather than merit. On the last question dealing the generation the farmer belonged to, the research revealed a split of 53% to 47% in favour of first generation farmers. At face value this shows a correct balance between new entrants and succession in the industry, however this could pose a conundrum with adverse consequences for the industry as the prevalence of passive farming seems to occur exclusively among the new industry entrants. In fact, some of the new entrants indicated that they would not be in farming had it not been for the assistance promised under the Recapitalisation Programme. The next chapter of the dissertation deals comprehensively with the phenomenon of passive farming, how it came about, what impact it has on the industry, and its implications for the overall sugar industry. Figure 4.7: Land Tenure Effects on Farming Operations

4.4 CONCLUSION

The preceding section on the research results, which commenced with the demographic profile of the BSSSGs, was graphically presented and discussed with respect to its characteristics and its meaning. This was followed by a detailed discussion of responses in respect of each question that was asked in the research process. This section revealed some positive trends in respect of some BSSSGs who distinguished themselves as being progressive in their attitude. This is evident in the fact that they seem to have embraced the challenges of the sugarcane industry. As a result they have been creative in dealing with their problems, including forging strategic partnerships with white commercial farmers. Through these linkages they state that their farming operations have been greatly enhanced. This group has also shown themselves to be generally aware of the decline of the industry and attribute it to globalisation and imports. The group was unhappy with the role of the government and Illovo Sugar regarding the implementation of the Recapitalisation Programme, but notwithstanding this, these respondents have confronted the challenges they face head on. On the other extreme, there is a group of passive farmers which is an unintended consequence of the Recapitalisation Programme, whereby participants are only required to provide land and the rest is done under the contractor farming programme. This study showed that this might have attracted people who are not of the right calibre for farming, who for all intents and purpose are neither farmers nor entrepreneurs. In the literature review section, entrepreneurship and the key role it plays in business survival was reiterated. Evidently there is a prevalence of "spoon-feeding" and a climate where it is possible for the misallocation of harvests, given that there is a group of farmers who are not sufficiently knowledgeable about their own farming operations. Naturally, these farmers are not taking responsibility for any of the problems afflicting the industry and deflect the blame on the government and Illovo Sugar. It is important to note, however, that even the progressive farmers blame the government and Illovo Sugar for all the problems, and particularly accuse the government of inculcating a culture of dependency, among other things. Another highlight of the study is the high optimism level regarding the industry, which was gleaned from the respondents' intentions to expand sugarcane farming. Even more interesting in this regard is the fact that they cited a profit motive as their rationale. This raised serious doubts about the veracity of the claim given that the industry had been declining for the 10 year period prior to the research. This chapter synthesises the information

collected through the research and interprets same in order to provide conclusions about the state of survivability of BSSSGs in the sugarcane industry. Chapter 5 deals comprehensively with the research results in the light of the extant literature. CHAPTER 5 5.1 DISCUSSION OF RESEARCH RESULTS This chapter discusses and analyses the themes that emerged from the study and interprets these in the light of authoritative sources discussed in the literature review. Following this discussion and analysis, the researcher draws conclusions regarding the state of survivability or otherwise of the BSSSGs within Ugu District Municipality, based on the areas of strengths and/or weaknesses elicited by the study. Emerging themes emanating from the study are dealt with in the chapter in the following order: the passive farming phenomenon, entrepreneurship and its potential impact, general levels of profitability of BSSSGs' farm operations, BSSSGs' technology uptake and agronomic practices, income diversification strategies, the HIV and AIDS pandemic, creative labour strategies, farm size effects on farming operations, and land tenure effects on survivability. This chapter ends with a conclusion that summarises the key findings on the survivability of BSSSGs. Among the key themes emerging from the study is the following, Land use and government policy dilemma, age and gender distribution of BSSSGs, key supporting role and mentorship of BSSSGs by White Commercial Farmers, relatively low capacity for employment creation by BSSSGs, relatively low profitability, a critical indicator of business viability, by BSSSGs and lack of use of decision support tools by BSSSGs, low capitalization by BSSSGs and relative low levels of sophistication in farming, the latter which made it difficult to judge on the prevalence of otherwise of the IR. 5.1.1 THE PASSIVE FARMING PHENOMENON: IMPLICATIONS FOR ENTREPRENEURSHIP AND POTENTIAL CONSEQUENCES The study revealed a significant amount of passive farming among BSSSGs at 40% prevalence, which upon further investigation was found to have been caused by the manner in which the Recapitalisation Programme had been implemented. These findings about passive farming simultaneously confirmed the scarcity of technical farming proficiency and business acumen, as asserted by Maloa (2001) and Murphy (2012). Furthermore, based on the fact that these farmers play no part in their farming operations, these BSSSGs are presumed to be lacking in key attributes that are deemed by several researchers to be drivers of success in business (Cunningham and Lischeron, 1991; Shaver and Scott, 1991; Rauch and Frese, 2000; Shane et al., 2003; Baum and Locke, 2004; Sumner, 2011; Young et al., 2012). The study also found that among the BSSSGs, a small percentage are highly motivated, directly involved in their farming business, and to some degree display the traits needed for success in business as alluded to above, including a perception of themselves as entrepreneurs upon whose efforts and decisions the success of their operations depend. The attributes displayed by these respondents are consistent with the motivational and individual psychological traits put forward by Shane et al. (2003) and Baum and Locke (2004), amongst others. These respondents distinguished themselves with a comparatively high level of technical acumen in farming practices, and had forged relationships with their white commercial farmer counterparts. This level of proficiency was more in line with the prediction of Maloa (2001) and Ortman (2003), however all the respondents lacked the degree of technological integration in their businesses that was envisaged by Van den Berg and Smith (2005). Another finding in respect of the small group of respondents were that while encouraging as these findings are, the

researcher noted that they still fell short of the expectations implied by the assertions of authors such as Sumner (2011), Beckford et al. (2012) and Genis (2012) when it comes to the degree of integration of measures that these authors prescribed as critical for success. In addition, these BSSSGs had comparatively low capitalisation levels, which is an indication of farm operations that are relatively small and largely constrained in the level of absorption of technology and other contemporary facets of farming as envisaged Ortmann (2005) and Van den Berg and Smith (2005). Likewise, passive farming is consistent with the predictions of Olawale and Garwe (2010) and Urban and Naidoo (2012), who spoke about the general lack of skills in the SMME sector which in turn causes a high rate of failure. While passive farming needs to be understood within the context of the quest to find an urgent solution to the decline in the sugarcane industry, its unintended consequences are a cause for concern. For the government the scheme has a dual purpose, i.e. to enable an increase in tonnage to revive the industry which is of 98 strategic economic importance to the region, and to extend participation to the industry in line with the government's BBEE policy. The program was designed in such a way that people willing to participate only had one requirement to fulfil, namely to assign land for the plantation of sugarcane with no pre-screening required. Whilst in theory the scheme would serve to gradually introduce the novice farmers through a phased introduction to farming by third parties used in the scheme (hired contractors), in reality farmers in the majority of instances ended up playing no part in the farming operations. During the research process Illovo Sugar and the government were widely criticised by the majority of the respondents, including the contractors as indicated above, with most claims being centred around allegations of fund misappropriation. However, most pertinently, the scheme itself received legitimate criticism for creating dependency. This was expressed by the most progressive group of farmers amongst the respondents, who themselves participated in the contractor scheme. They voiced their frustration that most recipients were sitting expecting hand-outs from the government and lacked the drive to take charge of their situations. These contractors blamed the government for spoon feeding and not consulting the farmers on how best to tailor the assistance programmes. This criticism of Illovo and the government was not limited to the elite group of farmers however, but resonated with most respondents. The group of respondents who for all intents and purposes were no more farmers than they were landlords expecting a return from leased land, however, seemed oblivious of the situation. These farmers were naturally the most passive of the whole group and in terms of answering questions about the industry, agronomic practices and future outlook respectively claimed stability, ignorance and optimism. Whilst the contractors' role was controversial, some of the respondents were themselves contractors and appeared honest in their appraisal of the contractor system, as well as in conducting their businesses in general. Among them there was an elite group who seemed to have the interest of the industry at heart and took up contracting to uplift their struggling counterparts. For this reason, the researcher believes that some form of pre-screening of individuals from both sides before they participate in the programme might bring the whole vision back on track. Currently, however, the majority of the respondents indicated that the situation is bleak. Unfortunately, apart from resulting in the apparent infamy of the contractors, another aspect that is detrimental to the industry is that farmers

who are passive adopt an aloof and uninterested disposition towards farming. This has created a serious dependency on outside grant, which passive farming interestingly is blamed even by the farmers who have been in the industry for long enough. They felt that this group of farmers were only a burden to the system and that perhaps do not warrant the assistance given to them. The researcher concurs with this view, especially in the long-term, notwithstanding that it may appear to solve the immediate problem of expanding sugarcane plantations. Apart from providing land on which production takes place, these BSSSGs are nothing more than pseudo-landlords with income paid to them in the form of rent. This group of farmers are clearly lacking in the motivation and cognitive attributes that are critical to drive a successful enterprise. Furthermore this didn't measure up to level of the expectations of entrepreneurship as envisaged by several authors such as Shane et al. (2003), D'Aveni and MacMillan (1991), Van Gelder et al. (2007) and others. Based on the foregoing, except for a progressive few farmers who distinguish themselves in this regard by achieving a relatively high level of income diversification, relatively high levels of contemporary agronomic practices and high turnover levels, the majority of the respondents displayed serious shortcomings when assessed against the ideals as espoused in the body of knowledge on what constitutes entrepreneurship, especially in the contemporary business landscape which is characterised by turbulence and complexity. Naturally, this spills into other important areas of business and is likely to have a crippling effect on the industry in general. More importantly, the efforts of the Recapitalisation Programme may not achieve the desired results.

5.1.2 GENERAL LEVELS OF PROFITABILITY OF BSSSGs' FARMING OPERATIONS The findings on the low levels of turnover and profitability experienced by the BSSSGs appear to contradict the assertions of several authors such as Ortmann (2005), Van den Berg (2005) and Sumner (2011), which in turn raises serious doubts as to the BSSSGs' competitiveness. However, at an average of R49 992 per respondent per annum, the income that accrues to BSSSGs is substantially higher than the R5, 000 projected annual start-up income for the Recapitalisation Programme (Kaye, 2013). The picture changes slightly and income drops when calculations are based on the lower income bracket of respondents, whose income fell between R0-150,000 at an average of R21 429 per respondent per annum. Overall, despite BSSSGs appearing to be generating reasonable revenues, this may not be consistent with the levels implied by Ortmann (2005), Van den Berg (2005) and Sumner (2011) as related to international competitiveness. Furthermore, the majority of BSSSGs appear to be largely operating at a survivalist level where the scale of farming operations is negligible. Even those that belong to a high income bracket have a lower level of mechanisation than those envisaged for commercial farmers in terms of degree of mechanisation, labour force, transport facilities and access to credit (Kaye, 2013). It is not surprising that the majority of respondents stated a lack of transport or high transport costs and the general problems of logistics for sugarcane hauling and transporting to the mill as among their major problems.

5.1.3 BSSSGs' TECHNOLOGICAL UPTAKE, AGRONOMIC PRACTICES AND GLOBALA COMPETITIVENES Firstly, passive farmers are detached from their farms which means that they cannot be regarded as farmers in the strictest sense of the word. Viewed in light of the literature review, this situation poses serious challenges for the state of BSSSGs' survivability and raises general concerns for the industry as a whole. Regarding these farmers, practices of critical importance to them and

the industry as espoused by authors such as Beckford et al. (2007), Ortmann (2005) and Murphy (2007) with regards to the embrace of relevant technology was absent. The study further found that this group of farmers was particularly lacking an appreciation of the agronomics practices that drive success in the industry, which was termed the bedrock of a competitive industry by Ortmann (2005). These findings are at odds with the farmer envisaged by Maloa (2001), who is not only adept at leveraging information systems as a business operations managerial tool, but is also highly proficient in both technical farming skills and business acumen. These findings are furthermore at odds with an entrepreneur as envisaged by various authors such as Young et al. (2012) and Van den Berg (2005). In Chapter 2, the role of technology intertwined with enhanced agronomic practices was asserted by, among other authors, Maloa (2001), van den Berg and Smith (2005), Murphy (2012) and Beckford et al. (2007). Apart from these authors, other authoritative sources referred to the perennial skills shortage in the farming industry, which translates to a paucity of managerial and technical acumen, which in turn hinders the international competitiveness of the sector (Ortmann, 2005; Olawale and Garwe, 2010; Urban and Naidoo, 2012). Meanwhile, other authors reiterated the role of the entrepreneur as a controller of the internal business environment (Aliber and Hart, 2010; Young et al., 2012). The findings regarding agronomic practices indicated that an overwhelming majority of respondents appeared to be following basic agronomic practices. As such there appeared to be no concerns regarding fertilisation, application of pesticides, improved variety of seedlings and all basic agronomic practices. At face value this supports the theories of the above authors, at least insofar as basic agronomic practices are concerned. However, one area that stood out as lacking was in terms of the farmers' uptake of decision support tools. Evidence of this is that not a single respondent indicated that he/she was using a computer as a decision support tool. In this context it should be noted that Van den Berg and Smith's (2005) crop modelling support decision system requires some degree of computer literacy. This further contradicts Maloa (2001), who envisaged a farmer leveraging information systems as a tool to enhance business decision and overall farming proficiency. This represents a serious limitation in the BSSSGs' capacity to move a notch higher in, for example, employing the crop growth modelling as envisaged by Van den Berg and Smith (2005). Another observation was that although farming practices have evolved to such an extent that there is a certain degree of automation, this remained at a marginal level amongst the BSSSGs. This is another area of possible improvement as the degree of mechanisation is likely to be a factor in international competitiveness. A comparative study of international producers of cane of a similar stature as BSSSGs might shed more light in this regard.

5.1.4 INCOME DIVERSIFICATION STRATEGIES

At 67% overall diversification propensity, the BSSSGs seemed to fair reasonably well in terms of diversification strategies. This supports the patterns observed by authors such as Reardon and Taylor (1996), Bryceson (1999), Barret and Reardon (2000), Barret *et al.* (2000), Metz *et al.* (2005), Eakin *et al.* (2006), Beckford *et al.* (2007), Taylor (2008) and Aliber and Hart (2009). Whilst the sugarcane industry appears to provide substantial opportunities for diversification, a sizeable number of BSSSGs diversified outside of the industry. Three respondents indicated that they had business interests in the taxi industry, one had a successful construction business, one was retailing in liquor and groceries, one was involved in other crops such as vegetables,

and another one was involved in tree-felling and piggeries. In total this diversification accounted for 47% percent. The majority of these respondents extended their diversification activities to contract farming as well. A further three were employed elsewhere to make up 67% income diversification reflected under section 4.1.5. This income diversification pattern occurred from the mid-income category to the top earning bracket. Further, it tended to coincide with higher education levels, with the exception of one case where the farmer had never attended school yet his farming and other enterprises placed him among the top earners. This case was referred to in the discussion of educational level of BSSSGs under section 4.1.3. As such, while these findings support the prediction of most authors regarding diversification behaviour by small farmers, they also differ in the sense that farm fragmentation is an integral part of their diversification strategy to take advantage of spatial variations and environmental conditions (Beckford et al., 2007). As can be seen in the study, the majority of diversification happens outside of the farming enterprise thus confirming the predictions of Reardon and Taylor (1996), Eakin et al. (2006) and Taylor (2008). Furthermore, this confirms Barret and Reardon's (2000) previous findings which noted that non-farm income sources constituted 45% of total income. Likewise, this somewhat supports Bezuneh et al. (2000), who noted that in North Central Kenya, the highlands of Rwanda and Cote d'Ivoire, livelihood strategies associated with non-farm activities offer the most income. With regards to the three respondents who are employed fulltime elsewhere, the researcher conjectures that this kind of income diversification is not the most ideal. This is based on the reasoning that fulltime employment places its own onerous demands on individuals that ordinarily would cause serious conflicts of interest, ultimately leading to one of the jobs being seriously compromised. However, in this particular instance, passive farming through third party contract farming under the Recapitalisation Programme makes this ordinarily untenable situation possible. As such, a high percentage of BSSSGs seemed quite diversified; this was spread across income opportunities to avoid being exclusively dependent on sugarcane farming income. This is evidence that BSSSGs are able to hedge income variations from sugarcane farming by relying on other sources. At the same time this may raise other questions about those BSSSGs who hold a permanent job while participating in the industry.

5.1.5 ECONOMIC ORGANIZATION

The study found a complete lack of economic organisation among respondents, which is at odds with the observations of Beckford et al. (2007), Ortmann and King (2007), Church et al. (2008) and Murphy (2012), who posited that horizontal and vertical coordination is a strategy to mitigate transaction costs. In this regard, the formation of cooperatives by farmers is seen as an imperative. Meanwhile, in the case of BSSSGs in the area of focus of the study, opportunities to register cooperatives are plentiful given that Cooperative Development (which entails encouraging farmers to register themselves into cooperatives and assisting them financially to do so) is an integral part of farmer and overall SMME development in the KwaZulu-Natal Provincial government, and is therefore fully embraced by the [Department of Agriculture and Rural Development](#) and the [Department of Economic Development and Tourism and Environmental Affairs](#). (It should be noted that these departments would have played a critical role in the implementation of the Recapitalisation Scheme.) Whilst respondents acknowledged that they were encouraged to form cooperatives as part of the programme, none of them did. In one particular instance, a respondent

heavily criticised cooperatives as creating an unnecessary “free-rider” phenomenon, and therefore strongly objected to it as stifling entrepreneurship. With regards to the potential benefits of horizontal and vertical coordination to enhance market access, it is clear why this potential benefit is not recognised, as the BSSSGs are assured of a market for their produce in the form of Illovo Sugar Mill. Notwithstanding the lack of uptake of economic organisation by respondents, there are many potential benefits of this that can be explored by farmers. These include collective ownership of transportation/logistics, fertiliser and pesticide bulk purchases, and sharing accounting services and cane cutting, all of which can help BSSSGs mitigate problems through leveraging numbers. Yet due to the manner in which cooperatives are promoted as being solely focused on primary production, BSSSGs may be oblivious to their potential benefits.

5.1.6 HIV AND AIDS PANDEMIC The study found that none of the respondents incorporated HIV and AIDS strategies into their operations. This is of great concern given that authors such as Nothard et al. (2004) and Ortmann (2005) identified HIV and AIDS as one of the challenges that the farming sector has to contend with. Among the devastating effects of the pandemic on the industry are high labour turnover and reduced labour productivity as a result of the associated illnesses and increased level of absenteeism. The Ugu District Growth and Development Strategy (n.d.) highlights the Ugu region as the area with the highest prevalence of the pandemic. A closer examination of the situation of the farmers shows that this may be because none of the respondents employed a significant number of labourers, with the exception of a single respondent who at some point during peak season employed 300. The researcher speculates that even in the case of this respondent, the employment relationship is of such a casual nature that labourers keep changing season by season. Given the challenging circumstances facing the BSSSGs, HIV and AIDS strategising may not be regarded as a priority.

5.1.7 CREATIVE LABOUR STRATEGIES An overwhelming majority of respondents indicated that they did not engage in creative labour strategies, which is at odds with several authors who perceive this to be a critical survival strategy, notably McLean-Meyinsse and Brown, Jr (1994), Reddy (2003) and Wiggins et al. (2010) among small farmers. Only two respondents indicated reliance on family labour, and the family involved seemed very few to have a significant impact on the farming operations. In theory, this may mean that BSSSGs may be exposed to high transaction costs associated with this factor of production, subsequent to the introduction of the [Basic Conditions of Employment Act 75 of 1997: Sectoral Determination 13](#). However, employment levels associated with BSSSGs were comparatively low and the researcher speculates that this is one potential reason explaining the non-prevalence of creative labour strategies. Within the context of low employment numbers, there is no reason to control this cost which in any case is insignificant. A further finding of the study showed a 60% prevalence of second generation farming phenomenon among BSSSGs. This might be interpreted as historical evidence of reliance on family labour and a form of succession planning; this implies an additional long-term benefit of creative labour strategies that goes beyond immediate cost mitigation.

5.1.8 FARM SIZE OPERATIONS AND PRODUCTIVITY EFFECTS During the study 47% of the respondents indicated a small farm size to be an advantage. This contradicts existence of IR as espoused by authors such as Barret (1996), Binswanger et al., (1996), Heltberg (1998), Assunção and Ghatak (2003), van Zyl and Reddy (2003) and Barret et al. (2010), but supports the

assertion of Kaye (2013) who claimed that (a lack of) economies of scale represents a major factor in the profitability of all businesses, including those of small farmers. A further 40% was ambivalent on this factor while only two felt advantaged by their size. Whereas the remaining 13% respondents indicated that they were 106 disadvantaged by the small farm size. This is in line with the predictions of Barret (1996), van Zyl et al. (1996), Heltberg (1998), Le Gal and Requis (2002), Assunção and Ghatak (2003), Reddy (2003), Barret et al. (2010) and Wiggins et al. (2010). Interestingly, of those respondents who considered small farm size to be an advantage, none of them attributed this to productivity, but rather to the fact that these small farms were more manageable and saved them from onerous demands physically. This response was thus based more on a match between the energy levels of a farmer against the demands of a farm in terms of physical exertion as opposed to a statement about IR. Most crucially, this is based more on intuition than a highly sophisticated and scientific analysis of farm productivity. During the discussion on IR it became very clear that to refute or prove its existence requires sophisticated levels of farming proficiency, characterised by a high degree of scientific farming methods based on sophisticated decision support systems. This assertion is based on the fact that both exponents and opponents of the IR rely on very sophisticated analyses and scientific comparative analysis data encompassing a myriad of factors, to support or contest the IR rather than looking superficially at absolute values of productivity and profitability growth with additional hectares added. Despite this, respondents in the study presented a case characterised by a very basic adoption of agronomic practices where applicable, including the already discussed issue of passive farming. For the respondents who institutionalised agronomic practices, these primarily concerned the correct balance between soil types, soil testing practices, new variety of cultivars and generally other technical regimes that ensure the right mix of inputs and the soil to improve yields. Whilst the importance of this cannot be discounted, the researcher noted that this remains significantly short of the level required to be able to make an informed judgement on the existence or otherwise of the IR Phenomenon. The technical proficiency level of these farmers simply does not allow them to consider the IR in the first place, let alone make an informed choice on its prevalence or otherwise. Therefore, within this context, rather than the verdict of absence of the IR, it is better to conclude a lack of awareness of its existence, which may be subject to further validation through correct technological application. In the case of the respondents who associated 107 higher profit with size, it may well be that they made this assertion based on intuition, which is understandable. It is already suggested by some authors that the IR is counterintuitive, which means that it can only be proved through relevant and highly scientific and sophisticated analysis, which was definitely lacking among BSSSGs. It may also be argued that the employment of sophisticated technology in farming and leveraging of information systems and other decision support tools may ensure that BSSSGs are likely to enhance their judgment regarding the IR.

5.1.9 LAND TENURE EFFECTS

The study found that a majority of respondents were undecided at 53% about land tenure effects on farming operations. Surprisingly, this contradicts the views of several authors such as Carter and Olinto (2003), Reddy (2003 and Ortmann (2005), who see communal land tenure as an impediment to farmers and investment in general. Notwithstanding the 33% who felt impeded by the communal land tenure

system, the reasons that they advanced for this were different from those of mainstream theory on communal land tenure as an impediment of development. Surprisingly 13% of the respondents felt that the tenure system was an advantage, which supports the assertions by Kaye (2013). An examination of reasons advanced by respondents for the communal tenure system being a disadvantage had nothing to do with financing requirements; in fact, respondents were typically at the lower end of the mechanisation continuum which gave an impression that credit access was not much of a factor in their capital. It should be noted that the disinvestment incentive associated with the communal land tenure system stems from this type of tenure not being amenable to transferability, which in turn hinders the ability to mortgage which is a requirement for accessing credit. On the other hand, respondents raised very valid concerns associated with communal land tenure which needed to be mitigated, especially within the context whereby KwaZulu-Natal is prioritising ITBL as a cornerstone of unleashing agricultural potential as contemplated in the KZNPGDP. These are freely roaming livestock, veld fires, incapacity to expand due to settlement pattern and jealousy among community members. Overall, even the two respondents who farm on freehold title did not indicate that they were advantaged by the title, which is at odds with mainstream land tenure theory.

5.1.10 EMPLOYMENT CREATION CAPACITY OF BSSSGs One of the observations made during the study was that the levels of employment created by respondents were surprisingly low. Despite it being 21.4 on average per respondent, one farmer was the biggest contributor to this number with 300 labourers in one season. If this farmer's contribution is taken out of the equation the average declines drastically to 1.5 jobs per respondent. This contradicts the proposition by Kaye (2013) who deemed the agricultural industry as being labour intensive. The absence of significant labour numbers also negates labour legislation and related challenges, as posited by Ortmann (2005) and Genis (2012). On the other hand this confirms Ortmann and Stockhill (1997) and Ortmann (2005) who observed a decline in unemployment within agriculture. In the case of Ortmann and Stockhill (1997) this decline was attributed to substitution of labour automation and labour contractors. This was further predicted by Murray and van Walbeel (2007) who predicted manual weeding with chemical weeding thus negatively and the use of labour contractors thus affecting negatively the labour force. Indeed, in the case of the study the role of contractors was very prominent and could have possibly accounted for the low employment figures attributable to BSSSGs. Paradoxically, this happened in the government sponsored program which places a high premium on job creation.

5.2 CONCLUSION This chapter discussed the research findings in light of the literature review. The following topics were covered in this chapter, namely the phenomenon of passive farming, its implications for entrepreneurship and potential consequences, profitability levels attributable to BSSSGs, the BSSSGs' technological uptake, agronomic practices and global competitiveness of the sector, income diversification with reference to sources of such behaviour, economic organisation, the HIV and AIDS pandemic, BSSSGs' implementation of creative labour strategies, farm size effects on operations, land tenure effects, policy conflict and employment generation capacity of BSSSGs. This chapter showed mainly two distinct behaviour patterns by BSSSGs, namely those that are intimately involved in their businesses and those who rely on contractors under the Recapitalisation Programme. Based on these behaviour patterns respondents

tend to exhibit different survivability patterns, whereby the group that was more involved in their businesses tended to be more successful than those that were reliant on third parties. Based on this dichotomy, farmers tended to lean to the side of those that are progressive and more in tune with what is happening in the sugarcane industry, including implementing strategies that enhance their survivability and those that are dependent on contractors systems, with its challenges as alluded to in the preceding section. In between these extremes are those BSSSGs who are either employed elsewhere fulltime and only use their farm income as a supplement, but they are also nearing retirement and therefore plan to take up farming full time in the coming years. Another important observation from the study is that BSSSGs contributed relatively low numbers in creating employment. As alluded to in the preceding section this may be as a result of labour contract system. Chapter 6 will focus on conclusions and recommendations based on key findings on BSSSGs' survivability as elicited by the study.

CHAPTER 6

6.1 CONCLUSION AND RECOMMENDATIONS

The persistent decline in the sugar cane industry within Ugu District Municipality is of serious concern given its strategic importance to the economy of the region. Furthermore, sugarcane farming is one of the few industries whose pattern of occurrence readily lends itself for extension into the highly underdeveloped hinterland, and therefore has vast potential for improving the quality of lives of the inhabitants of these areas which are characterised by lack of employment opportunities. Against the backdrop of the industry having experienced an exodus of established white commercial farmers and the unintended negative consequences of the Land Restitution Act (USIR, 2010), there has been declining participation amongst the established farmers in the industry. This has raised concerns as this translates into a loss of years of farming expertise. Within this context it was of great importance to ascertain whether the BSSSGs were surviving the sugarcane industry, which had proved to be highly competitive as indicated by the USIR (2010) and other sources (Ortmann, 2000; Ortmann, 2005; Genis, 2012). This study thus focused on addressing the following research questions: ? What are the BSSSGs' perceptions of the Ugu District Municipality's overall sugarcane industry? ? What are the BSSSGs' perceptions of the farm specific/micro-economic attributes that make them susceptible to failure? ? What are the BSSSGs' propensities to employ deliberate strategies to mitigate the causes and/or effects of the decline? ? What are the BSSSGs' perceptions of farm size and land tenure effects on survivability? The study was conducted using a convenience sampling for the first two respondents, followed by the snowballing sampling technique until a total of 15 respondents were reached from two farmers associations within Ugu District Municipality, namely the Qhubekani Farmers Association and Mnini-Mfume Farmers Association. An interview protocol was used to collect data through a semi-structured approach, which was followed in order to delve deeper into the issues and elicit rich information about what the respondents think about the district's sugarcane industry as well as its survivability factors. The following section deals with how each research question was addressed.

6.2 HOW THE GOALS OF THE RESEARCH WERE ACHIEVED

6.2.1 BSSSGs' Perception of the Ugu District Municipality's sugarcane industry

In terms of the first research question relating to the industry outlook, only 40% percent of the industry participants see the industry as declining, which is cause for concern given that the statistical data points to an industry that is in serious decline. The research further showed that although farming practices among had evolved

in the preceding 10 years, which was the time during which the industry fell into sharp decline, not an enormous amount of evolution in farming practices was noticeable among BSSSGs. It may be argued that changes such as replacing spans of oxen with tractors, as important as it is, does not represent the most dramatic reengineering of business processes in the face of international competition. It was evident that the degree of automation (capitalisation) of most businesses was still at an entry phase, even for those respondents who had accumulated farming assets over the years. As such, the BSSSGs' adoption of changes in the 10 years prior to the research cannot be said to have been ground breaking. Surprisingly, the research showed an 80% percent intention amongst the respondents to expand their sugarcane farming in the foreseeable future, despite a 40% conviction rate that the industry is declining. Even more confusing is the fact that the profit motive was advanced by the respondents as the underlying reason for this expansion. This raised the question, is the profit claim a realistic one or a fallacy? On the question of BSSSGs' perceptions of the factors that caused sugarcane businesses to fail, a deeply concerning pattern emerged whereby the role of government and Illovo Sugar was questioned. In this regard RDP Housing Scheme and Land Restitution by some of the respondents as contributing to the dire industry situation through competition for land. On the other hand some respondents appeared to understand the farm and industry specific factors which may result in the downfall of their businesses outside of the government and Illovo Sugar.

6.2.2 BSSSG's perceptions of farm-specific micro-economic attributes that mitigate their susceptibility to failure As has already been pointed out in the earlier chapters, a significant number of respondents were happy to apportion the blame for industry problems to Illovo Sugar and the government because of the Recapitalisation Programme. As such they exhibited external orientation, otherwise referred to as an external locus of control (Twenge, Zhang and Im, 2004; April, Dharani and Peters, 2012). This psychological state is often associated with negativity, for example April et al. (2012) found in their study that bi-local expectancy psyches were more adept at coping with life's challenges than either internal or external locus of control psyches. Meanwhile, Twenge et al. (2004) found external locus of control psyches to have a propensity for cynicism, poor achievement in school and helplessness. In this study, these are the respondents who had distinguished themselves through the phenomenon of passive farming and its attendant negative consequences for development of the small scale cane growers as alluded to under Chapters 4 and 5. To this end, a significantly small percentage of respondents (20%) had significantly improved their micro-economic practices and showed a deeper level of insight about the status quo of the industry. Overall these farmers were more hands-on in their day-to-day farming operations. They had also actively solicited knowledge by attending courses in farming, as well as forging relationships with their white commercial counterparts.

6.2.3 BSSSGs' propensities to employ deliberate strategies to mitigate the causes and/or effects of the decline At 60% of overall respondents, a significant number of respondents, with the exception of the passive farmer group, claimed to have implemented strategies to mitigate the decline. These respondents were seen to be internally focused (an internal locus of control) and accordingly acknowledged the onerous responsibility of farm-specific practices and the adoption of mitigation measures to stem the tide of farm failures. However this means that the remaining 40% percent of respondents utilise farming practices that are not in tune with agronomic practices which

is a source of concern. Of further concern is that only 47% percent of those respondents that rationalised farm specific measures with positive results in their farming operations. In an effort to ascertain whether respondents had included any major interventions in their businesses, whether it was the introduction of technology or a stand-out reengineering of farm operations, none of the respondents indicated such initiatives at the height of the decline. This is of concern and may be interpreted to suggest that while the industry in general may have been facing tough times, farmers are oblivious and adopt a 'business as usual' approach. None of the respondents mentioned the use of a computer in their business operations. With regards to income source diversification and economic organisation, the BSSSGs fared well in terms of diversification, with sources extending well beyond their immediate farming businesses. This ensured that farm incomes were supplemented by other economic activities which generally improved livelihoods. With regards to economic organisation, this strategy was totally unused by the farmers. On the other hand, potential for cooperation could be ascertained in the area of transportation and logistics as well as bulk purchases of farming inputs, to name just a few areas where farmers can leverage the power of their numbers.

6.2.4 BSSSGs' perceptions of farm size and land tenure effects on survivability The research revealed that none of the farm operations incorporated sophisticated approaches and tools to help determine the existence or otherwise of an inverse relationship between productivity and farm size, which is more a reflection of where these businesses are in terms of their development than a judgment on the IR. As a result, the advantages and disadvantages of small farm sizes were not rationalised by respondents on the basis of the IR phenomenon. Likewise, in the case of land tenure there were no discernible preference patterns of either type of land tenure system, surprisingly against the proposition the freehold tenure is more beneficial than communal tenure. Where respondents deemed communal tenure systems to be a disadvantage, challenges such as veld fires, free roaming livestock, bush pig invasions, jealousy among community members and in one case the threat of land confiscation by an Inkosi, were cited as reasons. Overall these farmers expressed indifference about the tenure system, which was understandable given the relatively low level of capitalisation that was observed among respondents, which is a proxy for low utilisation of credit.

6.3 RECOMMENDATIONS The section below concludes the study and focuses on recommendations aimed at improving on the shortcomings that were observed during the study. The following sub-topics will be covered under the recommendations sections, namely information dissemination on the state of the sugarcane industry, restructuring of the Recapitalisation Programme, a holistic assistance programme for small farmers, government policy alignment, and the promotion of economic organisation among farmers.

6.3.1 Information dissemination on the overall state of the district's sugarcane industry It was of great concern to note during the study that farmers, as the participants on whose hands the future of the industry depends, have such a low level of awareness about the critical shortage of the sugarcane supply. While the effort of Illovo Sugar and the government to turn the situation around is highly commended, their disregard of farmers and individual farms as the basic building blocks of the revival defeats the aims of the programme. For this reason, it is recommended that any such programme in the future be supported by a campaign that raises awareness of the BSSSGs of the critical shortage of cane supply. In addition, apart from

the programme being a means of income generation, the government and Illovo Sugar were pinning their hopes on the emerging farmers resolving the decline in the industry. If this was communicated, the BSSSGs would have a greater sense of appreciation of the fact that their efforts/roles are important for the greater good of the region and not just for themselves and their families.

6.3.2 Restructuring of the Recapitalisation Programme Throughout the study a deep sense of mistrust was directed at the government, Illovo Sugar and the contractors, which was detracted from the importance of the intervention whose underlying aim was to mitigate the dire situation the sugarcane industry is facing. It is thus recommended that future phases of the Recapitalisation Programme be implemented alongside genuine partnerships between Illovo Sugar, the KZN Provincial Government and farmers through the farmers' associations. Under the revised implementation model these three organisations would establish a representation model which would formulate, plan and agree upfront on specific targets and outcomes, including a monitoring and evaluation framework. While the project is being implemented, these parties should meet regularly and share information and concerns, as guided by the predetermined and agreed targets. Issues such as the selection and role of contractors, their performance and the overall financial information of the project should be shared in this forum to prevent accusations of impropriety by any party and to engender co-ownership of the project. At a farm level there has got to be a review of expectations, whereby an entrepreneurial role should be expected of the owner of the land. This will help ensure that those people who are participating in the Recapitalization Programme will one day take over the farming to ensure sustainability, otherwise when the Programme ends, farms that are solely dependent on contract farming will fail and all the effort will have been in vain. For this to succeed, the project partners may have to implement some form of pre-screening of individuals to ensure they have an interest in farming and the potential to develop into a farmer.

6.3.3 Need for holistic assistance to farmers It has to be acknowledged that as much as the sugarcane supply decline is a production programme, behind resolving the situation should be the aspirant farmers, and this implies the need for the development of human capital. As such this challenge should be viewed within the overall context of challenges associated with small business development. After all, the success of the technical production side depends on the human capital development side for sustainability. A structured Programme to enhance technical proficiency and business acumen should thus be integrated into future phases of the Recapitalisation Programme. To this end, participants should be placed into a business incubator model for intensive training in sugarcane farming, and thereafter be sent back to their farms to apply the knowledge that they gain. They should be assigned mentors who will ensure follow-up on training, assess how these emerging farmers are coping with practical challenges, and evaluate how the theoretical training assists these farmers adapt to the practical demands. Information obtained through mentorship follow-up should then get fed back into the system to enhance areas of strength whilst improving on weaknesses. To this end the role of the contractor system must be transitional and not be used to substitute the farmers. It is recommended that the Skills Enterprise Development Agency (SEDA) and the Agri-SETA become partners with Illovo Sugar and the Government to share their expertise for designing and implementing the development of sugarcane farmers.

6.3.4 Government policy alignment Throughout the study farmers

pointed to the apparent conflict in government policies, whereby sugarcane land has been substituted with residential and sometimes sports and recreational usage. Another issue that came out strongly from the research is the implementation of land restitution, whereby some respondents felt that some beneficiaries obtained farm land through this process yet their skills are still at very low levels and they are unable to maintain optimal productivity levels, which is exacerbating the decline. In addition there are allegations of impropriety in the gate-keeping system which may exclude other people who merit participation whilst including others who may not merit inclusion, with some saying that there is undue political influence in the allocation of these farms. It is thus recommended that an incubation system could help improve the technical proficiencies and business acumen of prospective land restitution beneficiaries. As for the policy conflict around land use management, the government needs to set its priorities straight and designate sugarcane as the priority sector.

6.3.5 Economic Organisation

It was noted during the research that none of the respondents use economic organisation, despite the potential benefits this has. The respondents' numbers could be positively harnessed for bulk purchasing of input costs such as fertilisers, transportation of cane and even accounting and bookkeeping services, yet during the interviews a strong sentiment opposing the cooperative model was echoed throughout. However, closer examination of the causes indicated that cooperatives may have been promoted to force cooperation in primary sugarcane production. The researcher is of the view that for the cooperative approach to be beneficial, farmers should retain their status as producers of sugarcane independently, and only use cooperatives in respect of services that would help them save on aspects that they would have incurred at a slightly higher cost individually. Under this approach their individual farms, as building blocks of sustainability, should not be tampered with. For this to be achieved a message concerning the promotion of cooperation needs to be revised and emphasis should be placed on cooperation at a level above primary production, otherwise fears of a free rider phenomenon will continue to detract from the potential benefits this approach holds.

6.3.6 Need to make sugarcane farming attractive to the Youth and females

One of the noticeable features of the demographic information of BSSSGs is the preponderance of males as well as the fact that BSSSGs are generally aging. Against the backdrop whereby farming is a physically demanding activity and the fact that youth are the back-borne of any succession, it is imperative that sugarcane farming like other industries attract youth of the right calibre. Also from a gender empowerment perspective, it is imperative that efforts are made to attract women as well to participate in sugarcane farming. On the other hand attracting these groups (especially youth) into sugarcane farming may prove difficult if the revenues and wages payable within the sector are relatively low as alluded in the section that discussed turnover and employment figures attributable to BSSSGs. As such, this may imply that the whole returns structure within the industry may need to be reviewed.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

This section proposes potential future research areas regarding the BSSSGs and the local sugarcane industry based on the gaps that were identified by the researcher during the study. One area of possible future research is a comparative study of the degree of institutionalisation of automation/mechanisation and the extent to which this correlates to industry success between local small-scale sugarcane growers and their international counterparts. A related study could determine the differences in size of

capitalisation of local farmers and their international counterparts. Other areas that are worth exploring are as follows: ? A comparative analysis of the degree of agronomic practices and information technology systems used by BSSGs versus national and international trends, and the impact of these on survivability. ? An evaluation of the Recapitalisation Programme with specific reference to the roles of its key stakeholders, namely Illovo Sugar, the KZN Provincial Government, participant farmers and cane growers associations. What lessons can be learned to improve future implementation?

6.5 CONCLUSION Based on the objectives that sought to be achieved through this study, the researcher observed two distinct behaviour patterns exhibited by BSSGs, which in turn affect survivability in different ways. These behaviours can be distinguished into two main categories - one category comprises those BSSGs who are intimately involved with the intricacies of their farming operations, who implement basic agronomic practices, are actively engaged in learning about improved farming methods as well as forging relationships with established white commercial farmers, and generally have a comparatively high level of capitalisation in their farm operations. The other category of farmers comprises those that are only in existence for no other reason than the Recapitalisation Programme implemented by Illovo Sugar and the KZN Provincial Government, which is not an ideal situation. These farmers adopt an aloof posture and leave everything to the contractors who are hired to carry out the farming work. Needless to say, this group does not show the same level of enthusiasm about their farms and it is doubtful that they regard themselves as entrepreneurs and business owners in the true sense. As such, in the majority of cases they did not appear to be bothered about the most basic of tasks associated with farming operations. This group was more inclined to perceive the intervention as a hand-out by the government with no reciprocal value-add warranted from their side. Based on these two groups, the former is deemed to be more survivable and can be referred to as a model of relative success and therefore a backbone of emerging farming. However, in general terms all farmers appeared to be at relatively low levels of capitalisation, even though this tended to be appreciably better compared to the former group. In the case of passive farmers, this group invariably owns parcels of land under the Ingonyama Trust land tenure system, which is their sole contribution to farming.

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09 June 2014

Mr Mandlakhe Dickson Mkhungo (202527207)
Graduate School of Business & Leadership
Westville Campus

Protocol reference number: HSS/0579/014M

Project title: Factors that account for the survivability of black small-scale sugarcane growers in the Ugu Municipality

Dear Mr Mkhungo,

Full Approval – Expedited Application

In response to your application dated 02 June 2014, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Paul Green and Ms Cecile Gerwel Proches
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