Analysing the competitiveness of the agribusiness sector in Swaziland

By

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DECLARATION

I Bongiwe Porrie Dlamini declare that the thesis/dissertation, which I hereby submit for the degree MSc in Agricultural Economics at the University of Pretoria, is my work and has not previously been submitted by me for a degree at this or any other tertiary institution.

SIGNATURE: *B.P. Dlamini*

DATE: May, 2012

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ABSTRACT

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Businesses in Swaziland have been somewhat cushioned against the impact of world trade liberation and least as far as home and regional markets are concerned (Ministry of Enterprise and Employment, 2005: 18). The country's position with the Southern African Customs Union (SACU) affords temporary protection against the competition felt by economies elsewhere in Africa. Furthermore, with limited domestic markets, export-oriented industries are the backbone of Swaziland's economy (Thompson, 2010:19). Trade vibrancy caused by globalisation, health standards requirements and other factors has started affecting export industries. It is therefore, important that the businesses in Swaziland prepare for more intense competition in the future. This could be achieved through improved management and improved productivity which would then enhance competitiveness.

The decrease of foreign direct investment in the agricultural sector, the removal of trade preferences among top export industries (sugar, textile), decrease in demand for export products (as a result of economic downturn), indicates that there is a problem of competitiveness in the Swaziland agribusiness sector. Therefore, the objectives of the study are; to determine the constraining and enhancing factors of

competitiveness of the agribusiness sector of Swaziland and to develop the strategies to improve competitiveness of the sector.

A structured questionnaire adapted from the Agricultural Business Chambers (ABC) of South Africa was used to collect the data through face-to-face interviews. Porter's (1998) theory for the determinant of competitive advantage was used as a base in designing the questionnaire in order to capture the constraining and enhancing factors influencing competitive advantage. The target group comprised decision-makers (chief executive, managing directors) for agribusiness firms, including in the following industries: dairy, sugar, animal feed, maize, livestock and poultry, textile. The data was analysed using the statistical package for social science (SPSS) and was presented in tableau and figure format. The scale of classification used when analysing the determinants of competitiveness was; a mean score of 1 meant constraining competitiveness success; a mean score of 3 meant moderate effect and a mean score of 5 meant enhancing competitiveness success.

Most of the determinants [factor (2.72), demand (2.64), related and supporting industries (2.29), chance (2.46) and government conditions (2.48)] were constraining competitiveness. The top three factors contributing to this are: unavailability of professional labour (1.63), costs of inputs and supplies (1.69), incompetent (1.69) and ineffective public sector personnel (1.88) and small local market size (1.88). The only determinant that has the ability to enhance competitiveness is the firm's strategy, structure and rivalry conditions, as indicated by a moderate mean score of 3.38. The top three factors enhancing competitiveness success of the agribusiness sector are; production of high quality affordable products (4.19), availability of water for production and processing purposes (4.00), and the cost of unskilled or semiskilled labour (3.94). The Porter analysis indicated that the competitive environment in which the sector operates in is unfavourable and does not enhance competitiveness.

An analysis of the interviewed industries revealed that the overall performance of each industry, particularly the sugar, dairy and maize industries are moderately competitive compared to the other ones. This is supported by the finding that these

industries have three determinants of comparative advantage enhancing competitiveness.

Special attention, through implementation of strategies to enhance the competitiveness of the agribusiness sector is necessary. This could be achieved though collaboration and intervention by all participants in the sector. The strategies are explained in terms of roles that could be played by the agribusinesses and the government. Strategies involve; industry coordination to minimise costs, market orientation strategy, HIV/AIDS services at company level, encouraging sustainable investments, products diversification and promoting internship and graduate training programmes.

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ACRONYMS AND ABBREVIATIONS

ABC	Agricultural Business Chambers
ACI	Agribusiness Confidence Index
ACS	Agribusiness Competitiveness Status
AES	Agribusiness Executive Survey
AGOA	African Growth and Opportunity Act
CCAA	Competitive Commercial Agriculture in Africa
EU	European Union
FDI	Foreign Direct Investment
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
LUSIP	Lower Usuthu Smallholder Irrigation Project
MOAC	Ministry of Agriculture and Cooperatives
NaMBoard	National Marketing Board
NMC	National Maize Corporation
RCA	Revealed Comparative Advantage
RTA	Relative Trade Advantage
SACU	Southern African Customs Union
SADP	Swaziland Agricultural Development Programme
SD	Swaziland
SDDB	Swaziland Dairy Development Board
SPSS	Statistical Package of Social Science
SZL	Swaziland Lilangeni
USA	United States of America
WEF	World Economic Forum

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

According to Esterhuizen and Van Rooyen (2008:2), new challenges to agribusiness firms around the world have been presented by globalisation of economies. The authors argue that agribusinesses not only have to compete domestically but now also on the global market. Businesses in Swaziland have to date been somewhat cushioned against the impact of world trade liberation and least as far as home and regional markets are concerned (Ministry of Enterprise and Employment, 2005: 18). The country's position with the Southern African Customs Union (SACU) affords temporary protection against the competition felt by economies elsewhere in Africa. The SACU agreement allows for free movement of goods between member states and currently represents the largest market (about 50% of exports) for Swaziland's export products (Thompson, 2010:19). Furthermore, with limited domestic markets, export-oriented industries are the backbone of Swaziland's economy (Thompson, 2010:19). It is therefore, important that the businesses in Swaziland come to terms with the fact and prepare for more intense competition in the future. This could be achieved through improved management and improved productivity which would then improve competitiveness.

In this study, not all agribusiness classifications/sectors formed part of the investigation, but rather those that were involved in processing and manufacturing of agricultural products. Esterhuizen (2006:25) states that the closeness and strength of agricultural connections to business activities distinguish agribusiness activities from business activities. Therefore, the closer and stronger the activity is to agriculture the more confidently it can be described as involved with agribusiness. He also argues that because of the nature of agriculture, marketing

activities and agribusiness management can be deemed to be of a different nature of business management and marketing in general. This is in reference to the seasonality of agricultural products, the biology, the markets and the risks involved, which further characterise agribusiness activity and normal business activity. The focus is on value adding sectors, since value addition in agriculture involves increasing the value of a basic commodity by taking control of processing, manufacturing and marketing activities. The industries that form part of the sample include; sugar, timber, maize, citrus, textile, dairy and other food industries.

1.2 PROBLEM STATEMENT

The agribusiness sector in Swaziland is facing many challenges, such as globalisation and the abolition of trade agreements following stricter phytosanitary requirements. Three major challenges currently face the sector. Firstly, Swaziland has received trade preferences for some exported goods, such as sugar, beef and textiles, awarded under the African Growth and Opportunity Act (AGOA), and have consequently seen improved growth, particularly beef and sugar. However, due to continuing trade vibrancy, export industries are threatened by the removal of these trade preferences. As a result agricultural products and industries have been exposed to more competition from other products and industries globally, which then affects exports volume and price.

Secondly, the stock of Foreign Direct Investment (FDI) in the agricultural sector declined by 2.7% to reach SZL954 million[1] in 2008. The decrease in the stock was considered to be a result of the global economic downturn, given that companies in this sector are mostly multinationals and as a consequence of rivalry in the region for new competition. Effects include a reduction in concessionary funding of local private sector companies by their non-resident parent companies, (Central

[1] The Swaziland Lilangeni (SZL) is equivalent to the South African Rand (R), which is equivalent to 7.53 US$.

Bank of Swaziland, 2008/9:20), while higher input costs, which include transport and electricity, have limited new investments in the sector. Thirdly, Swaziland has a Global Competitiveness Index (GCI) rating of 3.4 (out of 7) and is ranked number 126 (out of 139 countries, with 7 translating to the highest index (World Economic Forum, 2010/11:20).

The arguments made earlier together with these statements illustrates that the agribusiness sector in Swaziland has no comprehensive statement on competitiveness and hence no strategic plan to enhance competitiveness. Therefore, the study seeks to determine the factors that influence competitiveness of the sector in order to be able to come out with the strategies and interventions to manipulate them in such a way to enhance the overall competitiveness of the sector in a sustainable manner.

1.3 HYPOTHESIS

The hypothesis for this analysis is based on observations and previous research findings that the following factors have a negative influence on the competitiveness of the agribusiness sector of Swaziland:

- Limited domestic market
- Poor government support
- High input costs and infrastructure (electricity and communication)

It is believed that with the implementation of appropriate strategies to address the above factors, the agribusiness sector's competitiveness would improve.

1.4 RESEARCH QUESTIONS AND OBJECTIVES

The main research question relates to the competitiveness of the agribusiness sector: what strategies can be implemented to enhance the competitiveness of the agribusiness sector? The strategies are based from the factors identified to be influencing competitiveness of the sector.
The specific objectives are:

- To determine the key promoting factors that enhance the competitiveness of the agribusiness sector in Swaziland.
- To determine the main constraints influencing the competitiveness of the agribusiness sector in Swaziland.
- To determine how the competitiveness of the Swaziland agribusiness sector can be enhanced.

1.5 IMPORTANCE AND BENEFITS OF THE STUDY

The manner in which businesses combine their resources; the distribution channels through which they choose to get their products to the consumers; and the use of strategic alliances with government, customers and suppliers, all help contribute to making the world an intensely more competitive environment (Petit & Gnaegy,1998:2). To be competitive is fundamental for long-term endurance in the sector, therefore, analysing and understanding the agribusiness sector of Swaziland assists in discovering its strengths and weaknesses. Having such information should allow the stakeholders involved to devise strategies that would offset the weaknesses and increase the ability of the sector to compete internationally.

An extensive search through the internet and Swaziland library catalogues found no known research study that has been carried out or published about the

agribusiness sector or about the competitiveness of the sector of Swaziland. However, several studies about the agricultural sector of Swaziland have been carried out but none on competitiveness. Thus, besides adding to the academic literature, the study would allow comparison of the agribusiness sector with other agribusiness sectors from other countries.

1.6 ORGANISATION OF THE STUDY

The rest of the study is arranged as follows: **Chapter 2** provides an overview of the agricultural and agribusiness sectors in Swaziland. **Chapter 3** describes some of the methods for measuring and determining competitiveness. A brief description of results of some previous studies in which some of these methods have been applied is presented. **Chapter 4** illustrates the methodology used in the study, including research description, data sampling, data collection and data analysis. **Chapter 5** Porter's (1998) theory is applied to determine the objectives of the study. Hence, this chapter presents the constraining and enhancing factors of competitiveness of the agribusiness sector of Swaziland. **Chapter 6** identifies constraining and enhancing factors of the industries interviewed. **Chapter 7** explains the strategies for enhancing competitiveness of the agribusiness sector of Swaziland. Lastly, a summary, conclusion and recommendations are presented in **Chapter 8**.

CHAPTER TWO

OVERVIEW OF THE SWAZILAND AGRICULTURAL AND AGRIBUSINESS SECTORS

2.1 INTRODUCTION

This chapter focuses on factors that contribute to describing the agricultural and agribusiness activities undertaken in the country. In describing them a brief background with details about the land tenure systems, contribution of agriculture to the economy of Swaziland and the different industries (agricultural) is provided. The industries under the agribusiness sector are also described. It is worth mentioning that the agribusinesses referred to in this study are those that are engaged in manufacturing or processing and marketing of agricultural products. The last section of the chapter presents the challenges faced by both the agricultural and agribusiness sectors.

2.2 BACKGROUND OF THE AGRICULTURAL SECTOR

Swaziland is a predominantly a rural, landlocked country with a total land area of 17,364 square kilometres and is surrounded by the Republic of South Africa and Mozambique. Most of the population is dependent on subsistence agriculture for their livelihoods (FAO/WFP, 2008:5). Swaziland has a dual land tenure system consisting of Swazi Nation Land (SNL) and Title Deed Land (TDL). The SNL constitutes about 60% of the total land area and is held in trust by the King and allocated to households by traditional chiefs. The TDL is freehold and owned mainly by companies (sugarcane, forestry and citrus plantations) as well as by some individuals. Production on TDL is market-oriented and uses modern technology and irrigation, while production on SNL is subsistence-oriented and relies on rainfall (FAO/WFP, 2008:5).

Table 2.1 (below) indicates the different sectors in the economy as percentages of the GDP. The agriculture sector in 2010 contributed about 8.9% to the GDP (IHS Global Insight report, 2010). A far greater proportion is indirectly related to agriculture as a significant part of the manufacturing sector is value-added through the processing of products, such as sugar and timber (Swaziland Business Year Book, 2011). The agriculture sector forward linkage to other sectors (especially manufacturing sector in terms of raw materials) is of paramount importance and critical contribution to the country's economy. The sector also contributes to the economy, through the provision of employment and foreign exchange. Employment provided in areas such cultivation, manufacturing, processing and in services, and over 70% of the population relies of the sector for their income (Central Bank of Swaziland, 2008/9:13).

Table 2.1: The contribution of sectors in the economy as percentage of GDP

Sector	2006	2007	2009	2010
Agriculture	8.5	12.7	7.3	8.9
Manufacturing	41	31.7	49.5	-
Services	45.5	-	43.3	-

Source: IHS Global Insight report, 2010. FAO/WFP report, 2008

It is noteworthy that the Swazi economy is closely linked to that of South Africa, from which accounts for about 87% of local imports and to which it sends about 50% of its exports (Thompson, 2010: 15). Hence, South Africa's economic performance has a major influence on the local climate. Other major trading partners are the United States of America (USA) and the European Union (EU) (FAO/WFP report, 2008:5). The value of agricultural exports is 256 million US$, with a 3.5% share of the total exports. The value of agricultural imports is 224 million US$ with a 5.8% share of total imports (FAO, web page).

Figure 2.1 depicts the most problematic factors for doing business in Swaziland and their corresponding weights. From a list of 15 factors, business executives were asked to select the five most problematic factors for doing business in Swaziland and to rank them between 1 (most problematic) and 5 (WEF, 2010/11:308). The results were then tabulated and weighted according to the ranking assigned by respondents.

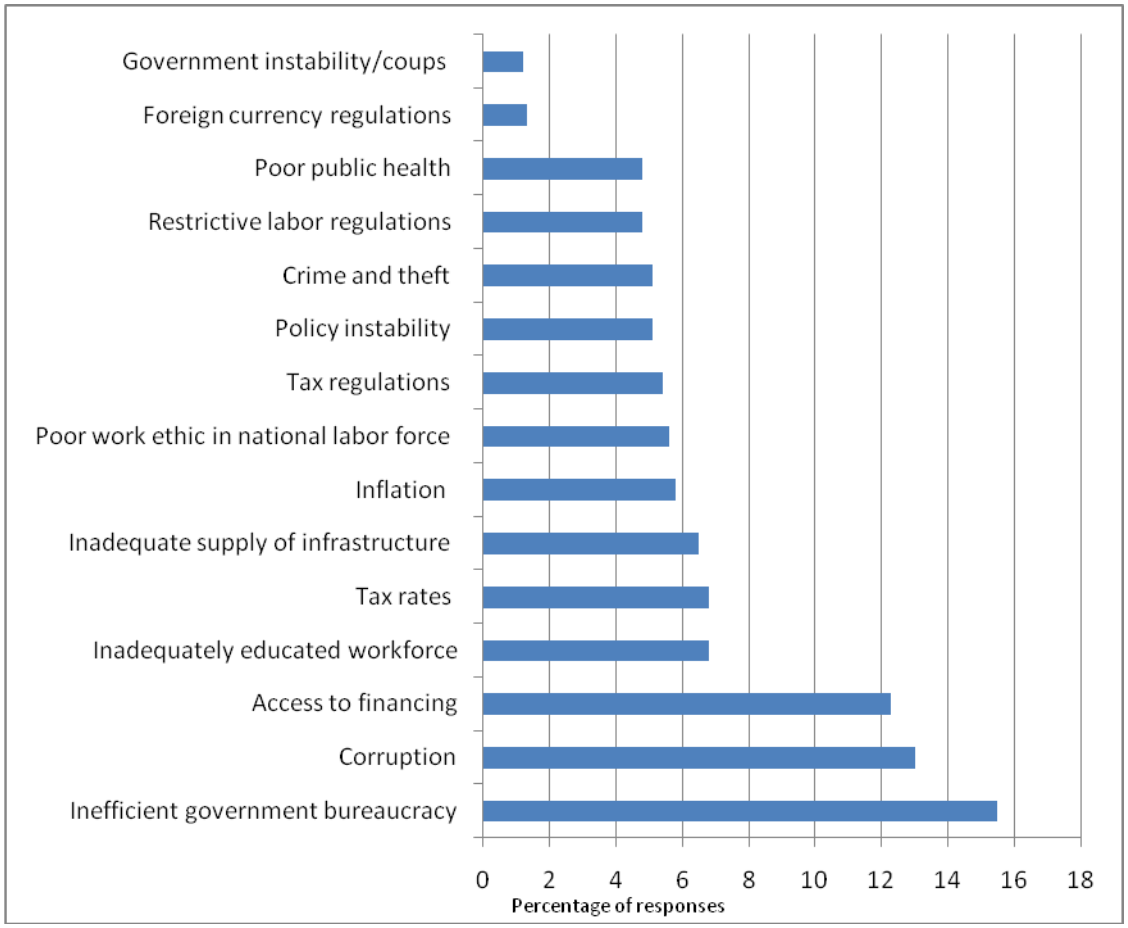

Figure 2.1: The most problematic factors for doing business in Swaziland
Source: WEF, 2010/11:182

NB: 1= Most problematic 5=problematic

This serves as evidence about the environment the agricultural and agribusiness sectors operate in. Other challenges faced by these sectors are explained towards the end of the chapter.

2.3 THE AGRICULTURAL INDUSTRIES

This section provides a description of the agricultural industries in the country, mainly: sugar, forestry, citrus, maize, livestock, poultry and cotton. In describing the industries, specific details, including production volumes, exports, imports, and with some industries, product contribution to GDP is provided.

2.3.1 The Sugar Industry

This is one of the major exporting industries, contributing about 12% to the national GDP of Swaziland, 35% to private sector wage employment and 11% to national wage employment (Central Bank of Swaziland Report, 2008/9:6). Through international assistance, the sugar industry has reached a comparatively high level of technological sophistication with irrigation the norm (Business Monitor International, 2007). The sugar industry produces over 600 000 metric tonnes annually, provides employment to over 3 500 people and brings foreign currency to the economy (through exports). In 2008/9, this industry was able to generate net sugar sales revenue of SZL 2,440 billion and SZL 43 million revenue sales for molasses (SSA, 2008/9:6). The domestic SACU market, which includes Swaziland, remains a vital one for the Swazi sugar, consuming 52% of total sales. In 2009/10 domestic sales increased from 319,715 tonnes in 2008/09 to 325,000 (Central Bank of Swaziland Report, 2009/10:19).

The major and dominating companies under the sector are the *Royal Swaziland Sugar Corporation* (RSSC) and *Ubombo Sugar*. This industry is regulated by the Swaziland Sugar Association (SSA), which not only regulates the industry but also runs the marketing and sales to global markets (EU, COMESA, SACU and World market).

However, the sugar industry has been struck by the removal of preferential trade arrangements, particularly the implementation of the final phase of the EU sugar

sector reforms, which saw the EU price decline by 21.6% in 2009/10 and the expiring of the trading agreement sugar protocol in September 2009, which led to decrease in price guarantees in the EU market from 100% to 90% of the reference price (Central Bank of Swaziland Report, 2009/10:19). As a result, Swaziland's average export price to Europe decreased, thereby affecting export earnings.

2.3.2 Forestry

Forestry is another dominant and major export industry, contributing about 20% to the country's GDP, including processed products. In 2008 it received SZL562.5 million in export earnings (Central Bank of Swaziland Report, 2008/2009:14) and provides employment to over 8,000 people (Swaziland Review, 2010:56). It also provides business opportunities for the service sector, such as forest management, fire fighting, transport, harvesting and other non-core activities. Forestry provides raw materials for many value-added products, which between them account for a significant proportion of the national export earnings (Swaziland Business Year Book, 2009/10).

The production level for Sappi Usutu's Unbleached Kraft Pulp (UKP) decreased by 19.9% from 170,398 tonnes in 2007 to 142,167 tonnes in 2008. The decline is attributable to the 65 day shutdown (instead of the normal 2 weeks), during which time the company invested E147 million; as well as to forest fires of the past few years, particularly the devastating fires in August 2008 when 20,500 hectares (40%) of the Pulp Mill's sustainable fibre requirement was destroyed. This had a negative impact on production and future sustainability. Subsequent to the decline in production, exports volumes also decreased by 17.7% in 2008 to 147,432 tonnes from 173,572 tonnes in 2007. In tandem with the decline in export volumes, export earnings fell substantially from a revised figure of SZL684.4 million in 2007 to SZL562.5 million in 2008, representing a 21.7% decrease. This was attributed to the unfavourable international pulp prices and fall in demand due to the global economic downturn (Central Bank of Swaziland Report, 2008/9:14). Subsequently, Sappi Usuthu wound down its operation as this sector's

performance had been compromised by forest fires, which destroyed more than 80% of the forests (Central Bank of Swaziland Report, 2009/10:15).

2.3.3 The Livestock and Poultry Industry

The livestock and poultry industry consists of cattle, poultry, sheep and pigs. In 2009 the cattle population accounted for a larger component of the country's livestock but has increased marginally by 1.1% to 608,538. Goats and sheep increased by 9.1% and 2.9%, respectively. The cattle population would have been much higher had it not been for slightly higher mortality, which rose from 4% to 4.7%, indicating a total of 28,612 deaths in 2009 (Central Bank of Swaziland Report, 2009/10:18). The industry provides employment and foreign exchange through exporting beef to the EU market by the Swaziland Meat Industries (SMI). Employment is promoted through the Livestock Development Policy, which emphasises commercializing the industry. This initiative includes encouraging farmers to go beyond rearing livestock and move on to the meat processing level, where more revenue is received. Technical and financial support is provided to the farmers, with the aim of educating and raising awareness of livestock farming.

Beef is the major product being exported under the livestock and poultry industry sector, mainly to the EU. However, in 2009, export receipts fell by 4.1% as a result of the appreciation of the local currency against the euro and US dollar to a record SZL50.3million (Central Bank of Swaziland Report, 2009/10). Nevertheless, this reflected a double increase over the year 2007, when revenue receipts were SZL26million (Central Bank of Swaziland Report, 2009/10:18).

Poultry meanwhile is one of the fastest growing sub-sectors in terms of generating income, and the country has become largely self-sufficient in chickens. Legislation protects producers from imported competition such that poultry import permits are granted only in special circumstances, and this also prevents the dumping of surplus stock. The Swaziland Poultry Processor (SPP) is the largest abattoir and

processor, supplying about 60% of the domestic requirement. However, the majority of eggs for chick production are imported from South Africa, as day-old chicks when local stocks become depleted. Egg production is increasing and local farms of all sizes are producing quality eggs at competitive prices. The Swaziland Poultry Producers Association looks after the interests of this sector (Swaziland Business Year Book, 2009/10).

2.3.4 Citrus Industry

The citrus industry exports almost half of its production volume and the rest is sold within the domestic market. In 2008 production fell by 5.3% from a peak production level of 85,262.7 metric tonnes in 2007. The decline in production can be attributed to alternate bearing and climatic factors and a significant shift in the weather conditions (Central Bank of Swaziland Report, 2008/9:13).

In 2009 the citrus industry export earnings fell by 14.42% from SZL100.5 million (in 2008) to SZL86 million, owing to a reduction in demand for citrus brought about by the global crisis. However, the domestic market provides an alternative market for citrus fruits and is becoming stronger, particularly for fresh fruit, canned fruit and juice. Domestic sales volumes increased by 4.6% from the 2008 volume sales. However, due to lower domestic prices the increase did not translate into increased sale receipts (Central Bank of Swaziland Report, 2009/10:17).

On the downside, the industry's performance is threatened by high input costs. Inputs such as fertilizer and chemical prices recorded a threefold increase in 2008, reducing profitability of the industry in the subsequent year. On the other hand, lower global demand has negative implications for both export quantities and prices (Central Bank of Swaziland, 2008/9:13). Therefore, the major growth point for the industry would be through productivity improvements aimed at improving the quality of product. Low global demand implies a shift from producer to consumer market, thus only good quality sells. Hence, in 2009, growers invested more on the quality of product for them to remain competitive in the export market.

Such initiatives involve increasing the lifespan of the fruit after harvesting, such as minimizing handling of fruit and temperature fluctuations (Central Bank of Swaziland, 2008/9:13).

2.3.5 The Maize Industry

Maize is the most grown cereal in Swaziland because it is the staple food and it is grown on subsistence farming under the SNL. Irrigation is often not used for maize, thus production volumes fluctuate, frequently depending on climatic conditions and often hardly enough for the domestic consumption of 113,000 tonnes. Therefore, the deficit is always imported from South Africa to supplement local production (Central Bank of Swaziland, 2008/9:15-16).

The National Maize Corporation (NMC) promotes local production of maize through providing a guaranteed market for local maize farmers. As a way of motivating them to increase local production, they host events such as the National Maize Competition. In addition to encouraging local maize production, the NMC over the years has been offering a standard price of SZL2, 000/tonne (importing price SZL 1,974/tonne), with the intention of making maize growing more attractive. When input costs increased in 2009, NMC increased the price to SZL2, 021/tonne as a way of cushioning the farmers. In 2008 there was a major shortfall of other cereals grown in the country, such as wheat, sorghum and rice, which resulted in a large increase in the prices of by-products such as flour, bread and mealie-meal at the retail level. The price of animal feed also increased, which then had a negative effect on the overall prices of food in the country (Central Bank of Swaziland Report, 2008/9:15-16).

Maize production in 2008/9 season increased by 14%, from 61,994 tonnes to 70,672 tonnes. Despite production increasing, the yield remained below the country's consumption requirement of 113,000 tonnes and the shortfall had to be

met through imports which reached 40,000 tonnes (Central Bank of Swaziland, 2009/10:15-16). This presents a market for maize in the country.

2.3.6 The Cotton Industry

The cotton industry has not been performing well for some years now. The factors listed to be contributing to this are drought, lack of finance, low cotton prices, and the absence of a ginnery (whilst there were previously two in the country). In 2007/08, cotton production recorded a 47% decline to 394 tonnes as farmers were discouraged by the closure of the KwaZulu Natal (in South Africa) ginnery that provided a market for local cotton. The Swaziland Cotton Board, with the Swaziland government's assistance, was able to revive a local ginnery with a break-even capacity of 7,500 tonnes, and government approved the cotton price subsidy to guarantee SZL4.00 per kilogram of cotton. These initiatives benefited the few farmers who had planted in that season, most having been discouraged (Central Bank of Swaziland, 2008/9:11).

However, in the 2008/9 season, the performance of the cotton industry improved significantly, and the area under cultivation rose from below a thousand hectares the previous season to 4,000 ha. This increase occurred despite excessive rains during the planting season, which delayed the planting process. This indicates how excited and committed the cotton farmers were with the implemented initiatives. Production rose more than threefold, from 394 tonnes in 2007/08 to 1,566 tonnes in the 2008/09 season. Out of the 1,566 tonnes, about 590 tonnes of cotton lint was sold to a local textile company and valued at SZL6.5 million. The bi-product of cotton production, namely cotton fuzzy seeds production, amounted to 774 tonnes with a value of SZL1.4 million, were sold to feedlots in South Africa (Central Bank of Swaziland, 2009/10:16).

There are positive prospects for the industry, which include the re-launching of the local cotton ginnery with an optimum capacity of 15,000 tonnes and the marketing

of the cotton through provision of packaging and transport to farmers. However, challenges remain, including: underprovided irrigation infrastructure, persistent droughts, highly priced planting inputs (whilst the selling price remains stagnantly low) and scarce financial support. Despite the creation of dams under Lower Usuthu Smallholder Irrigation Project (LUSIP), irrigation prospects for cotton remain dim as the crop faces competition with sugarcane, a more favourable crop. On the other hand, efforts to import cotton from RSA for optimal utilization of the ginnery have been hindered by legislation on Genetically Modified Organism, or lack thereof (Central Bank of Swaziland, 2009/10:16).

2.3.7 Other Industries

Other agricultural activities undertaken in Swaziland include vegetables and fruits, beekeeping and honey, fisheries, and mushroom production. Fruits include avocados, bananas, granadillas, guavas, mangoes and litchis. Vegetables are grown for local consumption and baby vegetables continue to gain an increasingly significant share of the export market. The National Marketing Board (NaMBoard) regulates the importation and exportation of the fruits and vegetables, and encourages vegetable growing by providing marketing and technical assistance (*Swaziland Business Year Book*, 2009/10).

2.4 THE AGRIBUSINESS SECTOR INDUSTRIES

The agribusiness sector is typically identified by those firms carrying out processing or manufacturing activity in order to add value to an agricultural commodity. Hence, some of the agricultural industries described earlier also fall under the agribusiness sector since they produce and manufacture or process the commodities. These industries include sugar, forestry, maize and citrus. It is worth mentioning that the production and trade data of these industries combine both agricultural and agribusiness activities, hence it is not ideal for the researcher to separate or repeat them. Only industries that manufacture or process agricultural are therefore presented in this section of the chapter.

2.4.1 The Textile Industry

The performance of textiles has been affected by recent contractions in the global economy, resulting in a slowdown in demand for textile products in the US and South African markets. The effect on the latter was manifested through the closure of some mines, which reduced the demand for protective clothing and the exports for zippers and yarn decreased. As a result of decreased demand, falling prices and the strengthening of the local currency, revenue receipts from this industry declined. The lower demand also led to the textile industries scaling down their operations, decreasing both output and employment, such that it recorded the highest number of job losses. In 2009, most of Swaziland's textile products were sold to the United States under the AGOA agreement, and to South Africa (Central Bank of Swaziland Report; 2009/10:20).

As with the sugar industry, the textile industry has also been hit by the removal of preferential trade arrangements. The textile industry is facing fierce competition from Asia and Latin America, and even though benefits are still received through US AGOA Act, the country would be hard-pressed to maintain the 2005 level of AGOA exports to the US of US$176.1m (Business Monitor International, 2007).

2.4.2 Animal Feed Industry

This industry manufactures and distributes the full range of balanced animal feed in Swaziland. The different animal feed manufactured includes: alfalfa silage, animal feed (fodder, alfalfa, lucerne), birdsfoot trefoil, blood meal, clovers, compound feed, fish meal and silage, grasses, meat and bone meal. The feed is sold locally and also exported.

2.4.3 The Dairy Industry

The dairy industry provides income and employment to small and marginal farmers. It is also a source of food to the Swazis who traditionally consume much milk in form of sour milk, which then provides a vibrant market (Simelane, 2011:1). In 2008, about two third (2/3) of the local milk production was produced by large commercial farmers on TDL and the rest on SNL (Central Bank of Swaziland Report, 2009/10:17). The dairy is dominated by informal trading; a bulk of the domestically produced milk is sold in the informal market, which offers more lucrative prices. The raw milk is sold fresh and in the form of sour milk to customers. Only 32% of total production is sold to the formal market, which is made up of milk processors. Hence, the price in the informal market is higher than those offered by milk processors in the formal market (Central Bank of Swaziland Report, 2009/10:17).

There is a high demand for dairy products in the country. The annual demand for milk products is documented to be in excess of 56 million litres, whereas commercial milk production from the national herd is about 8.4 million litres, leaving a shortfall of 48.2 million litres (Swaziland Business Year Book, 2009/10). The deficit is imported from South Africa. In 2009, imports, which include raw milk, long life fluid and other milk products, amounted to 44.3 million litres of LME value from 42.7 million litres LME value in 2008 (Central Bank of Swaziland Report, 2009/10:17). The low performance and underdevelopment of the industry is attributed to smallholder farmers represent a larger percentage of the dairy subsector being faced with serious challenges in accessing inputs and selling output (Simelane, 2011:1).

The dairy industry is regulated by the Swaziland Dairy Development Board (SDDB), which promotes dairy development services in milk production, through provision of technical services by supplying dairy industry information and encouraging investment in processing of dairy products (Swaziland Review,

2010:53). To encourage local production that would meet the local demand, SDDB has been conducting technical training for active and aspiring dairy farmers.

2.4.4 Other Food Industries

Other food industries which have been incorporated in this sub-sector include the manufacture of chilli pepper, honey, sunflower oil and amarula. The agribusinesses that are engaged in these activities have formed part of the sample population of this study. The products are sold in the domestic market and also exported to South Africa and to the international markets.

Marula processing: Amarula trees are naturally grown in Swaziland and about 2 million grow mostly in the lowveld region. A mature marula tree produces about 500kg of fruit each year and it is then harvested and processed by the company. The different products processed consist of marula oil, body lotion, lip balm and soap. The products are sold locally but a higher portion is exported to North America, Europe and Australia.

Honey pepper processing: The honey is processed by a firm that was established by a faith-based non-profit organization which offers opportunities for marginalized young Swazis. Beside honey, the firm also processes gourmet jams, jellies, chutneys and sauces. These products are bottled and distributed to local retail markets and to the US.

Chilli pepper processing: The chilli pepper is grown, processed and sold to an African supplier to an international hot pepper sauce manufacturer for value addition.

Sunflower oil: The products manufactured include; vegetable oil, beauty soap, oil cake and pet bottle. The products are distributed to the local retail markets.

2.5 THE SECTOR CHALLENGES

There are many challenges faced by both the agricultural and agribusiness sectors which contribute to the sectors not achieving growth targets. These include:

a. HIV/AIDS: Swaziland has the highest the HIV/AIDS prevalence of 26.1% (WEF, 2010/11:411) and because of the nature of these sectors; many employees are hired to operate the different activities (e.g., cultivation, harvesting, manufacturing/processing, packaging and etc). The effects of HIV/AIDS cause a serious impact on businesses, through loss of skilled workforce, increased absenteeism and reduced productivity. Therefore, the industries deploy into recruiting and training certain funds that could have been utilised to improve business operations.

b. High input costs: in addition to labour costs, input cost has been identified as one of the challenges faced by the sectors. These include inputs such as fuel, chemicals, fertiliser, and animal feed. Fertilizer and chemical prices recorded a threefold increase in 2008, reducing profitability of the citrus industry in 2009. Crude oil prices, which are a major factor in freight prices, also peaked in July 2008 (Central Bank of Swaziland Report, 2008/9:12).

c. Climatic condition: the agriculture sector is often affected by persistent drought and erratic rainfall. The bad climatic condition affects the performance of the agricultural sector by compromising production yield as well as sales volume. Industries that have been affected by drought or erratic rainfall include citrus, maize and cotton.

d. Exchange rate volatility and commodity price: the appreciation of the local currency against major currencies, notably the euro and the US dollar, coupled with low price of the goods, reduces the export receipts of exporting industries such the sugar, beef, citrus and timber. In response to

declining prices, the industries reduce production, which further reduces profitability.

e. Removal of trade preferential agreements: In 2001, the EU quota system for beef given to Swaziland was abolished, removing the advantages the country had previously enjoyed. The implementation of the final phase of the EU sugar sector reforms resulted in the EU price declining by 21.6% in 2009/10, coupled with a stronger rand/lilangeni exchange rate against major currencies, notably the euro and the US dollar. Furthermore, the expiry of the trading agreement Sugar Protocol in 30 September 2009 saw price guarantees in the EU market decrease from 100% to 90% of the reference price (Central Bank of Swaziland, 2009/10:20). This has led to other agricultural products and industries to be exposed to more competition from other products and industries globally.
f. Limited finance: Access to credit and other financial services is a serious constraint to many farmers, from small to large scale producers. The finance is required for increasing production, marketing and for the uptake of technology to increase productivity and innovation.

2.6 CONCLUSION

This chapter provided an overview of the agricultural and agribusiness sectors. The difference between the two sectors lies in the value addition to the agricultural commodities carried out through manufacturing or processing. Only those industries that were engaged in processing or manufacturing agricultural commodities were considered under agribusiness.

The sectors are dominated by exporting industries, namely sugar, forestry, citrus, livestock and textiles. These industries provide not only employment to the Swazi nation but also foreign exchange through the imports. Nevertheless, the sectors are faced with several challenges, as have been explained in detail. Identifying the challenges is one of the fundamental aims of the study, particularly as it gives a

better understanding of the factors that hinder competitiveness success of the agribusiness sector, so as to devise strategies to improve competitiveness.

Despite all the stated threats faced by the agricultural and agribusiness sectors, there are positive prospects for the industry, which include the development of dams under LUSIP project. This project is meant to assist all producers to access irrigation water and so improve production, expected to be in sugar, maize, cotton, citrus and others such as vegetables. Other initiatives include the launching of the Swaziland Agricultural Development Programme (SADP), aimed at providing innovative and effective production systems that are market driven and efficient in terms of input-output performance, subsequently stimulating economic growing by the sector (Swaziland Review, 2010:46).

CHAPTER THREE

A REVIEW OF SELECTED MEASURES OF COMPETITIVENESS AND EMPIRICAL STUDIES ON COMPETITIVENESS IN AGRIBUSINESS

3.1 INTRODUCTION

For any industry to survive in today's highly competitive business environment it is fundamental for that particular industry to determine and effectively address the factors related to competitiveness (Madima, 2009:56).

This chapter reviews the literature on competitiveness so as to provide a clear understanding of its importance, with regard to its indicators. First, the measures of competitiveness are discussed highlighting the methodology and its application in reference to determining competitiveness. Second, a review of previously done studies on competitiveness is discussed highlighting the methodology used as well as the results obtained. Finally, a summary of the chapter is given.

For the purposes of this study, *competitiveness* is defined as the ability of a sector, industry or a firm to compete by trading its products profitably within the global environment, at the same time earning at least the opportunity to meet the cost of returns on resources employed (Porter, 1998:2-9). Competitiveness is also defined as the set of policies, institutions and factors that establish a country's level of productivity (Global Competitiveness Report, 2008/9:16), which positions the sustainable level of prosperity that can be earned by an economy. This means that more competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy.

3.2 MEASURES OF COMPETITIVENESS

This section describes some of the different methods of determining and measuring competitiveness, namely Balassa's Revealed Comparative Advantage (RCA), Porter's theory of determinants of comparative advantage, Global Competitiveness Index (GCI) and FDI the indicator of competitiveness. Each method is described in detail below, with more emphasis placed on Porter's (1998) as it is the base for analysis of this study.

3.2.1 Balassa's Revealed Comparative Advantage (RCA)

Balassa (1989:187) introduced the Revealed Comparative Advantage (RCA) method to compare a country's share of the world market in one commodity relative to its share of all traded goods. His argument was that the RCA could be indicated by the trade performance of individual commodities. The index measures normalised export shares of the same industry in a group of reference countries (Esterhuizen, 2006:117). The data required is trade statistics, and one can measure for an industry or for a particular commodity or product, e.g., sugar. The index can be calculated yearly, hence trends can be identified which also permit comparisons.

The advantage of using the RCA measure is that, firstly, it can identify sectors for which an individual country has a comparative advantage and disadvantage. Secondly, it measures relative success in exporting; and lastly, it is not dependent on any theory regarding inter-industry trade and factor endowments (Esterhuizen, 2006:117).

Volrath (1991) devised three RCA specifications for analysing international competitiveness in agriculture, one of which is the Relative Trade Advantage (RTA). To calculate the RTA, export and import data is required, and the difference between them calculated. The formula is as follows:

$\boldsymbol{RTA_{ij}} = RXA_{ij} - RMP_{ij}$

$RTA_{ij} = (Xij/$

Where: RTA= Relative Trade Advantage

RXA= Exports

RMP= Imports

The subscripts i and j denote the product and country categories, respectively.

However, appropriate trade statistics for Swaziland were not available; the only available data is a mix between the agricultural and manufacturing sectors hence the RCA index has not been calculated in this study.

3.2.2 Porter's Determinants of Competitiveness

According to Porter (1998:71-128), the answer for the question "why does a nation achieve international success in a particular industry?" is encompassed by four broad attributes:

1. *Factor conditions:* The nation's position in factors of production, such as skilled labour or infrastructure, necessary to compete in a given industry.
2. *Demand conditions:* The nature of home demand for the industry's products or services.
3. *Related and supporting industries:* The presence or absence in the nation of supplier industries and related industries that are internationally competitive.
4. *Firm strategy, structure and rivalry:* The conditions in the nation governing how companies are created, organised, and managed and the nature of domestic rivalry.

These attributes or determinants, as a system and individually, make up the framework in which a nation's firm is born and its ability to compete. They involve: accessibility of resources and skills required for competitive advantage in an industry; the directions in which this resources and skills are deployed; information

that outlines what opportunities are perceived; and, the goals of the employers, managers, workers and all stakeholders involved in carrying out competition. More emphasis is placed on firms investing and being innovative. Ultimately, nations succeed in particular industries because the domestic environment is more challenging, more dynamic, and encourages and prods firms to upgrade and broaden their advantages over time (Porter, 1998:71). Furthermore, Porter (1998:72) refers to the determinants as 'diamond,' a term that refers to them being in a mutually reinforcing system, meaning that the effect of one is dependent on the state of others. Hence, they work together as a powerful system for sustaining advantage.

Porter (1998:124-128) added two variables to the attributes, namely the *role of chance* and *role of government*, with chance events described as occurrences that have less to do with circumstances in a nation and that are mainly beyond the influence and power of firms and local government. Examples of these are acts of pure invention, wars, major technological discontinuities, foreign governments and political decisions. Such events are deemed essential since they crate discontinuities that allow shifts in competitive position. Advantages that have been previously established by firms or other competitors can be reversed by such events, hence opening or creating advantages or disadvantages for other new firms in response to the new and changed conditions. The nation with the most favourable 'diamond' is often likely to translate chance events into competitiveness (Porter, 1998:124-128).

The *role of government* is seen by Porter (1998) as influencing the four attributes (an influencer of the national 'diamond'), which could either be positive or negative. For example, factor conditions are affected through subsidies, policies towards the capital market; regulations or local product standards introduced by government; and in some instances government is a buyer for the goods and services traded by firms (Porter,1998: 124-128). Petit and Gnaegy (1998:13) concur with Porter's theory on the role of government, arguing that it can provide a regulatory structure. Government can ensure an incentive structure that will

stimulate and reward investments, in particular the ancillary industries that support the production, transport, processing and export of goods. Government can also provide the large infrastructure, for instance dams, electric power generation, information and communications networks, which as a result of economies of scale and their public good nature are unlikely to be provided by the private sector.

Porter's (1998) diamond model provides a more qualitative description of factors for determining the competitive success of an industry in a specific country. Quantitative description can also be determined using the model, where different industries' competitiveness in a particular country can be compared (Esterhuizen, 2006). The determined success and constraining factors can be assigned scores or weights. Furthermore, Porter's analysis can be used to determine the trends in the factors impacting on the competitiveness of an industry, if the analysis is made regularly. Figure 3.1 depicts Porter's (1998) diamond model.

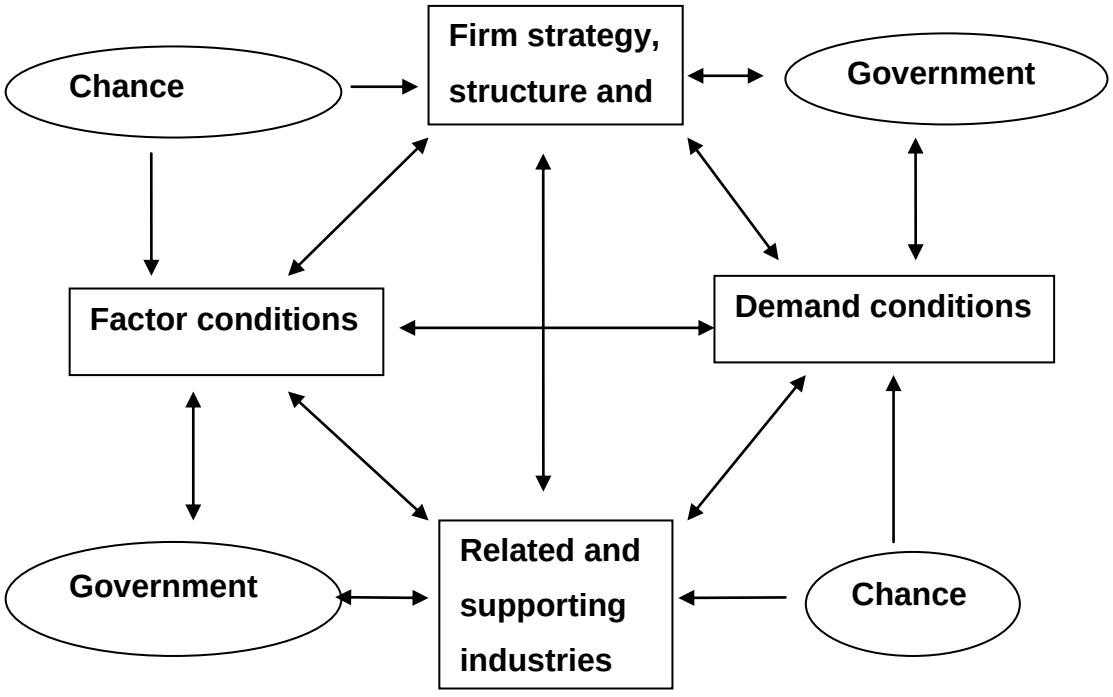

Figure 3.1: Porter's Diamond model
Source: Porter, 1998:128

In order to pursue these strategic moves, cutting-edge know-how and specific organisational capabilities, such as in-depth expertise, speed, agility, innovativeness and opportunism, are valuable resources (Ehlers & Lazenby, 2007:185-186).

3.2.3 Foreign Direct Investment (FDI)

This is a reasonable measure of national competitiveness which measures foreign ownership of productive assets such as factories, mines and land (Esterhuizen, 2006:108). FDI inflows play an important role in improving competitiveness for both producers and suppliers through advancing their managerial skills and technological capacities. Achieving competitiveness requires that host countries create business environments where foreign investors can boost the productivity of existing domestic activities and generate positive spillovers. Open trade and investment regimes are critical in this regard, as FDI has been found to be particularly beneficial for growth where it encourages trade. Improving human capital and technological capacity as well as developing infrastructure and financial sectors are crucial for attracting FDI that would generate positive spillovers for domestic economies (The African Competitiveness Report, 2011:xiv). In other words, more competitive economies will tend to attract more FDI.

Moreover, the role played by multinational enterprises (MNEs) in the recipient economy is crucial to improve competitiveness. FDI is liable to wield the most positive impact on productivity and development in recipient countries if MNEs take a broader perspective and support them in this endeavor. Therefore, MNEs need to negotiate contracts that are fair and sustainable, adopt adequate and clean technologies, share knowledge, and in general adhere to good standards of corporate behavior (The African Competitiveness Report, 2011:xiv).

Esterhuizen (2006:110) argues that differentiation is required with regard to FDI, since trade barriers can also be conquered by investing in other countries.

Therefore, if a country has a high level of investment in foreign countries, that could be used as an indicator of competitiveness.

Preliminary data for 2009 in Swaziland indicate an 18% increase in the overall stock of FDI to SZLE5, 970.2 million. This is a result of a significant improvement in FDI inflows to the services, finance and manufacturing sectors of Swaziland. The stock of FDI in the manufacturing sector posted a 12. 7% growth from SZL2, 684 million recorded in 2008 to SZL3, 025 million and it remains the largest component of total FDI. The agriculture sector increased from SZL720 million to SZL864 million (The Central Bank of Swaziland Report, 2009/10:30).

3.2.4 Global Competitiveness Index (GCI)

This is a highly comprehensive index for measuring national competitiveness and has been used by the World Economic Forum (WEF) since 2005. It captures the microeconomic and macroeconomic foundations of national competitiveness (The Global Competitiveness Report, 2010/11:4). For the reason that the determinants or measures of competitiveness are so many and complex, twelve (12) pillars of economic competitiveness have been described by the WEF. These 12 pillars are; institutions (pillar 1), infrastructure (pillar 2), macroeconomic stability (pillar 3), health and primary education (pillar 4), higher education and training (pillar 5), goods market efficiency (pillar 6), labour market efficiency (pillar 7), financial market sophistication (pillar 8), technological readiness (pillar 9), market size (pillar 10), business sophistication (pillar 11) and innovation (pillar 12). Although the pillars are not going to be described in detail, it worth noting that they are interrelated, they have a tendency of reinforcing each other. For instance, innovation is not possible without technological readiness, which is not possible without higher education and training, which is not possible without health and primary education (The Global Competitiveness Report, 2010/11:4-8).

The pillars are further described in terms of stages of development of an economy. Firstly, the GCI states that at the first stage of development the

economy of a country is factor driven and countries compete based on their factor endowments, primarily unskilled labor and natural resources. Maintaining competitiveness at this stage hinges on the first four (4) pillars; operational institutions (pillar 1) both public and private well developed infrastructure (pillar 2), a stable macroeconomic environment (pillar 3) and appropriate health and primary education (pillar 4) service. Secondly, as the country's economy continues to develop it moves from factor driven (basic requirement stage) to efficiency driven, where concentration is more on developing efficient production processes and high value products. At this stage, competitiveness is driven by higher education and training (pillar 5), efficient goods markets (pillar 6), well-functioning labor markets (pillar 7), developed financial markets (pillar 8), the ability to harness the benefits of existing technologies (pillar 9), and a large domestic or foreign market (pillar 10) (The Global Competitiveness Report, 2010/11:9). Finally, as the country's economy further develops and becomes more efficient, the concentration shifts to being innovative (innovation driven economy). Competitiveness at this stage is driven by the last 2 pillars namely; business sophistication and innovation (WEF report, 2010/11:9).

Furthermore, the concept of stages of development is integrated into the Index by attributing higher relative weights to those pillars that are relatively more relevant for a country given its particular stage of development (see table 3.1 below). This means that, all 12 pillars matter to a certain extent for all countries and the importance of each one depends on the country's stage of development (The Global Competitiveness Report, 2010/11: 9). In terms of the sub-indexes defined Swaziland is ranked as follows: for basic requirements, 110, with an index of 3.79; for efficiency enhancers, 126, with an index of 3.26, and for innovation and sophistication factors, 131, with an index of 2.77.

Table 3.1: Weights of three subindexes at each stage of development

Subindex stage	Factor Driven (% stage)	Efficiency Driven (% stage)	Innovation Driven (% stage)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

Source: The Global Competitiveness Report, 2010:11:10

The countries are allocated into the stages of development using the: level of GDP per capita at market exchange rates, which is considered a widely available measure that is used as a proxy for wages, since internationally comparable data on wages are not available for all countries covered; the extent to which countries are factor driven, which is measured by the share of exports of mineral goods in total exports (goods and services), assuming that countries that export more than 70% of mineral products (measured using a five year average) are to a large extent factor driven. The thresholds used are shown in Table 3.1. The level of GDP per capita for Swaziland is 2,907 US$ and thus Swaziland is considered transitioning from stage 1 to 2 (The Global Competitiveness Report, 2010/11:308). The GCI for Swaziland is 3.4 (out of 7) and ranked 126 out of 139 countries.

Table 3.2: The income threshold for establishing the stages of development

Stage of development	GDP per CAPITA (in US$)
Stage 1: Factor driven	<2,000
Transition from stage 1 to stage 2	2,000-3,000
Stage 2: Efficiency driven	3,000-9000
Transition from stage 2 to stage 3	9,000-17,000
Stage 3: Innovation driven	>17,000

Source: The Global Competitiveness Report (2010/11:11)

3.3 A REVIEW OF PREVIOUS STUDIES ON COMPETITIVENESS IN AGRIBUSINESS

There are many studies on competitiveness that have been carried out in South Africa, and have analysed *inter alia* the competiveness of: the Agribusiness sector (Esterhuizen, 2006), the agricultural input industry (Esterhuizen, Van Rooyen & Van Zyl, 2001), the flower industry (Van Rooyen, I.M. & Van Rooyen, C.J), the agro-food industry (Esterhuizen & Van Rooyen, 1999), agro-food and fibre complex (Esterhuizen, Van Rooyen & D'Haese, 2001), agricultural export firms (2004), and the wine industry (Esterhuizen & Van Rooyen, 2006). The Agricultural Business Chambers (ABC) as well as Esterhuizen and Van Rooyen have employed the methods of measuring the abovementioned competitiveness in their respective studies, to be review briefly here.

This section of the chapter also briefly describes two studies on competitiveness that has been carried out in other countries: the competitiveness of the agricultural sector in Rwanda; and the country competitiveness analysis for Zambia.

3.3.1 Various competitiveness studies carried out in South Africa

Described in this section are various studies carried out in South Africa by different authors on competitiveness.

3.3.1.1 ABC studies in South African Agribusiness

In the period 2004 to 2008 the Agribusiness Chamber (ABC) and Esterhuizen regularly carried out competitiveness research for the agribusiness sector, with the aim of determining trends in factors impacting on it. The measuring framework for competitiveness was based on the following methods: Agribusiness Competitiveness Status (ACS) (based on Balassa's RTA method); the Agribusiness Executive Survey (AES), based on Porter's determinants of

competitiveness; and the Agribusiness Confidence Index (ACI), evaluating the status of the decision-making environment for agribusinesses. The investigations generated fundamental information about the status of agribusinesses in South Africa, such that it was incorporated in the Strategic Plan for Agriculture. Some of the results obtained using these methods are described below.

The Agribusiness Competitiveness Status (ACS) index of South Africa: This method is based on the ability of the sector's products to sustain trade, thus exports and imports are analyzed, with those of agricultural products viewed as percentages of world trade in such products over a specific time. Therefore, the agribusiness sector is compared with other global competitors in terms of its ability to compete (market share) and remain competitive. Balassa's (1989) RTA was applied, the classification criteria of which are as follows: competitive, when RTA > 1; marginal competitive, when (1 > RTA > -1); and not competitive, when RTA < -1 (Esterhuizen, 2006:200).

As shown in Table 3.3 (below), the ACS index had values of less than one (< 1) for the majority of the period 2001-2008. The values indicate that the competitiveness status of the South African agribusiness sector was generally marginal in terms of global competitiveness, and that minor adjustments related to factors influencing the competitiveness status could contribute to changing the status to positive (Esterhuizen & Van Rooyen, 2008:3).

Table 3.3: The competitiveness status of the South African agribusiness sector

	RTA 2008	RTA 2007	RTA 2006	RTA 2005	RTA 2004	RTA 2003	RTA 2002	RTA 2001
South African Agribusiness Sector	0.12	0.00	0.25	0.53	0.39	0.55	0.46	0.48

Source: Esterhuizen & Van Rooyen, 2008:3

The Agribusiness Executive Survey: This is a descriptive methodology, the basic requirements of which influence the competitiveness of the agribusiness sector, for example, primary education, infrastructure, macroeconomic stability and

efficiency enhancers (such as technology, efficient financial markets and higher education, as well as innovation). The focal point of the research is at firm level, hence it involves the participation of individual firms from which executive opinions are gathered. Therefore, the survey data measures competitiveness as it is perceived, and is aimed at determining the main factors that ascertain competitiveness success and constraints impacting negatively on the competitiveness of agribusinesses (Esterhuizen & Van Rooyen, 2001:2-4).

The ABC and Esterhuizen (2008) have carried out studies using the executive survey approach in 2000, 2002, 2004 and 2008, and made comparisons of the results for the 2004 and 2008 surveys to determine the trend. They came up with 15 constraining and 15 enhancing factors that impacted on South African agribusiness competitiveness. The classification score ranged from one to seven, where 1 indicated major constraint and 7 showed major enhancement. The leading three factors constraining the competitiveness of agribusinesses were alike in both years, namely: the cost of crime, trust in the political systems in South Africa, and a low level of competence of personnel in the public sector. The corresponding mean scores in 2004 were 1.80, 1.87 and 1.80, respectively, however for 2008 they were 1.57, 1.66 and 1.70, respectively (agbiz, online; Esterhuizen, 2006:218). See Table 3.4 below.

Table 3.4: The major constraints to the competitiveness success of Agribusinesses in South Africa for 2008

Factors	Average
Cost of crime	1.57
Trust in the political systems	1.66
Competence of personnel in the public sector	1.70
Electricity supply in South Africa	1.71
Availability of skilled labour	2.15
Cost of transport	2.20
The cost of finance	2.51
Acquired immune deficiency syndrome (AIDS)	2.59
South Africa's labour policy	2.64
The cost of quality technology	2.64
Quality of unskilled labour	2.75
South Africa's land reform policy	2.78
Administrative regulations	2.80
The lack of sufficient scientific research institutions in the agribusiness sector	2.92
The overall cost of doing business in South Africa	2.95
1= major constraint 7= major enhancement	

Source: Esterhuizen & Van Rooyen (2008:10)

On another note, the top three enhancing factors to competitiveness success were intense competition in the local market, availability of unskilled labour, and the production of affordable high quality products. The corresponding scores in 2004 were; 5.61, 6.50 and 5.85, respectively, with the scores for 2008 being 5.76, 5.56 and 5.47, respectively (agbiz, online; Esterhuizen, 2006:221). See Table 3.5 below.

Table 3.5: The major enhancements to the competitiveness success of agribusiness in South Africa for 2008

Factor	Average
Intense competition in the local market	5.76
Availability of unskilled labour	5.56
Production of affordable high quality products	5.47
Continuous innovation	5.33
Investment in human resources	5.19
Unique products, services and processes	4.98
The availability of water for industrial purposes	4.76
Stringent regulatory standards in the industry	4.71
Production of environmental friendly products	4.71
Availability of local suppliers of primary inputs	4.68
Strategy to employ quality technology	4.53
Quality of local suppliers of primary inputs	4.53
The efficient flow of information from the customer to the business	4.46
Supply chain relationship with primary suppliers	4.44
South Africa's micro economic policy	4.40
1= major constraint 7= major enhancement	

Source: Esterhuizen & Van Rooyen (2008: 12)

When applying Porter's determinants of competitiveness, Esterhuizen and Van Rooyen (2008:8-14), discovered that the South African agribusiness sector as a whole was only marginally competitive and in a declining phase. To be specific, the relating and supporting industries and firm strategy, structure and rivalry determinants of competitiveness were the main factors that provided it with a global competitive edge, since they had mean scores of 2.5 each (where a mean score of 1 indicated constraining, 2 moderate, and 3 enhancing). The demand conditions and factor conditions had a moderate impact (mean score of 2 each) and the last two determinants, namely government support conditions and chance conditions, had a negative impact (mean score of 1.5).

The results from the 2008 survey depicted that only Porter's (1998) fourth determinant provided competitive edge (the firm strategy, structure and rivalry conditions), with the same mean score (2.5) as in 2004. The demand conditions and related and supporting industry conditions had a moderate impact on the agribusinesses, with a mean score of 2, whilst the other three determinants (chance conditions, government policies and support, factor conditions) rated negatively, with a mean score of 1.5 (Esterhuizen & Van Rooyen, 2008:8-14).

Esterhuizen and Van Rooyen (2008:8-14) further discussed the specific conditions that impacted on competiveness of the agribusiness sector in South Africa, these being: local suppliers of primary inputs, electricity supplies, financial institutions, trade policies, market growth, market size, scientific research institutions, technology, capital infrastructure, labour, cost of doing business, crime, AIDS, labour policy and land reform.

3.3.1.2 Study on the Agro-Food and Fibre Industry

In 2001, Esterhuizen and Van Rooyen carried out a study to determine the competitiveness of different supply chains in the agro-food and fibre industry, calculating Balassa's (1989) RTA index for the industry. The scale of classification for competitiveness of the industry was RTA > 0, meaning a comparative advantage, and RTA < 0 = meaning a comparative disadvantage. The results revealed that the agro-food and fibre industry was succeeding in operating competitively, as indicated by the RTA score of 0.41. The index included primary and value added industries, with 18 food chains measured. The primary products were maize, sugar, groundnuts, oranges, apples, grapes, pineapples, wool, wheat, potatoes, soybeans, sunflowers seeds, tomatoes, milk, pigs, chicken, beef and mutton. Table 3.6 depicts the competitiveness status of these products. It was concluded that the primary products in the agro-food and fibre chains were marginally or highly competitive in international terms. However, beef and mutton were not competitive.

Table 3.6: Competitiveness of primary products in the agro-food and fibre industry

Competitive (+)	Marginal (=)	Not Competitive (-)
Maize; Sugar; Groundnuts; Apples; Oranges; Grapes; Pineapples; Wool	Wheat; Potatoes; Soybeans; Sunflower seeds; Tomatoes; Milk; Pigs; Chicken	Beef; Mutton

Source: Winners, Losers and Turnarounds; Esterhuizen & Van Rooyen; 2001:2

NB: RTA > 0 = competitive advantage; RTA < 0 = Competitive disadvantage

Expect for wheat, maize, apples, pineapples, beef and sheep chains, there was a decrease in competitiveness when moving from the primary to the processed products in the chains, as shown in Table 3.7 (below). At that period it was concluded that value adding opportunities in South African agribusiness were limited (Esterhuizen & Van Rooyen; 2001:2).

Table 3.7: Changes in competitiveness in the movement from primary to processed products in the chain

Increase	Decrease
Wheat; Maize; Pineapples; Beef; Sheep; Apples	Potatoes; Sugar; Soybeans; Groundnuts; Sunflower seeds; Tomatoes; Oranges; Grapes; Milk; Pigs; Wool; Chickens

Source: Winners, Losers and Turnarounds; Esterhuizen & Van Rooyen; 2001:2

3.3.1.3 Study on the agricultural input industry

In 2001, Esterhuizen, Van Rooyen and Van Zyl (2001:12) carried out a study determining the competitiveness of the agricultural input industry in South Africa. Again, Balassa's (1989) method of determining RTA was applied to the different input industries, namely: total farming requisites; total agricultural machinery; tractors; fertiliser; and pesticides. The scale of classification was as follows: RTA > 0 = positive trend; RTA < 0= negative trend and 0 = constant trend. The following conclusions were drawn for the different industries:

- Total farming requisites - relatively marginally competitive in the international arena as indicated by the RTA value of -0.11 in 1999 and -0.24 in 1998. A positive trend in competitiveness was observed from 1980 to 1999.
- Total agricultural machinery - not competitive but improving. The RTA sector was -1.06 in 1999, whilst in 1995 it was -2.29; hence it was described as having a competitive disadvantage in the international arena. A constant trend was observed from 1980 to 1999.
- Tractors - not competitive but improving, as in 1999 the RTA was -1.36 and -3.25 in 1995. A positive trend was observed from 1995 to 1999.
- Fertiliser - increasingly competitive. The RTA value was 1.46 in 1999 and 1.25 in 1995. South African manufacturers were very competitive internationally. Fertiliser manufacturers had a positive trend in international competitiveness in the long and short run.
- Pesticides - marginal but with a negative trend. This was depicted by the RTA value of -0.25 in 1999 and 0.38 in 1995, which meant that manufactures in the sector were relatively marginal. They had a positive trend in competitiveness in the long run but followed a negative trend in the short run (Esterhuizen, Van Rooyen, Van Zyl, 2000:12).

3.3.1.4 *A study on the Wine Industry*

Van Rooyen and Esterhuizen, in 2006, determined the competitiveness status of the wine industry. Again Balassa's (1989) method of determining the RTA and Porter's (1998) method for determining the factors of competitiveness was applied. The scale of classification was RTA >1 meaning competitive advantage, and RTA < 1 meaning competitive disadvantage. The results revealed that, starting from 2000 to 2007, the RTA has been increasing and greater than 1. In 2000 the RTA was 4.02 and in 2007 it was 6.81. This means that during that period the wine industry was increasingly competitive internationally and was also sustainable (2006: 3).

With regard to the determinants of competitiveness described by Porter (1998), a scale of 1 to 3 was used to classify the determinants in terms of constraining or enhancing the competitiveness success of the wine industry. The value 1 indicated constraining, 2 = moderate effect, and 3= constraining. The factor conditions, demand conditions and related and supporting industries conditions had a moderate effect on the wine industry's competitiveness, since the corresponding mean score of 2 was achieved. This meant that the attributes could do with improvement to an enhancing state. Although the firm's strategy, structure and rivalry conditions had a positive impact in enhancing the wine industry's competitiveness success, with a mean score of 3, the government support conditions and chance conditions were negatively impacting the competitiveness success of the wine industry, as indicated by the mean score of 1.5.

The drivers for this successful industry were listed as a result of: product quality improvement and product integrity; the roll-out of a unique brand referred to as ''Brand SA''; sharper market segment focus; cost effective technology and business systems; social development and economic transformation; driving the focus of the SA wines in the global arena; international trade agreements and successful and proactive government interaction to establish and enhancing business and social environment.

3.3.1.5 A study on the Flower Industry

In 1999, Esterhuizen and van Rooyen carried out a competitiveness study for the South African flower industry, and again applied Balassa's (1989) method of RTA. Using the same classification scale that values greater than 1 (RTA > 1) they indicated positive competitive advantage and values less than 1 (RTA < 1) and indicated comparative disadvantage. The RTA for this industry was 1.124, which meant that the flower industry had comparative advantage, which was reported to be as a result of the cut foliage industry, which had a higher comparative advantage at that time.

Esterhuizen and Van Rooyen (1999:98) also identified the factors that had a negative influence on the flower industry's competiveness, particularly strong negative effects, according to farmers they interviewed, being labour problems, limited affordable credit and unfavourable climate, amongst others.

3.3.1.6 A study on the Deciduous fruit canning Industry

Madima (2010) carried out a study of the deciduous fruit canning industry of South Africa, employing both Balassa's (1989) and Porter's (1998) methodologies to evaluate the competitiveness of the different players in the supply chain, namely: canning fruit producers and farmers, can manufacturers, fruit canners, labour union in the fruit canning industry and the fruit canning industry association. The purpose of the study was to investigate the competitiveness of the South African deciduous fruit canning industry in the global fruit canned market. it was discovered that the industry was internationally competitive, particularly in such areas as labour costs, product quality, efficient production technology and world class regulatory standards. Madima (2010) argued that the South African fruit canning industry had been negatively affected by European Union subsidies.

3.4 A REVIEW OF OTHER STUDIES ON COMPETITIVENESS IN THE AGRICULURAL SECTOR

This section discusses briefly two studies on competitiveness that has been carried out in other countries, namely Zambia and Rwanda. The methodology of how competitiveness was measured in the two studies is described briefly as well as the results obtained in each respective section.

3.4.1 The Competitiveness of the Agricultural Sector in Rwanda

Esterhuizen and Van Rooyen carried out another study of competitiveness for the Rwandan agricultural sector in 2001, again using Balassa's (1989) method for

calculating the RTA. Table 3.8 (below) depicts the competitive index for the sector. Their analysis revealed that the food and agricultural industry was positive relative to the rest of the industries in Rwanda. There was a large decrease between 1993 and 1994, a slight recovery in 1995, another decrease in 1996 and an increase thereafter. The genocide that occurred between 1993 and 1996 was regarded as the main contributor to this. However, Rwanda was regarded as competitive in the production and trading of beans, coffee, tea, pyrethrum, hides and frozen vegetables. Sorghum, wheat, tobacco, milk and chicken industries were marginally competitive, while maize, sugar and beer had a competitive disadvantage (Esterhuizen & Van Rooyen, 2000:284).

Table 3.8: The competitiveness status of Rwanda's agricultural industry

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Index	7.90	7.94	7.60	5.14	-1.92	2.01	0.02	3.81	5.62	6.35

Source: Esterhuizen and Van Rooyen, 2000:284

Esterhuizen and Van Rooyen (2000:284) went on to identify the products that were winners and losers in the sector. Table 3.9 (below) depicts the competitiveness of agricultural production and value adding in Rwanda over time. A matrix was used to present the results. Beans, coffee, tea, frozen vegetables, hides and pyrethrum were winners, meaning value addition to these commodities was worth it.

Table 3.9: The competitiveness of selected agricultural industries in Rwanda

Competitive (+)	Marginal (=)	Not Competitive (-)
Beans; Coffee; Tea; Pyrethrum; Hides; vegetable frozen	Wheat; Sorghum; Chicken; Meat; Milk; Tobacco	Maize; Sugar; Beer of barley

Source: Esterhuizen and Van Rooyen, 2000:284

3.4.2 Country Competitiveness Analysis for Zambia

A study carried out by Keyser (2007) described the country competitiveness analysis for Zambia, which was undertaken as part of the Competitive Commercial Agriculture in Africa (CCAA). The primary objective of the CCAA study was to explore the feasibility of restoring competitiveness and growth in selected African countries by identifying key commodities, production systems, and marketing arrangements that were capable of underpinning rapid development of commercial agriculture. The analysis covered seven important commodities and three farm sectors ranging from individual family farms to large-scale commercial enterprises. The commodities were cassava, cattle, cotton, maize, rice, soybeans, and sugar (Keyser, 2007:2). The report identified products that were competitive or stood good prospects of becoming competitive in domestic, regional, or global markets, notably sugar, cotton and soybeans. Keyser (2007) argues that in so doing, the analysis sought to identify weak links in the value chain that are the main obstacles to achieving competitiveness and to summarize the qualitative and quantitative factors that shape the actual and potential opportunities for trade of each commodity analyzed. An overview of the current performance issues, opportunities, and constraints in Zambian agriculture assisted Keyser (2007) in the analysis to achieve the objectives of his study.

Keyser's (2007) methodology consisted of both qualitative and quantitative data. From the author's qualitative perspective, the approach was to try and identify major policies, institutional, and organizational factors that affect costs and shape Zambia's trading relations. Whilst, on the quantitative side, the analysis was prepared using a methodology designed for the CCAA study to calculate a set of standard indicators and benchmark prices. The methodology was built around a set of seven interlinked excel templates that calculate standard indicators of total costs and private profitability at each major stage in the production and marketing cycle. By filling in the elements of each template for individual commodities and farm systems, the approach offers a practical way of establishing benchmark

prices for each value chain that can be compared with world standards as measures of international competitiveness. The costs were measured in terms of Domestic Value Added (DVA) and Shipment Value (SV), which constitute the main value chain indicators. The author further argued that for cross-country comparisons, the final calculation of SV for each traded commodity is the most comprehensive measure of actual and potential competitiveness. For a given product or commodity, international competitiveness is determined by comparing SV at the final destination (sale point) with a benchmark parity price (usually a domestic free on board price for exports or cargo, insurance and freight (cif) price for import substitutes) Keyser (2007).

The methodology designed for the CCAA study helps to identify specific areas where domestic costs could most effectively be reduced to improve performance. In that case, if some cost accounts for a large share of total value, or is significantly higher than the international benchmark, then new policies or investments focused on reducing that cost would likely be an effective strategy for enhanced competitiveness, Keyser (2007).

Keyser's (2007) analysis identified high transportation costs as restricting the opportunities for agriculture trade and investment. In this regard Keyser (2007: ii) stated that most of Zambia's imports are made up of farm products, hence increasing production costs at every stage of a value chain. Keyser (2007:ii) gave an example of international freight, which accounted for 30% of the value of fertiliser. This serves as evidence that high transportation cost are constraining competitiveness, therefore any competitiveness strategy should take this into consideration and account for it. Another point raised by Keyser (2007: ii) is that when developing a competitiveness strategy one should consider strategies that include increasing product volume or production in order to increase better economies of scale and transaction costs when sourcing raw materials.

3.5 SUMMARY

In this chapter competitiveness theory, with particular reference to the different methods for measuring or determining competitiveness as well as indicators of competitiveness, has been described, namely: Balassa's RCA, Porter's (1998) methodology, GCI and FDI. More emphasis is on Porter's (1998) theory as it is the base of analysis for this study. Therefore, understanding Porter's (1998) theory of the determinants of competitive advantage is fundamental for the application of the method to the results of the study in Chapter 4. Porter's (1998) theory will assist in identifying the strength and weakness of the agribusiness sector of Swaziland. Following which, strategies to enhance the sector would be identified.

Another important section of this chapter has been the description of the different previous research studies, which provide information on how competitiveness has been measured and determined in different industries or sectors in other countries. This allows the researcher to make comparisons with the obtained results of this investigation during discussions of the results.

The following chapter describes the methodology that has been employed in this investigation and provides the framework for how the competitiveness of the agribusiness sector of Swaziland is determined.

CHAPTER FOUR

SURVEY METHODOLOGY

4.1 INTRODUCTION

In Chapter 2 the measures of competitiveness were explained, with particular reference to Porter's (1998) theory which has been used as the base of this study. The objective of this chapter is to describe the methodology used to analyse the competitiveness of the agribusiness sector of Swaziland. The step-by-step descriptions from the type of the investigation, to sampling procedure, data collection process and analysis, are presented below. A simple framework for the agribusiness competitiveness analysis of Swaziland concludes the chapter.

4.2 INQUIRY STRATEGY

The main aim of the research was to analyse the competitiveness of the agribusiness sector of Swaziland. This was achieved by determining the key factors that promote competitiveness success as well as the constraining factors that impact negatively on competitiveness. Porter's (1998) determinants of competitiveness were used as a base for the analysis, as shown in the results section in Chapter 4. This is supported by Esterhuizen (2006), who stated that the theory of the determinants of competitiveness described by Porter (1998) is an effort to identify the many factors that influence competitiveness and to show that they relate to each other and to the economic performance of the country's industries in a global economy.

Given the above, it is clear that the research has a descriptive design that involves institutional analysis at firm level, whereby individual agribusinesses were the main target. The executive opinions were gathered using a business survey referred to as the Agribusiness Executive Survey (AES). A survey strategy, according to Saunders, Lewis and Thornhill (2007:138), is popular and common in

business and management research, and it is frequently used to answer the who, what, where, how much, and how many questions. It is used in descriptive research.

The survey strategy was deemed appropriate for this study as it allowed the collection of a large amount of data from a sizeable population, obtained through the use of a questionnaire administered to a sample (Saunders *et al*., 2007:138). Therefore, a questionnaire was self administered as a tool to capture informed judgments of decision-makers and business leaders on issues that influence their competitiveness success as agribusiness firms.

The information gathered from the study is applies both qualitative[2] and quantitative[3] methods. Porter's (1998) theory provides a more qualitative description of factors determining competitive success of an industry. This study involved interviewing executive agribusiness leaders to acquire their opinions on the factors that influence competitiveness success using a questionnaire that was qualitatively designed. The In this study the data collected was analysed quantitatively since it was coded and analysed statistically and presented in chapter 4. Both methods (quantitative and qualitative) when combined result in a study stronger than either of the methods used individually (Saunders *et al.*, 2007:145).

However, a limitation of using such a survey strategy is that it is time-consuming and progress can be delayed by the researcher having to depend on other people (respondents) for information (Saunders *et al.*, 2007:139). Such was the case with this investigation since it targeted executives or decision-makers who would often

[2] Qualitative methods are any data collection techniques (such as interview) or data analysis procedures (such as categorising data) that generate or use non-numerical data.

[3] Quantitative method is used predominantly as a synonym for any data collection technique (questionnaire) or data analysis procedure (graphs or statistics) that generates or uses numerical data (Saunders *et al*., 2007:138).

either cancel or postpone an appointment for the interview because of their busy schedules and other reasons beyond the researcher's control.

4.3. RESEARCH DESIGN

The following are appropriate descriptors that best describe the broad research design of the study:

•*Empirical research* – The study is classified as an empirical study since the researcher collected and analyzed primary data related to it.

•*Basic (Pure/Fundamental) research* – The research was undertaken purely to understand the competitiveness of the agribusiness sector in Swaziland, specifically the key promoting and constraining factors influencing competitiveness success. Porter's (1998) theory of competitive advantage was used as a base for the analysis. However, the results from the investigation are not meant to solve directly a real-life organizational problem or inform managerial decision-making, but for only academic purposes.

•*Descriptive research* – The goal of descriptive research is to determine the nature of how things are and describe one or more characteristics of a fairly large population (Leedy & Ormrod, 2005:198). The study is therefore aimed at providing an in-depth description of the competitiveness of the agribusiness sector of SD. An agribusiness executive survey was conducted to acquire executive opinions from agribusiness firms about the factors that influence competitiveness success. Therefore, this research design is applicable.

•*Primary data* – Primary data refers to data that is collected specifically for a research project being undertaken (Saunders *et al*., 2007:607). In this study, the researcher collected empirical data and the information obtained assisted in addressing the research objectives of the study.

•*Numeric (quantitative) and textual (qualitative) data* – The research involved both qualitative and quantitative data. The use of Porter's (1998) theory and data from the AES provided both types of data.

4.4 SAMPLING

The focus of the study is on perceptional analysis at institutional firm level; hence the agribusiness firms in Swaziland are the units of analysis. Specifically, the firms involved in the processing and manufacturing industries of agribusiness were the targeted group. The study was interested in opinions from chief executive officers, managing directors, or managers or any executive decision-maker of the agribusiness firms. Employees were not used as sources of data since they do not make strategic decisions in the firms.

A list of all registered companies in Swaziland was obtained from the Swaziland Statistics Office. Based on the definition of agribusiness presented above, a list of agribusiness companies that were processing or manufacturing was selected. A total of 30 companies were obtained and since 30 is a small sample size, all the agribusiness firms formed part of the sample. Table 4.1 depicts the 30 agribusiness companies categorised under industries to which they belong. However, due to circumstances beyond the researchers control, only half (15) the agribusiness companies were interviewed, one reason being that since the targeted units were executives they often had busy schedules and appointment were postponed or cancelled. Some of the executives were not interested in participating in the study and were therefore omitted. The industries that were represented the participating firms included: sugar, dairy, maize, textile, livestock and poultry, animal feed and other food industries.

Table 4.1: The industries and companies in the Swaziland agribusiness sector

INDUSTRY	COMPANY NAME
Sugar	*Ubombo sugar* *RSSC*
Citrus	*Swazi canners*
Dairy	*Dalcrue* *Valley farm* *Parmalat*
Livestock and Poultry	*SMI* *SPP*
Animal Feed	*Crane feed* *Feed masters* *Arrow Feeds*
Textile	*Spintex* *Tuntex* *Fashion International* *Zang yong* *Tex ray*
Pulp	*Swazi Plantation* *Woodmaster furniture* *Timber craft* *SD trustees and timber products* *Peak Timbers* *Shiselweni Forest Company*
Maize	*Ngwane mills* *Universal mills*
Other Food Industries	*Swaziland Oil mill Industries* *Swazi secrets* *Basolile* *Eswatini Kitchen* *Omnia fertilisers*

4.5 DATA COLLECTION

A self-administered [4]questionnaire (see appendix A) was used to interview the agribusiness executives. It contained 68 closed ended questions and one open ended question. Porter's (1998) theory for the determinant of competitive advantage was used as a base in designing the questionnaire in order to capture the constraining and enhancing factors influencing competitiveness success. The

[4] The questionnaire was adapted from an ABC questionnaire, which was used to carry put a similar study in South Africa.

questionnaire was divided into six sections, which defined the attributes (factor, demand, related and supporting industries, firm's strategy and rivalry, government and chance conditions) of comparative advantage. Most of the questions or statements in the questionnaire requested the respondent to pick (circle) one from a list of responses according to their opinion. For example, the questions took the following format:

Example of questions in the questionnaire

1. Demand Conditions

Competition in the local market is:

Very limited	1	2	3	4	5	Very intense

Picking 1 means you agree wholeheartedly with the statement on the left-hand side.
Picking 2 means you agree somewhat with the statement on the left-hand side.
Picking 3 means you are indifferent between the two statements.
Picking 4 means you agree somewhat with the statement on the right-hand side.
Picking 5 means you agree wholeheartedly with the statement on the right-hand side.

With the open-ended question, the executives were required to make any recommendations they felt could be implemented to enhance the competitive success of the agribusiness sector of Swaziland (see Appendix A). After each interview, the questionnaire was checked to determine if all questions had responses, ensuring unanswered questions would be addressed at that time and so guaranteeing that during data entry no gaps would affect the data analysis.

4.5.1 QUESTIONNAIRE DISTRIBUTION

Data was collected through a face-to-face interview with the executives of the agribusiness firms. This data collection method was deemed appropriate in this study since it was a small sample size of 30 companies. The fact that the study had not been carried out before also allowed a face-to-face briefing of the executives about the research, which was deemed essential in ensuring their full cooperation.

To ensure understanding and cooperation during the interview process the agribusiness executives were first given a consent letter, which they had to read. When they were comfortable and willing to participate they indicated by signing the letter, which was then returned to the researcher for safekeeping. The questionnaire was then presented to the respondent to answer, designed to take between 15 to 20 minutes to complete.

4.5.2 Pre-testing the Questionnaire

As stated above, the questionnaire had been adapted from the ABC agribusiness competitiveness survey questionnaire from South Africa, hence its reliability and validity had been proven. However, it was considered necessary that it be tested in Swaziland before the actual data collection process, thus assisting in making it more applicable. Three firms involved with the production of agriculture primary goods were used for this exercise, and two stages applied in the pre-testing of the questionnaire:

Stage one: The supervisor was to comment on the questionnaire.

Stage two: After comments from the supervisor had been inputted, interviews were scheduled with respondents. The following questions were asked at the end of the interview:

i. Length of the questionnaire (time taken to complete the interview)

ii. Clarity of the questions (easy/complex to understand)
iii. Range for company turn-over (whether it is within the country's profile or applicable to the agribusiness firms (minimum/maximum)
iv. Any comments or suggestions that could help improve the tool.

After the comments from the respondents had been incorporated, the questionnaire was considered ready for the targeted respondents.

4.6 DATA ANALYSIS

The closed ended questions were coded with numbers in the questionnaire for ease of analysis, then quantitatively analysed using Statistical Package of Social Science (SPPS). The data was then presented as mean and standard deviation. The open ended responses were also grouped during data quality control so that they may be summarised for analysis, in frequencies and percentages. In the study the determinants of competitiveness are rated to have either constraining (1-2), moderate (3) or enhancing (4-5) impact on competitiveness of the agribusiness sector in Swaziland. All the results are presented in tableau and figure format in Chapter four (4). The responses were coded and captured electronically and stored on a compact disc for future reference. Figure 4.1 (below) presents the summary or a framework of how the competitiveness of the agribusiness sector of Swaziland has been analysed. Briefly, it includes the methodology applied to determine the objectives of the study.

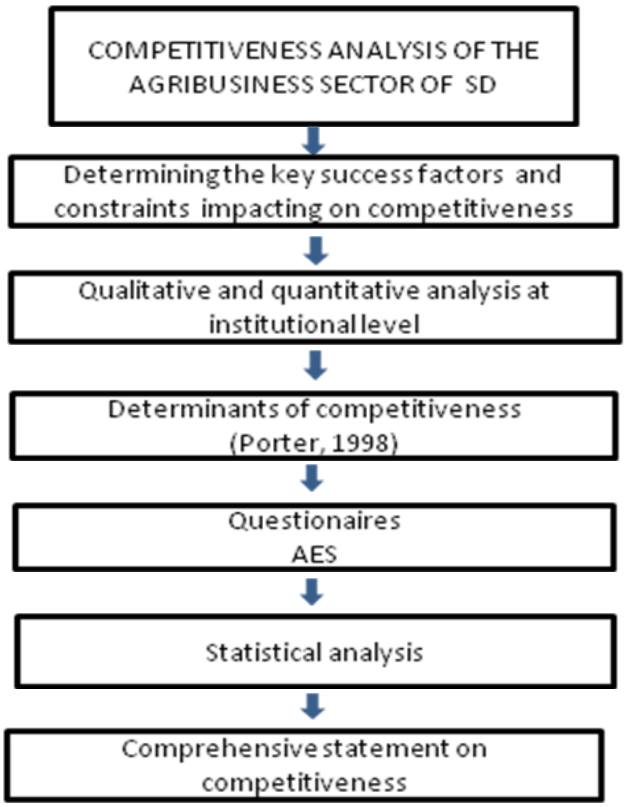

Figure 4.1: A framework for analysing the competitiveness of the agribusiness sector of Swaziland

4.7 QUALITY AND RIGOUR OF THE RESEARCH DESIGN

The specific sources of bias or error that could influence a study depend on the inquiry strategy, data collection methods used, the sampling method applied, the characteristics of the participants, and the context in which the study is conducted, (Kotzé, 2010:13). The face-to-face interview ensured that there were no unanswered questions in the questionnaire, as the interviewer was available to reassure interviewees and clarify any ambiguities. This also minimised bias.

As stated above, the data collection tool (questionnaire) was adapted from the ABC competitiveness executive survey conducted for South African agribusinesses every second year, and so the tool is reliable and valid, having produced valuable data also used in strategic planning for that country. Moreover, a piloting exercise was carried out to ensure that the tool was applicable to the sector in Swaziland.

4.8 CONCLUSION

The chapter has described the methodology used to carry out this investigation. It provided justification or supporting statements for the choice of methodology and discussed the questionnaire used as the main data collection instrument.

The following chapter is aimed at presenting the results obtained from the investigation, and an explanation of them.

CHAPTER FIVE

THE DETERMINANTS OF COMPETITIVENESS OF THE AGRIBUSINESS SECTOR IN SWAZILAND

5.1 INTRODUCTION

According to Petit and Gnaegy (1998:2), the manner in which businesses combine their resources, the distribution channels through which they choose to get their products to the consumers, and the use of strategic alliances with government, customers and suppliers, all contribute to making an intensely more competitive world today. To be competitive is fundamental for long-term endurance in the agribusiness sector, therefore, analysing and understanding the sector assists in identifying its strengths and weaknesses. Understanding the strength and weaknesses would allow development of strategies that could be manipulated to enhance competitiveness in a sustainable manner.

This chapter presents the determinants of competitiveness of the agribusiness sector of Swaziland. First, a brief description of the firms that participated in the study is provided. This is followed by the application of the Porter's (1998) analysis. The constraining and enhancing factors to competitiveness success are also discussed. Finally, a summary is presented.

5.2 DESCRIPTION OF THE AGRIBUSINESS THAT PARTICIPATED IN THE STUDY

This section of the chapter illustrates the agribusiness firms that participated in the study. It is worth mentioning that the results discussed in this paper are those that are significantly outstanding, i.e. that have a high and low mean figure as far as that particular question or condition is concerned.

Table 5.1 (below) depicts the major business operations of the agribusiness firms that participated. It is important to note that most are involved in more than one business operation; hence the percentages presented in the table exceed 100. All (100%) interviewed agribusinesses were involved in manufacturing or processing and/or adding value to their products, which shows that it was indeed the right target group for this research. Beside manufacturing or processing, about 66.7% of the agribusiness companies were also involved in product marketing and sales, whilst about 60% were also exporting their products, such as the sugar, textile, livestock, animal feed and other food industries (chilli, honey, amarula, sunflower oil). Technical services provision was operated by 13.3% of the agribusiness firms. The technical services were offered to the customers, who in some instance were also farmers and/or individuals dealing with that particular company.

Table 5.1: The major business operational focus for the participants

Business Operations	Frequency	Percentage (%)
Input suppliers (seeds, feed, fertilizer, etc)	4	26.7
Processing/manufacturing/value adding	15	100.0
Product marketing and sales	10	66.7
Retail/distributor	5	33.3
Exporting	9	60.0
Technical service provider	2	13.3
Product handling, storage	4	26.7

Source: own calculation, 2010/11 survey

The agribusinesses turnover per annum for 2009 for the agribusinesses that participated ranged between a minimum of SZL500, 000 to a maximum of over SZL1 billion (> 1 billion). The year 2009 was the base year for this study; therefore all the information required from the executives in the questionnaire was in reference to that year. Twenty percent of the agribusinesses that participated had a turnover SZL500, 000 to SZL1 million. Another 20% had a turnover of SZL120 to SZL150 million, and so had a turnover of SZL60-90 million. Four companies had over 6% ,but with different turnover range, mainly; SZL1-10 million, SZL90-120

million, SZL150-180 million and over SZL1 billion. Figure 5.1 (below) presents the number of agribusiness firms that were interviewed.

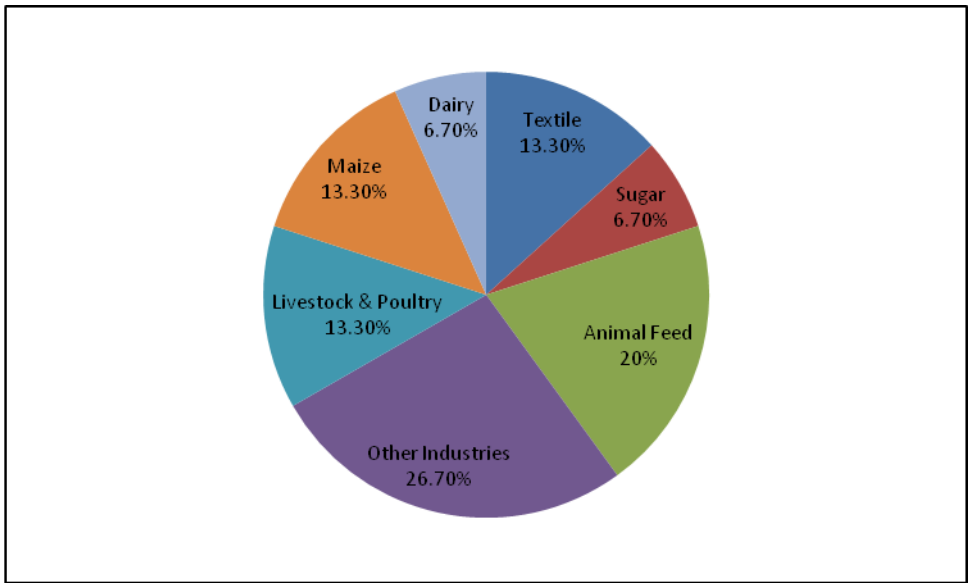

Figure 5.1: An industry distribution of agribusinesses interviewed
Source: Own calculation, survey 2011

5.3 THE APPLICATION OF THE PORTER ANALYSIS

As stated in the previous chapters, with particular reference to Chapter 2, Porter's (1998) theory describes competitiveness in terms of several conditions, which he describes as the determinants of competitiveness: i) factor conditions, ii) demand conditions, iii) related and supporting industries conditions, iv) firm strategy, structure and rivalry, v) government support condition, and vi) chance conditions. Porter's (1998) theory describes key success factors that established competitive advantage and constraints that impacted negatively on competitiveness with regard to the agribusiness sector in Swaziland. This section illustrates the descriptive analysis for these six determinants of competitiveness with regard to the agribusiness sector of Swaziland.

Factor Conditions: Factor conditions refer to the quality of production factors, natural resources, level of production cost of labour, fuel, pesticides, machinery,

and infrastructure necessary to compete in a given industry (Madima, 2009:61). Production factors such as labour, land, capital and infrastructure determine the flow of trade (Esterhuizen, 2006:223).

Table 5.2 (below) depicts the descriptive statistics for production factor conditions. Most of the factor conditions are rated by the agribusinesses in Swaziland to be constraining competitiveness, as most are rated with a mean score below 3. The factors most contributing factors are: shortage of professional labour, with a mean rate of 1.63. The respondents stated that they are then forced to spend more to acquiring and retaining this kind of labour, since often they have to source them from neighbouring countries; There is also a shortage of good quality technology, which becomes the second leading constraining factor condition to competitiveness and so is its associated cost which is high; Another remarkable factor condition that is constraining the agribusiness sector is the cost of using infrastructure in SD (mean rate = 2.13), which includes electricity, telecommunication and roads. The Swaziland business environment is characterised amongst other factors by single suppliers of key production inputs, namely electricity fixed line telecommunication, water and these are Swaziland Electricity Company (SEC), Swaziland Post and Telecommunication (SPTC) and the Swaziland Water Service Cooperation (SWSC). The monopoly being enjoyed by these suppliers affects the costs of doing business in Swaziland because of lack of competition.

However, on a positive note the most enhancing factor condition in competitiveness of the agribusiness sector of Swaziland, with a mean score of 4, is the availability of water for industrial and/or production processes. The sector is benefiting from the Lower Usuthu basin, which is an initiative of the Swaziland Water Development Programme (SWADE). The initiative is meant to encourage irrigation to all producers and improve production. Another enhancing factor condition, with a moderate effect on the sector, is the cost associated with employing unskilled and semi-skilled labour. This is indicated by the mean score

of 3.94. The unskilled and semi-skilled labourers are readily available locally, hence employing them is affordable.

As a whole, factor conditions as a determinant of competitiveness of the agribusiness sector of Swaziland have a constraining impact, with an overall mean score of 2.72.

Table 5.2: Descriptive statistics for factor conditions

Factor Conditions	Mean	Standard Deviation
Unskilled labour in Swaziland		
-Availability	3.81	1.33
-Quality	2.88	1.09
-Cost	3.94	1.00
Skilled labour in Swaziland		
-Availability	2.38	1.15
-Quality	2.94	0.85
-Cost	3.00	1.03
Professional labour in Swaziland		
-Availability	1.63	0.70
-Quality	2.50	1.32
-Cost	2.06	0.93
Admin Cost	2.56	0.96
Infrastructure in Swaziland		
-State	2.75	1.13
-Cost	2.13	1.15
Quality Technology in Swaziland		
-Availability	2.00	0.73
-Cost	2.00	1.10
Water in Swaziland		
-Availability	4.00	1.03
-Cost	2.88	1.50
Overall mean	**2.72**	

Source: Own calculations, survey 2010/11

Key: 1= Constraint 3= Moderate 5=Enhancement

Demand Conditions: The second determinant of competitive advantage described by Porter (1998) is demand conditions, illustrated in Table 5.3 below. Most of the conditions are rated by the agribusinesses in Swaziland to have contributed negatively to the sector's competitiveness. The respondents consider

the local market size too small and slow for investment in new technology. This is illustrated by the mean score of 1.88 and 2, respectively, as shown in the table below. The size of the market affects productivity since larger markets allow firms to exploit economies of scale. This finding is in line with the global competitiveness report by the World Economic Forum (WEF) that the Swaziland local market size is small and was ranked number 132 (out of 139 countries), and a global competitiveness index (GCI) score of 1.91 (where 1= low and 7=high) (WEF, 2010/11:18-21). However, the respondents believed that the changing consumer trends in Swaziland have a moderate impact on competitiveness in terms of being an opportunity for their business. This is indicated by the mean rate of 3.38.

As a whole, demand conditions have a mean score of 2.64, which indicates that the influence is negative to the competitiveness of the sector. Therefore, it is suggested that the agribusinesses involved need to embark on a customer orientation strategy in order to improve the demand conditions. This follows an argument made by Johnson *et al. (*2009:86*)*, that providing superior customer value is key for maximizing long-term profit and sustainable competitive advantage. The strategy would assist agribusinesses in understating their customers better, thereby supplying exactly what, how, when and to whom the products to be delivered.

Table 5.3: Descriptive statistics for demand conditions

Demand Conditions	Mean	Standard Deviation
Local buyers		
-Sophistication	2.94	1.29
-Adoption of products	2.81	1.28
-Internationalization	2.69	1.08
-Concern on ethics	2.50	1.32
-Concern on environmentally friendly products	2.94	1.57
Local market		
-Size	1.88	1.09
-Growth	2.00	1.10
Consumer trends	3.38	1.09
Overall mean	**2.64**	

Source: Own calculations, survey 2010/11

Key: 1= Constraint 3= Moderate 5=Enhancement

Related and Supporting Industry Conditions: Having access to related and supporting industries that are internationally competitive is fundamental to a firm's competitiveness success, as well as for the commencement and continuous operation of the business (Madima, 2009: 74). For instance, to start a business one needs capital, which could be credit from the bank, as well as inputs, and hence suppliers. Distribution of products from one place to another is necessary in order to be accessible to the customer at the right time and place and in the right condition, hence one requires transport. Finally, producers, processors and manufacturers, middlemen, marketers, distributors and customers need to communicate with one another to be able to trade the required goods or services.

Table 5.4 (below) depicts the descriptive statistics for related and supporting industries, most of the conditions for which are rated by the agribusinesses as impacting negatively. To be specific, and starting with a condition with the lowest means score, these are cost of inputs/supplies, inefficiency of local suppliers, the cost of acquiring credit, non-existence of scientific research institutions, cost of transport, availability of finance, and efficiency of electricity. This is evident by the respective mean scores presented in Table 5.4. It was gathered from the executives that the cost of fuel is the reason behind the high input and supply costs, and for the fact that Swaziland imports most of its input supplies,

particularly machinery and chemicals. In addition to that, acquiring credit in Swaziland is impacting negatively on the sector and is shown by the Global Competitiveness Report (2010/11:457), under the financial market development section in which Swaziland was ranked number 68 out of 139 countries, with a score of 2.8 out of 7. Since credit is a crucial input for increasing agricultural production and productivity, it is therefore essential that the government of Swaziland supports or develops strategies or initiatives that will improve the credit situation to benefit the agribusinesses.

As a whole, the related and supporting industry conditions have a mean score of 2.29, which means they are constraining competitiveness of the agribusiness sector of Swaziland.

Table 5.4: Descriptive statistics for related and supporting industry conditions

Supporting Industry Conditions	Mean	Standard Deviation
Credit/Finance		
-Availability	2.19	1.22
-Cost	2.00	1.10
Cost of transport	2.19	0.98
Cost of supplies/inputs	1.69	0.70
Financial institutions	2.63	1.09
Non existence of scientific research institutions	2.06	1.18
Transport companies	3.50	1.03
Local suppliers		
-Availability	2.50	1.32
-Efficiency	1.94	1.12
-Sustainability	2.31	1.14
Electricity supplier	2.25	1.34
Telecommunication and internet services	2.63	1.09
Specialized information tech	2.56	1.21
Quality and trustworthy	2.63	1.15
Training and skills development institutions	2.44	0.81
Regulatory standards	3.00	1.21
Overall mean	**2.29**	

Source: Own calculations, survey 2010/11
Key: 1= Constraint 3= Moderate 5=Enhancement

Firm Strategy, Structure and Rivalry Conditions: The way a firm is organised and the ways operations are carried out influences the business's success, and so

is the competition environment in which the business is located. Table 5.5 (below) illustrates the descriptive statistics for firm strategy, structure and rivalry conditions. Most of the firm strategy, structure and rivalry conditions have been considered by the respondents to have a moderate impact on the competitiveness on their businesses, as indicated by the mean score of 3. The enhancing condition to competitiveness success is the production processes utilised by the agribusiness firms. This is depicted by the mean score of 4.13.

As a whole, firm strategy, structure and rivalry conditions have a positive impact on competitiveness of the agribusiness sector. This means that Porter's fourth determinant is a key success factor that establishes competitive advantage to the agribusiness sector in Swaziland.

Table 5.5: Descriptive statistics for firm strategy, structure and rivalry conditions

Firm Strategy, Structure and Rivalry Conditions	Mean	Standard Deviation
Competition		
-Intensity	3.75	1.81
-Source	3.00	1.71
Entry of competitors	2.94	1.48
Substitutes	2.94	1.48
Spending on R&D	2.69	1.14
Relationship and Networking	3.19	1.22
Source of comparative advantage	3.44	1.17
Environmentally friendly products	3.81	1.15
Production processes	4.13	1.22
Business approach to human resource	3.88	0.89
Compensation of management	3.38	1.36
Overall mean	**3.38**	

Source: Own calculations, 2010/11 survey
Key: 1= Constraint 3= Moderate 5=Enhancement

Government Support Conditions: This is Porter's (1998) fifth determinant of competitive advantage. Government support conditions refer to policies, regulations (administration, environmental), taxing systems and etc. Government is in a strong position to enable a legal and regulatory environment in which potential entrepreneurs will find it easier to establish businesses and under which

existing entities will find it easier to grow (Ministry of Enterprise and Employment, 2005:34).

Table 5.6 depicts the government support conditions and their corresponding mean scores. Most of the conditions are rated to be impacting the agribusiness competitiveness success negatively. The most constraining factors are: competence and effectiveness of public personnel, administration regulations, trade policies, tax system and trust in politicians. This is concurred by the WEF that government bureaucracy, policy instability, taxing rates and taxing regulations are among the top 15 most problematic factors of doing business in Swaziland (WEF, 2010/11:182). Despite the constraining contributing factors, the respondents considered the impact of the environmental regulations and the competition law on the competitiveness of the agribusiness sector to be relatively moderate. As a whole, government support conditions have a negative impact on competitiveness success of the agribusiness sector of Swaziland, as indicated by an average score of 2.48.

Table 5.6: Descriptive statistics for government support conditions

Government Support Conditions	Mean	Standard Deviation
Public sector Personnel		
-Competence	1.69	0.87
-Effectiveness	1.88	0.89
Tax system	2.31	1.14
Regulations		
-Administration	2.19	1.05
-Environmental	3.00	1.51
-International trade	2.88	1.10
SD trade policy	2.31	1.14
Labour policy	2.81	1.38
Macro-economic policy	2.75	1.00
Competition law	3.38	1.25
Trust in politicians/government officials	2.06	1.18
Overall mean	**2.48**	

Source: Own calculations, survey 2011
Key: 1= Constraint 3= Moderate 5=Enhancement

Chance Conditions: According to Porter (1998:128), chance events are occurrences that have little to do with circumstances in a nation and are often largely outside the power of the firms to influence. They allow shifts in competitive positions, which means that they can be favourable for one firm and be a disadvantage to another.

Table 5.7 (below) presents the descriptive statistics analysis for chance conditions, all of which are rated to be impacting negatively on the sector, as indicated by the mean values below 3. The major constraining chance condition is HIV/AIDS, which affects the businesses through reduced productivity as a result of absenteeism, loss of skilled labour and increased unplanned costs of training and recruiting of new staff. Swaziland has the highest HIV/AIDS prevalence in the world with 26.1% and rated the last of the 139 countries (World Economic Forum, 2010/11:410).This indicates a serious impact on business and it is attested by the World Economic Forum.

With regard to the exchange rate, the current appreciation of the lilangeni against the US dollar and other major currencies has reduced profitability in export-oriented sectors, which might lead to a scaling down of operations and postponement of planned investments (African Economic Outlook, 2011). However, importing industries find it affordable to import goods and services with the current state of the local currency against the US dollar, euro and pound sterling. On another note, the local political environment is also constraining the agribusiness sector. The country persists to experience pressure to fully democratize. The past three years labour unions and its members (which are employees) have been organizing riots on the streets demanding, improved services, salary increment, reform of the governance system and etc. Moreover, political unrest in North Africa and the Middle East, and other countries that trade in crude oil, affects the price for fuel, which subsequently negatively affects the overall inputs costs for the agribusiness firms (African Economic Outlook, 2011).

Foreign currency regulations and crime are amongst the top 15 most problematic factors of doing business in Swaziland (WEF, 2010/11:182). This becomes a serious concern to the economy of Swaziland as the country becomes less attractive in terms of attracting foreign investments, when FDIs are essential for improving competitiveness.

Table 5.7: Descriptive statistics for chance conditions

Chance Conditions	Mean	Standard Deviation
Crime	2.56	1.26
HIV and AIDS	2.00	1.16
Exchange rate	2.44	1.16
Global political development	2.50	0.97
Local political environment	2.81	0.75
Overall mean	**2.46**	

Source: Own calculations, survey 2010/11
Key: 1= Constraint 3= Moderate 5=Enhancement

Figure 5.2 (below) depicts the determinants and the mean rate impact on competitiveness of the sector. From the figure it is evident that the sector is not internationally competitive but rather constraining the competitiveness of the agribusiness sector in Swaziland.

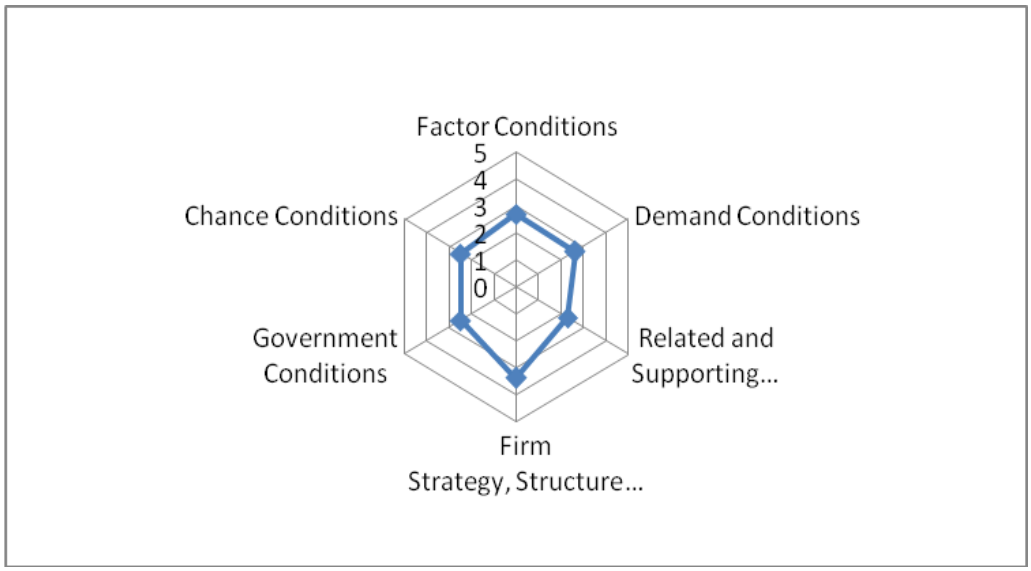

Figure 5.2: The status of the determinants of competitiveness in the Swaziland agribusiness sector

Source: Own data and calculations, 2011 survey
Key: 1= Constraint 3= Moderate 5=Enhancement

5.4 ANALYSIS OF CONSTRAINTS AND ENHANCEMENTS

According to Esterhuizen (2006:iv), competitiveness is dependent of certain key success and constraints factors which must be identified and managed, in order to sustain competitiveness.

5.4.1 Analysis of constraining factors for competitiveness success

The results obtained from the survey indicated that the agribusiness sector's competitiveness is mostly constrained by: Firstly, with the lowest mean score of 1.63 is obtaining professional labour. The respondents stated that it becomes very to acquired professional labour costly since it requires that kind of labour to be sourced from outside the country. The cost of supplies or inputs is the second constraining factor, with a mean score of 1.69. The executives emphasised fuel prices due to the increase of crude oil prices in the previous years (2008, 2009), saying it was a major contributor to high input prices and hence constrained competitiveness success. They reported that there was a point at which crude oil reached US$147 per barrel during that period. Another negative influence on competitiveness success is the small size of the economy and population (estimated at 1.2 million) (World Economic Forum, 2010/11:308). This limits investment opportunities in the country.

The competency of personnel in the public sector at national level is another constraining factor, with a mean score of 1.69. The public sector personnel are deemed to be less competent in comparison to those in the private sector. It is not only competent but also less effective and constraining service delivery at local (municipal) level, as indicated by the mean score of 1.88. This is in line with the WEF discovery, published in its annual report (African Competitiveness Report), WEF, 2010/11:182), that one of the most problematic factors for doing business in Swaziland is the inefficiency of government bureaucracy. This is not good for the reputation of the economy with regard to foreign direct investments (FDI). The FDI

inflows play an important role in improving competitiveness in African firms (both producers and suppliers), through advancing their managerial skills and technological capacities. Attracting growth-enhancing FDI helps raise competitiveness and achieving it requires that host countries create business environments in which foreign investors can boost the productivity of existing domestic activities and generate positive spill over (WEF, 2010/11:xiv).

Another factor that the agribusiness executives regarded as constraining was the local market size, which those interviewed regarded as too small in terms of obtaining economies of scale, consequently affecting business competitiveness success negatively. The local size market affects productivity and profitability since larger markets allow firms to exploit economies of scale. In the era of globalisation, international markets have become a substitute for domestic markets, especially for small countries like Swaziland (World Economic Forum, 2010/11:8). This is also in line with the global competitiveness report (WEF, 2010/11:9), which ranks Swaziland as 132 in the market size pillar out of 139 economies.

Tackling the constraining factors calls for all stakeholders' involvement, which consists of the agribusinesses, the suppliers of inputs, the government of Swaziland and all those that are related industries. The stakeholders need to liaise, collaborate and form good working relationships that will benefit all fairly. The specific recommended strategies for how this could be carried out are outlined in Chapter 7.

Table 5.8: The constraining factors for the Swaziland agribusiness sector

Factor Conditions	Mean	Standard Deviation
1. Availability of professional labour	1.63	0.60
2. Cost of supplies/inputs	1.69	0.70
3. Competency of personnel in public sector	1.69	0.87
4. Effectiveness of personnel in public sector	1.88	0.89
5. Market size	1.88	1.09
6. Quality of local primary inputs	1.94	1.12
7. Availability of quality technology	2.00	0.73
8. Cost of quality technology	2.00	1.10
9. Cost of financing	2.00	1.10
10. Speed of growth of market	2.00	1.10
11. HIV and AIDS	2.00	1.15
12. Non existence of scientific research institutions	2.06	1.18
13. Trust in politicians	2.06	1.18
14. Cost of using infrastructure	2.13	1.15
15. Cost of transport	2.19	0.98
16. Administration regulations	2.19	1.05
17. Credit facilities	2.19	1.22
18. Sufficiency and reliability of electricity supplier	2.25	1.34
19. Tax system	2.31	1.14
20. Swaziland's trade policy	2.31	1.14
21. Sustainability of local suppliers	2.31	1.24
Average	**2.03**	
1= Major constraint 5=Major enhancement		

Source: Own calculations, survey 2010/11

When comparing the top 5 constraining factors with those obtained by Esterhuizen (2006) in South Africa ; the only common constraining factor that of competence of personnel in the public sector. The other factors in the top 5 for the agribusiness sector in South Africa are; cost of crime, trust in the political systems and electricity supply (Esterhuizen & Van Rooyen, 2008: 10).

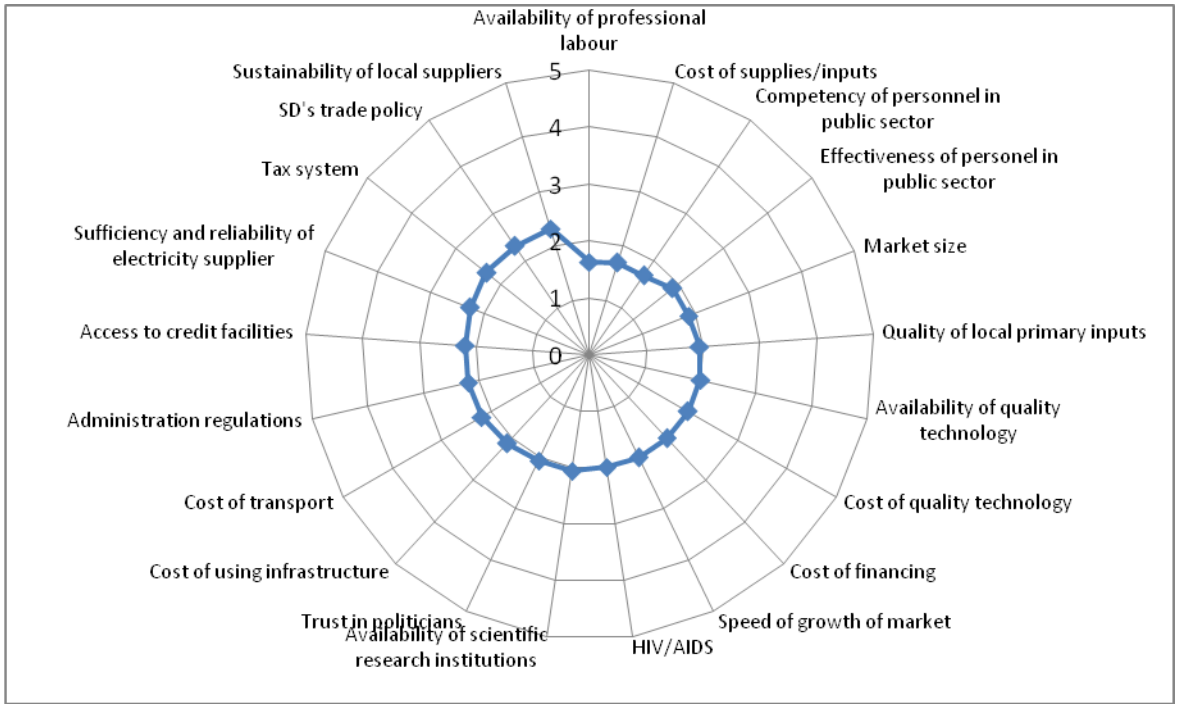

Figure 5.3: The constraining factors
Source: Own calculations, 2010/11 survey
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

5.4.2 Analysis of enhancing factors for competitiveness success

Table 5.9 (below) depicts the factors that the agribusiness executives of Swaziland deemed as enhancing their businesses comparative advantage. The top two enhancing factors to the agribusiness sector are: the strategy of selling affordable high quality products, as indicated by the highest mean score of 4.19; and availability of water for industrial or for production purposes, with a mean score of 4. The executives agreed with the statement that water for industrial and production is readily available for their businesses to use, which makes this a positive boost considering that water is an essential element in the agribusiness sector. The costs associated with unskilled or semi-skilled labour is considered to have a moderate effect towards enhancing the sector. They considered this kind of labour as fair and affordable, as indicated by the mean score of 3.94. Other factors with a moderate impact are: compensation of management; changes in consumer trends; relationships and networking. These enhancing factors need to be managed and be manipulated to improve the competitiveness of the sector as a whole.

Table 5.9: The enhancing factors for the Swaziland agribusiness sector

Factors Conditions	Mean	Standard Deviation
1. Affordable high quality products	4.19	1.17
2. Water for industrial purposes	4.00	1.03
3. Cost of unskilled/semi skilled labour	3.94	1.10
4. Approach (Investment) to human resources	3.88	0.89
5. Availability of unskilled/semi-skilled	3.81	1.33
6. Production processes	3.81	1.22
7. Transport companies/contractors	3.50	1.03
8. Nature of competitive advantage	3.44	1.46
9. Incentives in the compensation of management	3.38	1.36
10. Changing consumer trends	3.38	1.09
11. The influence of business relationships and networking	3.19	1.22
Average score	**3.68**	
1= Major constraint 5=Major enhancement		

Source: Own calculations, survey 2010/11

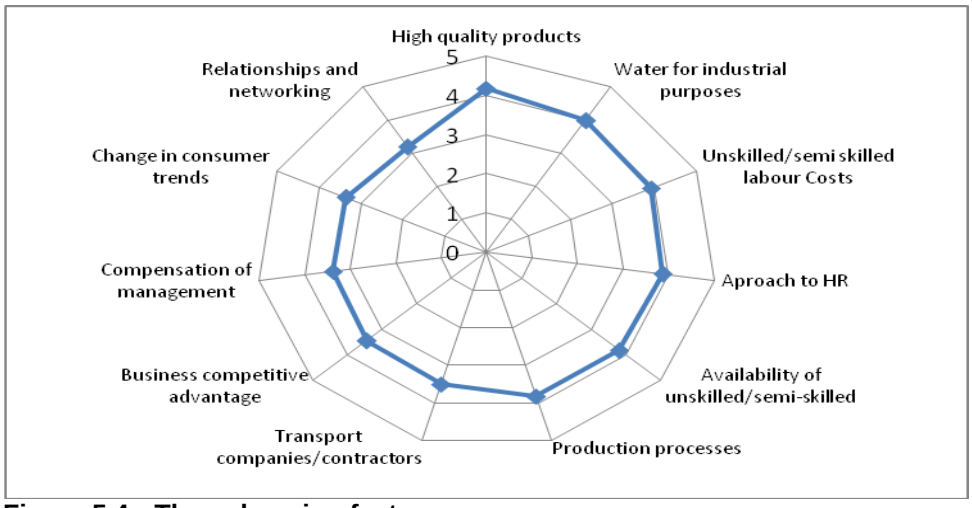

Figure 5.4: The enhancing factors
Source**:** Own calculations, 2010/11 survey
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

When comparing the top 5 enhancing factor to those obtained by the Esterhuizen (2006) for the agribusiness sector in South Africa; the only common factor is the strategy of investing in human resources. This strategy is observed as impacting the sectors in the two countries positively. The other top 5 enhancing factor for the South African agribusiness sector are: the intense competition in the local market, availability of unskilled labour, production of affordable high quality products and

continuous innovation (Esterhuizen & Van Rooyen, 2008: 12). Figure 5.5 indicates the factors and the mean value of their constraining and enhancing impact.

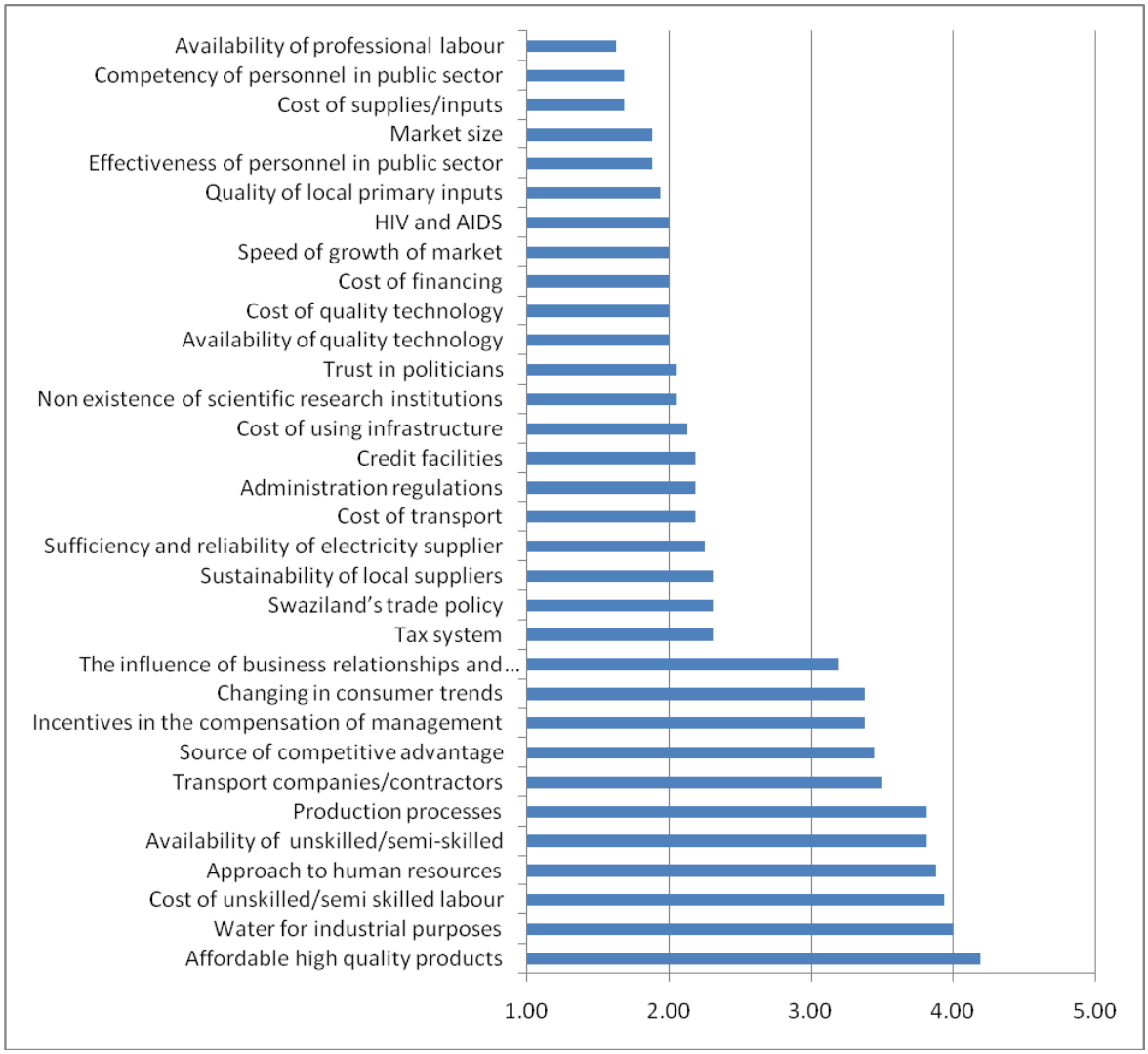

Figure 5.5: The factors constraining and enhancing the competitiveness of the agribusiness sector is Swaziland

Source: Own calculations, 2010/11 survey

NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

5.5 CONCLUSION

The above analysis reveals the reality of the competitiveness environment for the agribusiness sector in Swaziland, with particular reference to the interviewed agribusinesses. Most of the determinants were rated by the agribusiness executives to be influencing the competitiveness of the sector negatively. The only

determinant that has the ability to enhance competitiveness is the firm's strategy, structure and rivalry. This means that the agribusiness firms that participated in the study are well created, positioned, organised and managed appropriately in their respective industries.

Specifically, the most constraining factors to competitiveness of the agribusiness sector as perceived by the interviewed executives are: unavailability of professional labour, costs of inputs and supplies, incompetent and ineffective public sector personnel and small local market size. Given the daunting list of factors that constrain the agribusiness sector's competitiveness, agribusiness participants will need to prioritize and implement strategies to improve the situation to enhancing. In so doing a turnaround of these factors to a positive state could result in a positive spill over to the rest of the economy. On a positive note, the top three factors that have a positive influence to competitiveness of the agribusiness sector are: production of high quality affordable products, availability of water for production/processing purposes and the cost of unskilled/semiskilled labour. Moreover, the hypothesis of the study have been proved correct as the executives agreed that the local market size is small and the cost of inputs is indeed constraining the competitiveness of the agribusiness sector.

On another note, Porter's (1998) theory can also be used to determine the trends in the factors impacting on the competitiveness of an industry, if the analysis is made regularly. Therefore, it is important that a similar study be carried out again, so that this one acts as a base for comparison. This will allow an observation of the trends or the movement of the factors' ability to enhance competitiveness. It will indicate whether improvements in resource use, support from government and other industries, industry structure, local rivalry and consumer behaviour have occurred after a specific period. The study could be carried out every second year, like in other countries such as South Africa.

CHAPTER SIX

ANALYSING THE COMPETITIVENESS OF THE INDUSTRIES

6.1 INTRODUCTION

Competitiveness is achieved when individual companies within an industry are able to sell goods or services at a price and quality that compares at least as favorably as competitors. Competitiveness at industry level is therefore taken to be synonymous with the broad economic performance of the companies comprising that industry. At root, therefore, competitiveness should be viewed as being about economic efficiency or productivity (Economics International Division, 2002:4).

This chapter illustrates the analysis of the agribusiness industries with regard to the determinants of competitive advantage. The differences for each industry (in terms of the determinants of competitiveness) are explained. The industries have been presented in terms of the number of agribusiness firms interviewed, i.e., the industry with the highest number of interviewed firms is described first.

6.2 AGRIBUSINESSES GROUPED UNDER OTHER FOOD INDUSTRIES

Four agribusinesses were classified under “other food industries”: a manufacturer of marula fruits to produce human body lotions, body cream and other products; the processing of chilli pepper; the processing of honey and the manufacturer of sunflower cooking oil. Two of these firms had an annual turn-over of half a million to one million Emalangeni (SZL500,000-SZL1 million); one firm had an annual turn-over of above 1 but less than ten million (between SZL1-SZL10 million) and another firm had between 30 and 60 million Emalangeni (SZL30-SZL60million). Beside processing and adding value to commodities as the main business operation activity, these firms have other operational activities, such as product

marketing and sales, retailing, product handling, storage and exporting. The following section depicts the opinions of the executives with respect to the determinants of competitiveness.

The results in Figure 6.1 below indicate that government's administration and policies are not business friendly to these agribusinesses. This is illustrated by the overall mean rate of 1.75. All listed factors under government support are contributing to this and are constraining the competitiveness of these agribusinesses. According to Madima (2010:86), government administration systems and policies must enhance business profitability and competitiveness in a sustainable way. He further argues that the support that businesses receive from government through civil servants is considered a very important success-determining factor. However, in this case that's not happening, instead the agribusiness executives view the public personnel's competency as lower than the private sector and constraining service delivery.

These agribusinesses being in an industry where operations involve; primary inputs that require a lot of human labour (in terms of cultivating), exporting products and importing inputs, exposes the agribusinesses to major incidents such as crime, the impact of HIV/AIDS, influence of local and global political changes and foreign exchange. This is also illustrated in the table, where all the factors under chance conditions have a negative impact to the agribusiness competitiveness. Crime has negative influence on investor confidence (Madima, 2010:92). This means that business executives would be reluctant to expand operations or increase investment on the businesses or even attract other investors who would have provided goods and services that would have been beneficial to the agribusinesses in terms of competitiveness. The impact of HIV/AIDS on the agribusinesses includes increased absenteeism, loss of experienced and productive stuff, higher labour turn-over, decreased productivity and increased training costs.

Related and supporting industries conditions are also considered as not business friendly. This is explained by the overall mean rate of 2.13, indicating that this industry's competitiveness is constrained. The most contributing factors are; credit facilities, cost of finance, availability of specialised information technology, cost of supplies and etc.

The results in the figure below also indicate that the respondents viewed the influence of factor and demand conditions as negative to the industry's competitiveness. This is attested by the overall mean score of 2.59 and 2.28, respectively. Nevertheless, Porter's fourth determinant of competitive advantage in an industry has a moderate impact to this industry's competitiveness, as indicated by the overall mean rate of 3.5

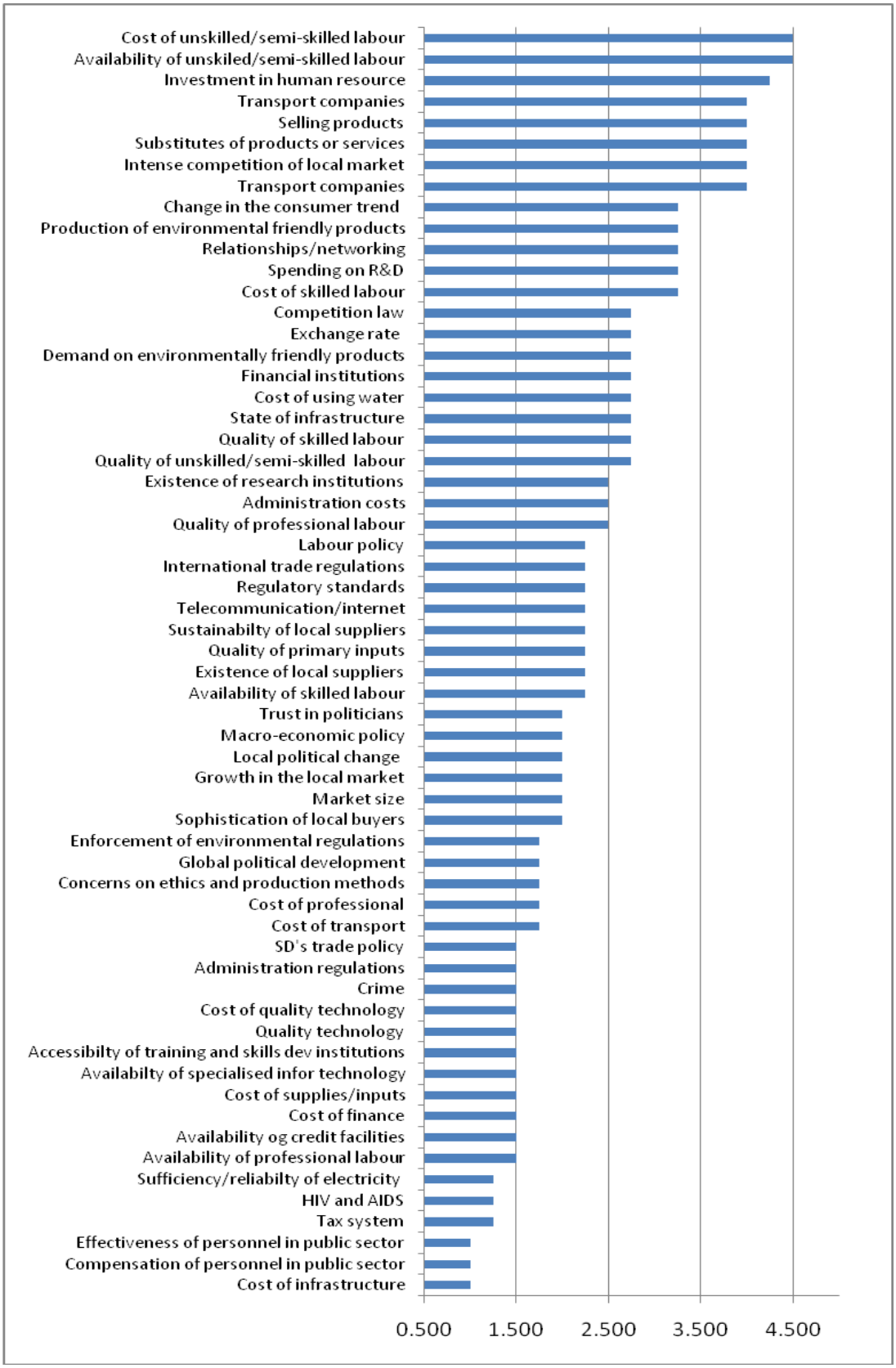

Figure 6.1: The determinants of competitiveness for the Other Food Industries
Source: Own calculation, 2011 survey

NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.3 THE ANIMAL FEED INDUSTRY

There are three firms classified under the animal feed industry. Alongside processing, these agribusiness firms provide other services that include provision of inputs to farmers, product marketing and sales, retail distribution, product handling, exporting and technical assistance to farmers. These firms had an annual turn-over range of SZL120 and SZL150 million. The following are the executives' opinions with regard to the statements on the determinants of competitiveness as shown in figure 5.2 below.

Out of the six determinants, four have been rated by the agribusinesses as constraining the animal feed industry competitiveness success. The constraining determinants are: chance conditions, with the lowest overall mean score of 2.13, followed by related and supporting industries conditions, with an overall mean score of 2.27, then government support conditions, with an overall mean score of 2.42, and the factor conditions, with an overall mean score of 2.60. Demand conditions and firm strategy, structure and rivalry conditions have a moderate impact on the industry's competitiveness, with an overall mean score of 3 and 3.88, respectively.

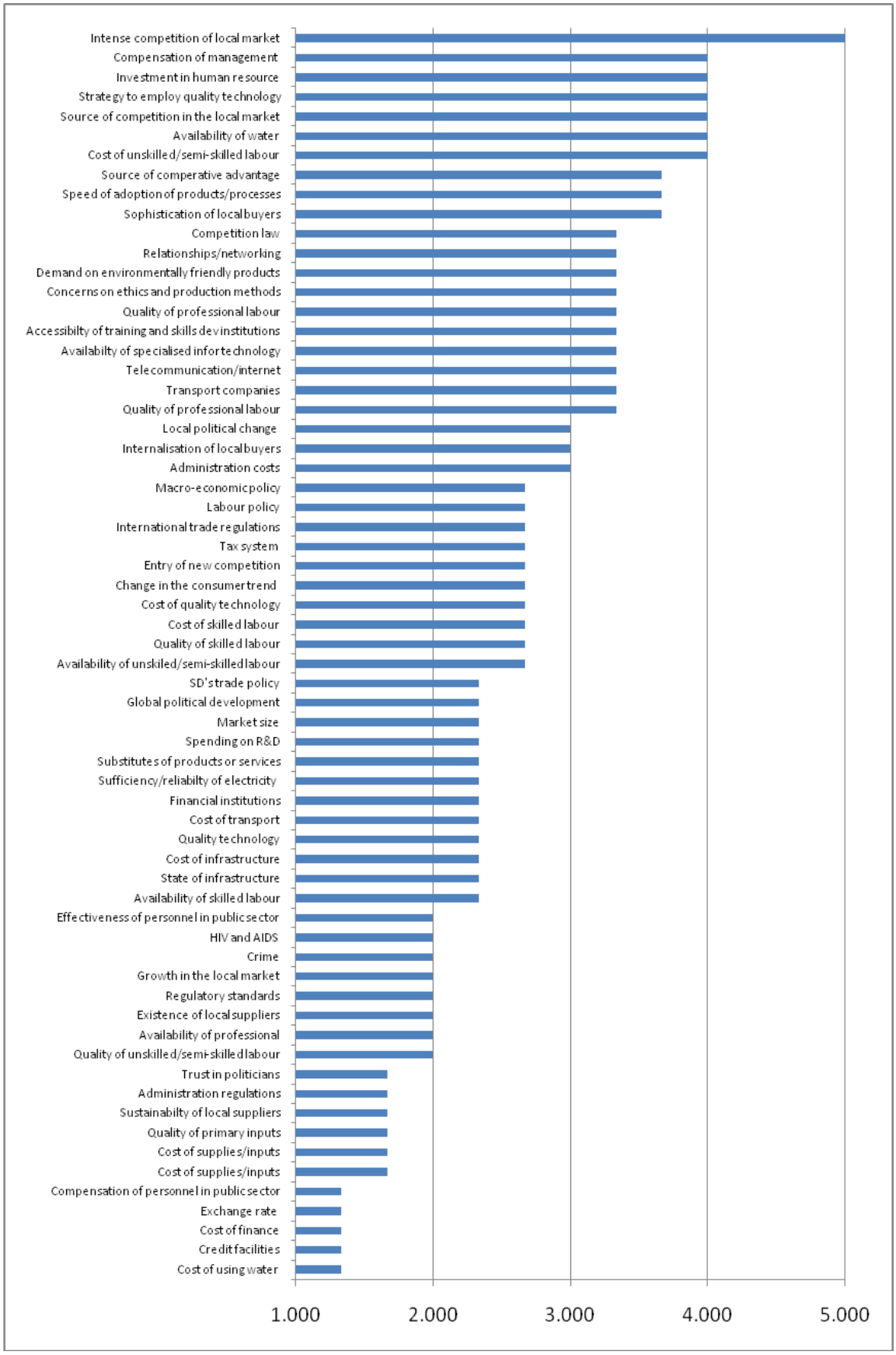

Figure 6.2: The determinants of competitiveness for the Animal Feed Industry

Source: Own calculations, survey 2011
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.4 THE LIVESTOCK AND POULTRY INDUSTRY

There are two agribusiness firms classified under the livestock and poultry industry. Alongside processing and adding value to commodities, other business operations are carried out, including product marketing, sales and exporting. The annual turnover for the firms was estimated to be between SZL120 and SZL180 million Emalangeni.

Figure 6.3 (below) shows that only one factor has a moderate impact on the industry, namely firm strategy, structure and rivalry conditions. This is similar to the other interviewed industries, in that the firms internally have been positioned and managed well enough to have a positive impact. This is indicated by the overall mean score of 3.13. All the other determinants are constraining, chance conditions being the most, with the lowest overall mean score of 2.5; followed by related and supporting industries conditions with the overall mean score of 2.53; then factor and demand conditions with an overall mean score of 2.63 each, and government support conditions with and overall mean score of 2.73.

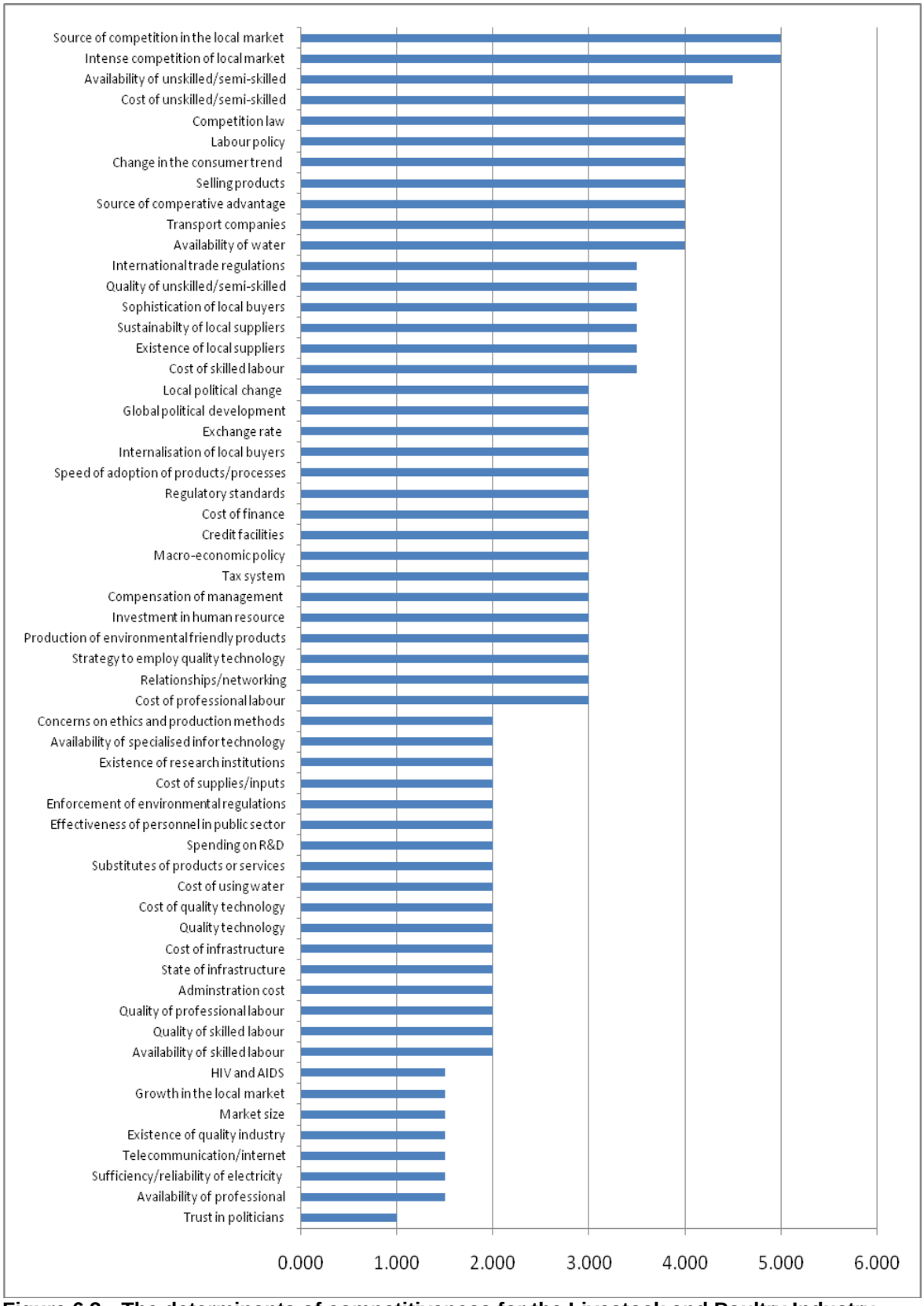

Figure 6.3: The determinants of competitiveness for the Livestock and Poultry Industry
Source: Own calculations, 2011 survey
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.5 THE TEXTILE INDUSTRY

There are two firms classified under the textile industry and were; manufacturing clothing, as well as product handling, marketing and exporting. In 2009, they recorded an annual turn-over between SZL60 and SZL120 million. Figure 6.4 (below) depicts the responses of the firms to the determinants of competitiveness.

Out of Porter's (1998) six determinants of competitiveness, four are impacting the industry's competitiveness success negatively: related and supporting industry conditions with the lowest overall mean score of 2.38. Most of the statements under this determinant have a negative influence. Demand conditions are the next lowest determinant with an overall mean score of 2.81. The third constraining determinant is the factor conditions, with an overall mean score of 2.91, and the last constraining attribute with an overall mean score of 2.94 is the firm strategy, structure and rivalry conditions. All these determinants are constraining competitive success of the textile industry, hence strategies are required to improve the situation to be positive. Unlike the other industries, firm strategy, structure and rivalry conditions have a negative impact on this industry. However, positive impacting determinants, albeit with moderate influence on competitiveness success, are: government support conditions and chance conditions, with overall mean scores of 3.09 and 3.58, respectively.

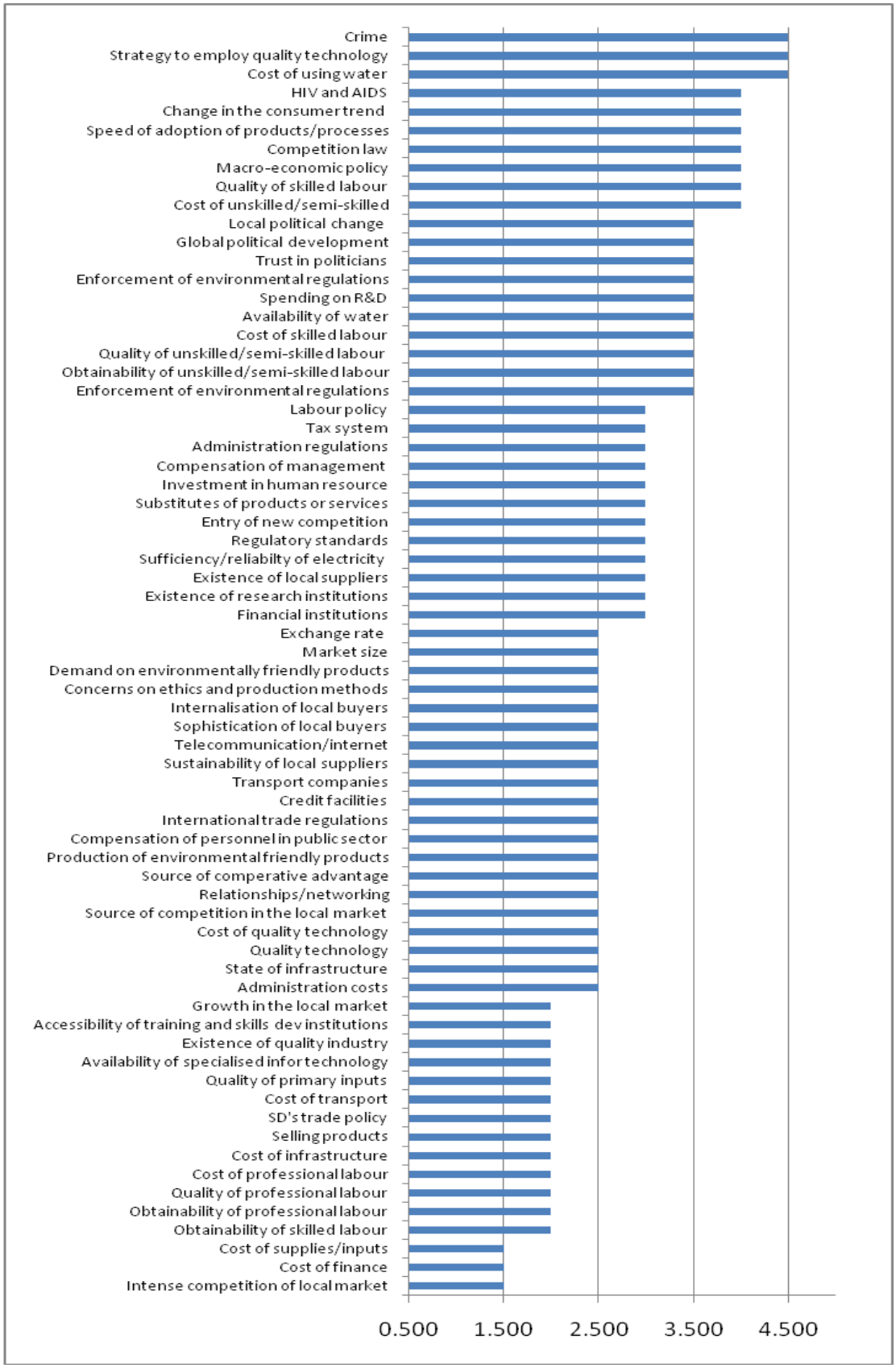

Figure 6.4: The determinants of competitiveness for the Textile Industry
Source: Own calculations, survey 2011

NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.5 THE MAIZE INDUSTRY

The maize industry includes two agribusiness firms that process and add value to maize for food consumption. Maize products such as mealie-meal, mealie-rice, samp and other maize products are produced by these firms. These firms are also involved in retail distribution of the products, product marketing and sales and exporting. In 2009 they recorded an annual turn-over between SZL100 and 180 million Emalangeni.

In Figure 6.5 the major constraints impacting on the competitiveness success of the maize industry are indicated by having a mean rate below 3. The cost of; inputs, quality technology; the size of the local market, the fluctuation of the exchange rate; the availability of; professional labour, quality technology, credit facilities, research institutions, local suppliers; competency of personnel in the public sector; the quality of professional labour; the costs of; administration, infrastructure and etc are some of the constraints to competitiveness success in this industry. The major enhancements to competitiveness success of the industry are: the availability of water; the strategy of; selling affordable high quality products, networking; the costs of unskilled/semi-skilled labour; intense competition in the local market; the enforcement of environmental regulations; the compensation of management and etc.

When analyzing Porter's (1998) determinants of competitive advantage in relation to the maize industry; it is clear that demand conditions, factor conditions and related and supporting industries are constraining the maize industry's competitiveness success. It is only the fourth determinant that is rather enhancing competitiveness success, since government support and chance conditions have a moderate impact on competitiveness success. A similar analysis was observed with the textile industry.

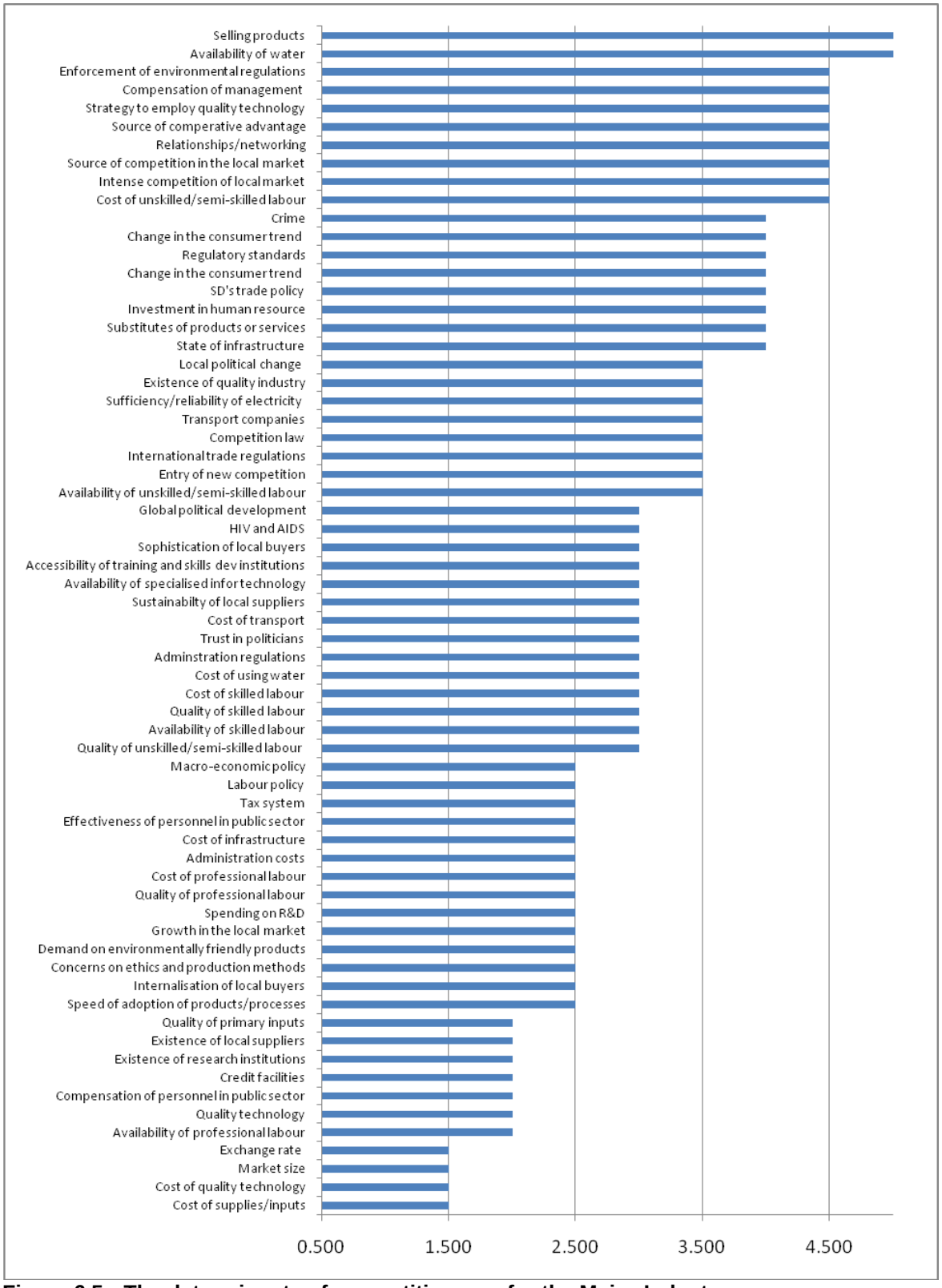

Figure 6.5: The determinants of competitiveness for the Maize Industry
Source: Own calculation, 2011 survey
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.7 THE SUGAR INDUSTRY

Under this industry only one company was interviewed, but this was one of the largest in the country, that grows and processes sugarcane to sugar. It is also involved in product marketing and sales, product handling, exporting and technical service provision to sugar cane growers. In 2009, it recorded over SZL1 billion annual turn-over.

Figure 6.6 (below) shows three constraining factors to the sugar industry's competitiveness, namely chance conditions (2.4 overall mean score), which is clearly a constraint when considering some of the statements that the representative of this firm rated under this determinant was HIV/AIDS. The company has currently employed over 3500 workers to work in the farms, milling machinery and in management department. Therefore, the effects of the virus could affect production, through absenteeism, low productivity, loss of skills and etc. The global political environment had a great influence on the business operations, e.g., with the political unrest in major fuel exporting countries, as fuel is one of the major inputs to the sugar industry. Government support and related and supporting industry conditions are also impacting the sugar industry's competitiveness negatively, as indicated by the overall mean scores of 2.58 and 2.88, respectively. On a positive note, some of the sugar industry initiatives to improve productivity, which include: efforts to reduce financing costs for smallholder sugarcane growers (including debt restructuring); implementation of a special electricity tariff and pooling of inputs to benefit from economies of scale for smallholder growers, may benefit the industry, (Central Bank of Swaziland,2008/9:14).

The factors that have a moderate impact on competitiveness success of the sugar industry are: demand conditions with a mean score of 3.5, factor conditions (3.25), and firm strategy conditions (3.08).

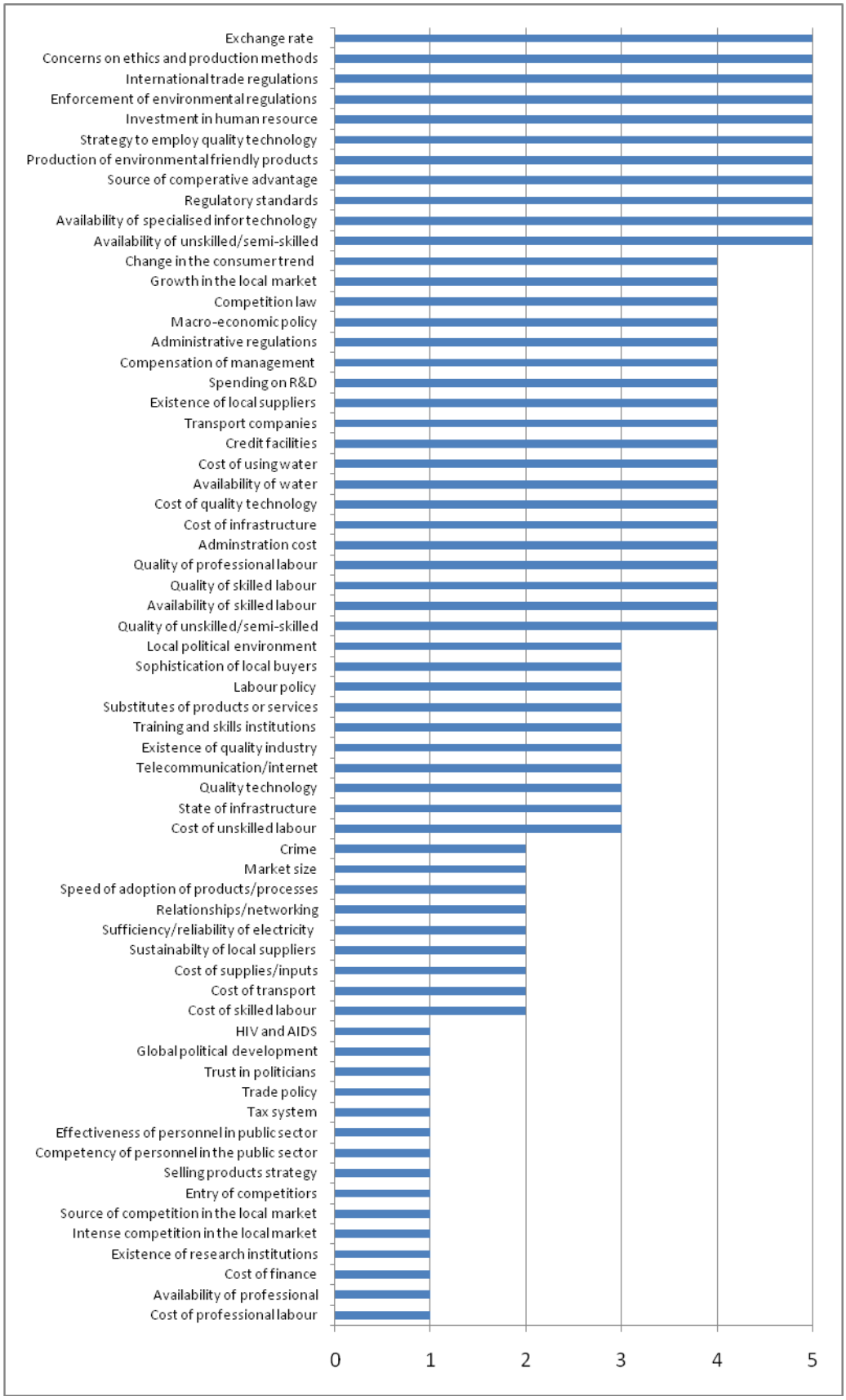

Figure 6.6: The determinants of competitiveness for the Sugar Industry
Source: Own calculations, 2011 survey

NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.8 THE DAIRY INDUSTRY

Under this industry only one firm was interviewed, and it is involved in processing and value addition to produce milk products such as cheese, yoghurt, cream and pasteurised milk. The company in 2009 recorded annual turn-over of about SZL60 to SZL90 million.

Figure 6.7 (below) depicts the determinants of competitiveness based on the interviewed company. Only half of the determinants of competitiveness are influencing the company's competitiveness success negatively, as indicated by the overall mean score below 3 of factor conditions (2.56), supporting industries (2.94), and demand conditions (2.75). The other determinants indicate a moderate impact to positive effects and are firm's strategy, structure and rivalry conditions (3.92), government support (3.55), and chance conditions (3.4).

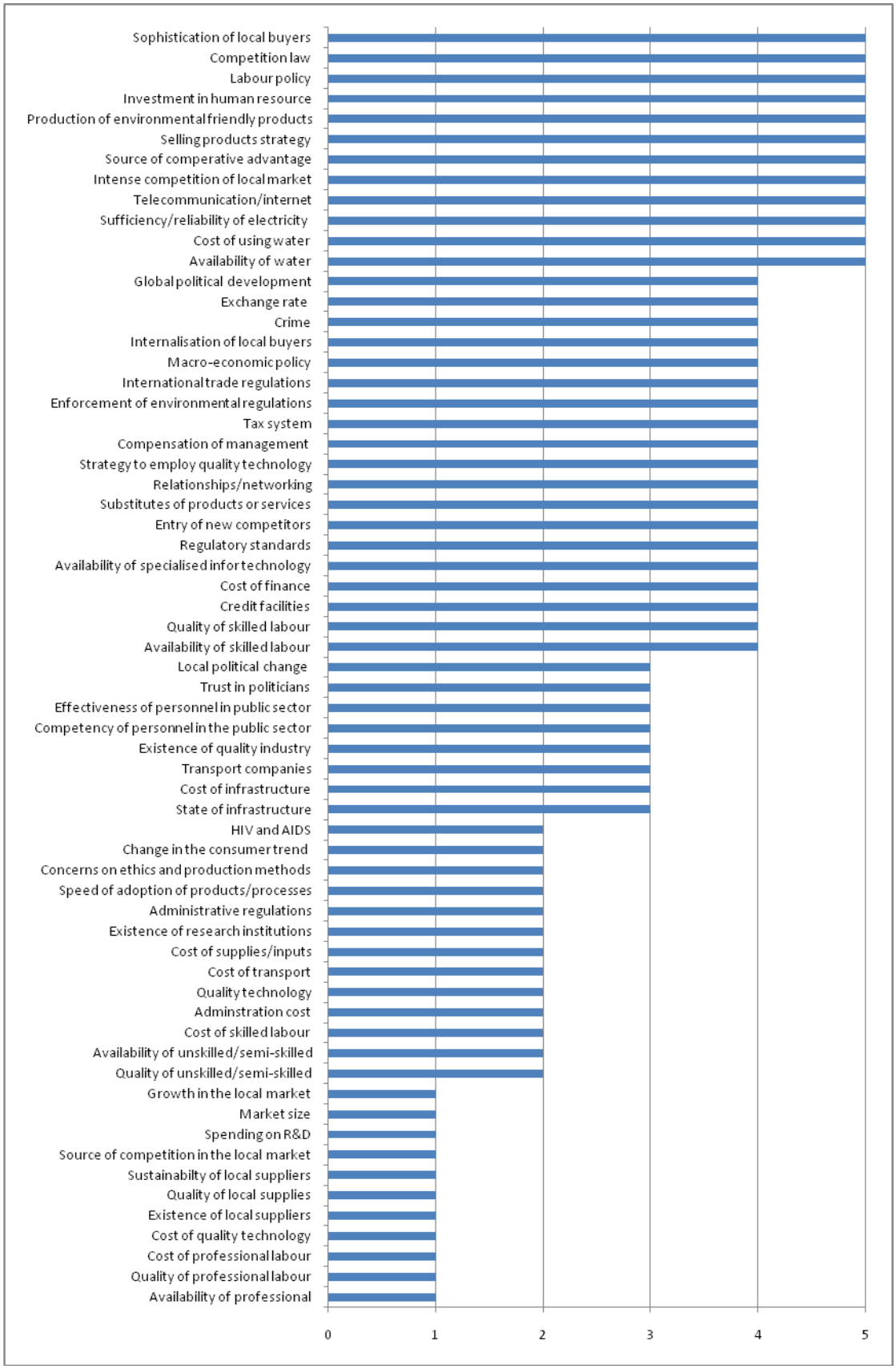

Figure 6.7: The determinants of competitiveness for the Dairy Industry
Source: Own calculation, 2011 survey

Table 6.1 (below) depicts the summary of all the industries' performances with regard to Porters' determinants of comparative advantage. The following is drawn from the table:

- Factor conditions - to support competitive advantage, a factor must be highly specialised to an industry's particular need. The efficiency and effectiveness of how the factors are deployed determines competitive advantage (Esterhuizen, 2006:130). In this chapter in is clear that the factors of production have a moderate impact on competitiveness of the sugar industry. This includes labour (low/semi-skilled, skilled, professional) land, inputs, water and machinery. This is evident in the mean score of 3.25, whilst the other industries (textile, maize, animal feed, livestock and poultry, dairy, other industries) have mean score values of less than 3
- Demand conditions - firms gain competitive advantage when local buyers are the world's most sophisticated and demanding buyers for the products or services, (Esterhuizen, 2006:131). Only the sugar and the animal feed industries have demand conditions that influence competitiveness positively.
- Related and supporting industries conditions - as shown in the table below, all industries are constrained by the related and supporting industries.
- Firm strategy, structure and rivalry - as depicted in the table, this determinant has a positive ability to enhance competitiveness to almost all the industries in the sector. Most of the industries have a mean score greater than 3. The maize industry has the highest mean score, which means that it is well structured internally and has the ability to compete in the local market. The textile industry has a mean score less than 3, however it is improving.
- Government support conditions - the dairy, maize and textile industries' competitiveness is positively influenced by government support.
- Chance conditions - as shown in the table below, this determinant has the ability to enhance competitiveness to the dairy, maize and textile industries. This means that these industries are able to use the opportunities that arise

with the change in environment, whereas the others are not, or the competitiveness is not enhanced.

Table 6.1: A summary of Industries performance on competitiveness

	INDUSTRY						
Determinant	**Dairy**	**Sugar**	**Animal feed**	**Maize**	**Textile**	**Livestock & Poultry**	**Others**
Factor conditions	2.56	3.25	2.60	2.97	2.91	2.63	2.59
Demand conditions	2.75	3.50	3.00	2.63	2.81	2.63	2.28
Related and supporting industries conditions	2.94	2.88	2.27	2.72	2.38	2.53	2.13
Firm strategy, structure and rivalry conditions	3.92	3.08	3.88	4.31	2.94	3.13	3.50
Government support conditions	3.55	2.90	2.42	3.05	3.09	2.73	1.75
Chance conditions	3.40	2.40	2.13	3.00	3.58	2.50	1.85

Source: Own calculation, survey 2011
NB: Competitive disadvantage = <3; Moderate = 3; Competitive advantage = > 3

6.9 CONCLUSION

As Porter (1998) stated, some industries perform better than others, even when exposed to similar economic and environmental conditions. It is clear that the other industries and livestock and poultry industry's competitiveness are enhanced by the fourth determinant, firm's strategy, structure and rivalry. When comparing the sugar and the dairy industries (with equal number of firms interviewed), it is clear that competitiveness in each firm is influenced positively by three determinants. However, the determinants are different in each industry, with the sugar industry influenced positively by factor, firm strategy and demand conditions, whereas the dairy industry is influenced positively by firm strategy, government support and chance conditions. When comparing the industries with two interviewed firms (livestock and poultry, textile and maize industries), the livestock and poultry firm's competitiveness is moderately influenced by how it has structured itself and the strategies (fourth determinant) implemented only. The textile industry is positively influenced by government support and chance conditions, and is the only industry not to have been impacted positively by the fourth determinant, firm strategy structure and rivalry condition. The maize

industry is moderately influenced by two determinants (government support, chance conditions) and highly enhanced by the firm structure, strategy and rivalry condition. This is indicated by the respective means scores; government support (3.05), chance conditions (3) and a positive mean score for firm structure, strategy and rivalry (4.31).

When observing the overall performance of each industry in table 5.8 (above), the sugar, dairy and maize industries are moderately competitive compared to the other ones. This is supported by the finding that these industries have three determinants of comparative advantage enhancing competitiveness. With the above results it is clear that each individual company under these industries needs to go back to the drawing board and come up with strategies to improve all the conditions so as to attract positive competitiveness for their firms. Moreover, the fourth determinant, firm strategy structure and rivalry, is the common positive one among all the industries, whilst the related and supporting industry conditions is the common negative determinant impacting competitiveness ability of the sector.

CHAPTER SEVEN

STRATEGIES TO ENHANCE THE COMPETITIVENESS OF THE SWAZILAND AGRIBUSINESS SECTOR

7.1 INTRODUCTION

This chapter is aimed at determining the strategies that could be implemented to increase the competitiveness ability of the agribusiness sector of Swaziland. The strategies are based on the findings in Chapter 4 and are targeted at all the stakeholders involved in the agribusiness sector of Swaziland. The emphasis is on the roles that involved stakeholders need to play in order to enhance the sector and make it competitive internationally. These stakeholders are the individual agribusiness firms, the government of Swaziland and the related and supporting industries.

7.2 SPECIFIC ROLES

Each stakeholder has a specific role to play to ensure competitiveness success, as indicated in this section. It is worth mentioning that the factors with a significant impact (relevant to each determinant) are highlighted in the strategic roles.

7.2.1 The Role of the Agribusiness firms

The agribusiness executives considered most of Porter's (1998) determinants of competitive advantage constraining to competitiveness success of sector, namely: related and supporting conditions (2.29), chance conditions (2.46), government support conditions (2.48), demand conditions (2.64) and factor conditions (2.72).

However, firm strategy, structure and rivalry conditions were considered to have a moderate impact to competitiveness success as indicated by a mean rate of 3.38.

The roles stated below are based from the results stated above and are taken from Chapter 5:

- **Market orientation:** according to Johnson *el al*. (2009:86), a marketing orientation consists of a focus on customers (customer orientation), an intimate understanding of competitors (competitor orientation), and integration of all functions within the company to create superior customer value (inter-functional coordination). The authors further argue that providing superior customer value is key for maximizing long-term profit and sustainable competitive advantage. Active integration of functional groups within the company to create superior value results in a behavioural culture that guides the way employees think and act. This strategy when employed by the agribusinesses could bring improvement to all the agribusinesses through the status of the determinants of competitive advantage; with particular reference to the second and forth (demand and firm strategy, structure and rivalry conditions with 2.64, 3.38 mean rate, respectively. This could mean that the demand conditions and firm strategy, structure and rivalry conditions to be enhancing competitiveness success. Esterhuizen and Van Rooyen (2001:28), concur that a competitive firm has the ability to satisfy the consumer with a product or service of the right price, quality, right and packaging, and such a firm therefore beats the competitors for the scarce rand, dollar, euro or pound of the consumer (Esterhuizen & Van Rooyen, 2001:28).

- **Internship and or graduate programmes:** in order to improve the availability of professional labour (1.63), the larger agribusiness firms could introduce such programmes as well as offering bursaries to students who are pursuing careers in the same field of work. Marketable employment

packages could also be offered in order to retain professional labour from leaving.

- **Strategic partnership/Industry coordination:** in view of the relatively high costs of inputs (1.69), transport (2.19), the agribusiness firms/industries could collaborate with one another or with suppliers of raw materials or service providers like transport services, telecommunication, electricity and storage/ product handlers. To be specific, the industries could support one another through various options, such as sharing of bulk transport cost, provision of technical services, collaborative and joint marketing (advertisement) and information dissemination. Better transport rates can be negotiated as a unified team as well as marketing costs could be shared. This could improve competitiveness of the sector. More business operations options beside transport and marketing could be explored that could assist in improving the current situation.

- **HIV/AIDS awareness and prevention facilities:** in view of HIV and AIDS constraining competitiveness (2.00), resulting to reduction of labour productivity, increased absenteeism and loss of skilled labour. Therefore, agribusiness firms could introduce HIV and AIDS awareness and prevention facilities e.g. having a on-site clinic which provide HIV/AIDS services (testing, counselling, Anti-retroviral drugs). Partnership with local organisations and government departments dealing with such issues would be valuable. It is worth noting that some firms already have introduced such facilities on-site, e.g. the sugar industry.

- **Products diversification:** Agribusinesses need to invest more in technology and innovate other products in a way of expanding the local market base. This based on the results from the study, that the local market size is quite small and is unfavourable in terms of competitiveness. The specific diversification details and options would explored by the agribusinesses depending on that particular product.

7.2.2 The Role of Government

Governments play a critical role in developing competitiveness within a country. According to Porter (1998:124), government influences factor, chance, demand and firm strategy, structure and rivalry conditions. The influence could either be positive or negative. Below are the roles that the government of Swaziland could play, to support the agribusiness sector.

- **Encourage sustainable investment**: in this study the availability of; quality technology, professional and skilled labour; the quality of unskilled, skilled labour and professional as well as all the associated costs is constraining competiveness success of the sector. Therefore, government could encourage sustained investment into human labour, high quality technology and improved infrastructure in order to improve productivity, efficiency and innovation which could subsequently improve competitiveness. Tugores (2009:3) argues that, intangible resources, knowledge and employee skills generate a better competitive advantage and consequently, better performance indicators for a firm.

  Taking into consideration the current economic situation in Swaziland, the local people are discouraged particularly when it comes to employment instability and investing. Consequently, in a situation like that people are forced to seek better opportunities someplace else and in most cases outside the country. Government could then provide an environment or structures that could encourage sustained investment. Petit and Gnaegy (1998:13), supports the statements by arguing that, government can ensure all incentives and a regulatory structure that will stimulate and reward investments.

- **Encourage entrepreneurship and training:** In order to promote sustainable Swazi business ownership and to support the economic needs

of the country growing population. Access to small business and entrepreneurship training should be available to any Swazi who is considering setting up a business and to all those currently trading.

- **Subsidies to specific goods/services:** In view of the relatively high cost of using infrastructure, supplies/inputs and transport in the sector, the government of Swaziland could introduce subsidies. The subsidy could be provided for a specific period (5 years) to allow the agribusiness firms to be profitable. This could improve reduce production costs and improve competitiveness.

- **Encourage HIV/AIDS awareness and prevention to agribusinesses**: HIV/AIDS is constraining competitiveness success of the agribusiness sector of Swaziland though reduced labour productivity, high absenteeism and loss of skilled labour. Therefore, government could encourage or collaborate with the firms through providing on –site HIV/AIDS services such as testing, counselling and treatment. The agribusiness firm could provide space and government could bring in the nurse/counsellor and the supplies. The specific logistics like the frequency of nurse visit to the firm and the quantity of supplies would depend on the size of the firm (number of staff members). This could lessen the negative effects on the labour force and improve competitiveness.

- **Provide surety:** in view of the difficulty and cost associated with acquiring credit by the agribusinesses, the government of Swaziland could provide surety on behalf of the agribusinesses to the financial institutions. Specific agreements could be arranged between the involved parties that are suitable to all parties involved. This could enable the agribusinesses to be able to continue with the business operations, to either expand or acquire quality technology to improve production and innovation.

- **Provide insurance for primary products:** the agribusiness executives believed that because of the nature of the business they are in, with regard to the raw material (primary inputs) exposed to changing weather conditions, disease (livestock, poultry) and theft. Therefore, to lessen the impacts of these conditions to the producers, government could perhaps assist producers provide insurance for primary products. When such circumstances occur (flood/drought, diseases, blaze of fire, theft) it not only the producer that is affected but the agribusinesses that processes, manufactures or that adds value to the commodity as well as the consumers of the final product. The agribusiness losses in terms of quantity and quality of the commodity which results in reduced productivity and it becomes cost ineffective. Hence, competitiveness would be influenced in a negative way. The insurance cover by government could be for a specific period of time and it should target those agribusinesses that are in the early stage of the business operation.

Table 7.1 (below) outlines the recommendations made by some of the agribusiness firms about strategies that could be implemented to enhance the sector to achieve competitiveness success. These recommendations have been discussed above.

Table 7.1: Recommendations to enhance agribusiness competitiveness

Recommendations/suggestions of strategies to enhance competitiveness	Frequency	Percentage (%)
Government policies must be pro-business	1	6.70
Stronger consumer education	1	6.70
Consumers to support local products	1	6.70
Subsidy to farmers (inputs) or any incentive to motivate for industries	3	20.00
Insurance for farmers by government	2	13.30
Government to provide land with enough water to farmers	2	13.30
Build more dams	1	6.70
Training for farmers	1	6.70
Protection for the agriculture industries to develop the sector (imports)	3	20.00
Focus on primary production, then process and manufacture, and add value	2	12.50
Focus on commercial projects and then cooperative projects	1	6.70
Develop agriculture industries that are recognisably competitive	2	13.30

Source: Own calculation, survey 20110/11

7.3 CONCLUSION

It is clear that the agribusiness sector cannot achieve competitive success in isolation but requires support from government and supporting industries. The individual agribusinesses can develop, organise and manage the business operations. However, the playground or the business environment should permit agribusinesses to carry out business operations fully, in such a way that competitiveness is achievable. Augmenting to that, government regulations and services should promote competitiveness success, not constraining. Services provided by related and supporting industries should be accessible to all firms in terms of costs, reliability and efficiency. The agribusiness executive's confidence could be boost up with regard to the suppliers; thereby expanding business operations. Cooperation between the suppliers and the agribusinesses will result in a mutual benefit for both parties. Continued trade and business operations would be guaranteed, since the agribusiness would receive goods or services

from the supplier and the supplier receive payment for the goods or service rendered.

CHAPTER EIGHT

SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 SUMMARY

The purpose of the study was to investigate the competitiveness of the agribusiness sector in Swaziland. Porter's (1998) theory on competitive advantage was used as the basis for the analysis through a process of individual interviews of 15 agribusiness executives involved in the product processing, value adding or manufacturing in the agricultural value chain in Swaziland. The turnover for the agribusiness firms ranged between SZL500 000 and SZL1 billion per annum for year 2009, which was the base year for this investigation.

The objectives of the study were to determine the factors impacting positively and those impacting negatively on the competitiveness of the agribusiness sector of Swaziland and to determine the strategies to enhance the sector to be able to compete internationally in an ever-changing global environment. The objectives were met.

Most of the determinants [factor (2.72), demand (2.64), related and supporting industries (2.29), chance (2.46) and government conditions (2.48)] were constraining competitiveness. The top three factors contributing to this are: unavailability of professional labour (1.63), costs of inputs and supplies (1.69), incompetent (1.69) and ineffective public sector personnel (1.88) and small local market size (1.88). The only determinant that has the ability to enhance competitiveness is the firm's strategy, structure and rivalry conditions, as indicated by a moderate mean score of 3.38. The top three factors enhancing competitiveness success of the agribusiness sector are; production of high quality affordable products (4.19), availability of water for production and processing purposes (4.00), and the cost of unskilled or semiskilled labour (3.94). The Porter

analysis indicated that the competitive environment in which the sector operates in is unfavourable and does not enhance competitiveness.

However, when analysing the industries that make up the agribusiness sector, it is clear that the impact of the conditions is quite different in each industry. Industries with a single firm interviewed (sugar and dairy) were moderately competitive, with three determinants positively influencing competitiveness. The sugar industry is influenced positively by; factor conditions as indicated by a mean score of 3.25, firm strategy, structure and rivalry with a mean score of 3.08, and demand conditions with a mean score of 3.50. Whereas, the dairy industry is influenced by; firm strategy, structure and rivalry conditions, and it is indicated by the mean score of 3.92, government support with a mean score of 3.55 and chance conditions indicated by a mean score of 3.40.

When comparing the industries in which two firms participated, namely the livestock and poultry industry, the Porter (1998) analysis indicated that the competitive environment in which agribusinesses in this two industries operate in is unfavourable and do not enhance competitiveness. This is indicated by the fourth determinant, firm strategy, structure and rivalry conditions having only a moderate influence with a mean score of 3.13. However, the maize industry is competitive with three positive determinants (firm's strategy = 4.31, government support = 3.05 and chance conditions = 3.00). The textile industry is not competitive, however it is positively influenced by government support (3.09) and chance conditions (3.58). The textile industry is the only industry that is not impacted positively by the fourth determinant, firm strategy structure and rivalry condition. The animal feed industry's competitiveness is enhanced by the demand (3), firm strategy, structure and rivalry conditions (3.88). The rest of the participating firms that fell under 'other industry' were not competitive, as out of six determinants they were positively influenced by the firm strategy, structure and rivalry conditions. Moreover, the hypothesis have been proved correct as the executives agreed that the local market size is small and the cost of inputs is indeed constraining the competitiveness of the agribusiness sector.

In a nutshell, the Porter analysis confirmed that the competitive environment in which the agribusiness sector operates in is unfavourable and does not enhance competitiveness. Therefore, strategies to enhance the sector's competitiveness were stated. The strategies are explained in terms of roles that the stakeholders need to play in order to improve the situation (agribusinesses and the government of Swaziland). Strategic collaboration and intervention of these stakeholders is fundamental for improving competitiveness in each firm or industry, which ultimately impacts on the sector and the economy at large. This could be through; technical support, sustainable investment (infrastructure or human capital), industry coordination and etc.

8.2 CONCLUSION

According to Petit and Gnaegy (1998:2), the manner in which businesses combine their resources, the distribution channels through which they choose to get their products to the consumers, the use of strategic alliances with government, customers and suppliers, all help contribute to making the world an intensely more competitive environment. To be competitive is fundamental for long-term endurance in the agriculture sector, therefore, analysing and understanding the agribusiness sector of Swaziland assists in discovering the strengths and weaknesses of the sector. The findings in the study serve as an indication to guide the sector's key players to manipulate the constraining and enhancing factors to increase the competitiveness of the sector as a whole. The focus should be in strengthening the factors that are less competitive and maintaining those that are competitive.

However, the current financial crisis that is faced by the government of Swaziland cannot be ignored as it is going to affect the agribusiness sector. Furthermore, public administration procedures such as; the number of days and the number of procedures required to start a business in the country being 61 and 13, respectively; the country being ranked number 121 and 124 out of 139 countries globally (World Economic Forum, 2009/10:434) contributes to making the country

unfavourable in terms of attracting foreign direct investment. The situation with regard to these factors is an indicator of goods market efficiency (pillar 6) which is also an indicator of competitiveness. Augmenting to the factors, the delays are daunting to potential and current investors who could have brought in high quality technology to improve productivity and innovation to industries, which are necessary for achieving competitiveness.

Despite the challenges faced by the country, there are developments and initiatives that have been introduced and are envisioned to enhance business operations for the sector and consequently improving competitiveness. This consists of; infrastructure (roads), dams through the LUSIP projects, and the Swaziland Agricultural Development Programme (SADP) initiative. For instance, recently, an initiative referred to as the SADP has been launched, aimed at assisting the sector develop relevant and coherent policies, institutional structures and field programmes ,which will result in more effective, demand-oriented research, leading to improved agricultural services. Amongst the outcomes expected from the initiative are innovative and effective production systems which would be market-driven and efficient with respect to input-output performance (Swaziland Review, 2010:46). This should subsequently stimulate economic growth and subsequently benefit the sector as a whole.

Therefore, government will need to prioritize and sequence reforms and investments in the business environment and infrastructures in order to unleash the potential for growth in within industries. In doing so, it is important that the policies to promote competitiveness are brought together within a coherent strategy rather than being implemented as a series of ad hoc interventions. Experience indicates that measures adopted in isolation tend to be much less effective (African Competitiveness Report, 2010/11:26).

8.3 RECOMMENDATIONS

The recommendations listed below are based on the results and observations made when carrying out the study:

Structuring the agribusiness sector: From the observation and experience during data collection, it is recommended that the MOAC (Ministry of Commerce and Ministry of Agriculture and Cooperatives), in collaboration with the agribusiness firms or industries, properly organise and structure the agribusinesses into a sector not only by name but as a fully functional one. It is suggested that it should be defined by organisations that represent the interests of primary input suppliers and product suppliers. The organisation(s) could then form a committee that would represent concerns and interests to the relevant authority, such as, government. When the sector is properly organised, then the specific roles mentioned in Chapter 5 could be implemented by the respective stakeholders. It is acknowledged that there are organisations that have been established that carry out some of this duties, however, the agribusiness sector is still not structured accordingly and it will impossible to implement the identified strategies. This is based on the experience that, in the initial stage of this research and even before data collection, it was difficult for the researcher to acquire information about the agribusiness sector, let alone find specific documentation about the sector. This was because the sector was not properly organised and not even the total number of agribusinesses were known. However, the central statistics of Swaziland assisted in providing a list, hence the researcher was able to select and categorise the firms that fell under the sector, according to agribusiness definition.

Determining the Agribusiness Competitiveness Status (ACS) Index for SD: In this study, competitiveness of the sector was determined qualitatively using Porter's (1998) method and the results were analysed and presented

quantitatively. Therefore, an exact ACS index is necessary to quantify the competitiveness status of the agribusiness sector. Balassa's (1989) method of calculating the RTA could be used to determine the ACS index, where the performance of imports and exports would be observed quantitatively.

RTA value for individual commodities: It will also be useful if RTA for the individual commodities were to be determined, specifically determining the ''winners'' or ''losers'' in the sector. This will enable the stakeholders involved to identify the commodities and products that are internationally competitive and those that are not. This information will assist in decision-making in terms of developing strategies.

Explore other markets: In view of the declining SACU receipts which were making a notable contribution to the country's reserves, the country needs to expand its export base in order to generate more foreign exchange. This could be through diversification of the products or finding other markets for the same traded products.

Provision of infrastructure: provision of processing facilities, roads, research institutions and land are necessary for increased production, expanding to value addition and innovation of products. This will also enhance investment opportunities and FDI that are necessary for competitiveness success.

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APPENDIX

APPENDIX A

Data Collection Instrument

Executive Survey Questionnaire

Title: Analysing the competitiveness of the agribusiness sector in Swaziland

COMPETITIVENESS EXECUTIVE SURVEY FOR THE AGRIBUSINESS SECTOR OF SWAZILAND

Name of Agribusiness.....

Please specify the information about your business:

i. In what business form does your organisation operate?

Public company	1
Government entity	2
Cooperative	3
Association	4
Other (please specify)	5

ii. Please indicate your organisations major operational focus? (Select more than one, if applicable)

Input suppliers (seeds, feed, fertiliser, etc)	1
Processing/manufacturing/value adding	2
Product marketing and sales	3
Retail/distributor	4
Exporting	5
Finance or insurance service provider	6
Technical service provider	7
Product handling, storage	8
Other (please specify)	9

iii. Please indicate your company's turn over in 2009

Amount		**Amount**	
-< E500,000	1	-E120mil-E150million	8
-E500,000-E1million	2	-E150mil-E180million	9
-E1mil-E10million	3	-E210mil-E250million	10
-E10mil-E30million	4	-E250mil-E500million	11
-E30mil-E60million	5	-E500mil-E750million	12
-E60mil- E90million	6	-E750mil-1billion	13
-E90mil-E120million	7	->1 billion	14

The questions/statements are in the following format:

EXAMPLE:

Competition in the local market is:

Very limited	1	2	3	4	5	Very intense

Crossing **1** means you **agree wholeheartedly with the left-hand side**
Crossing **2** means you agree somewhat with the left-hand side
Crossing **3** means you **opinion is indifferent between the two answers**
Crossing **4** means you agree somewhat with the right-hand side
Crossing **5** means you **agree wholeheartedly with the right-hand side**

Note: Please tick only one number per statement (highlight with a bright colour or put a cross (X))

1 FACTOR CONDITIONS

1. Unskilled/semi-skilled labour (drivers, floor operators, manual labour, etc.) is:

Difficult to obtain	1	2	3	4	5	Easy to obtain

2. Unskilled/semi-skilled labour is:

Not of a very high quality	1	2	3	4	5	Used productively by your business

3. The cost of unskilled/semi-skilled labour is:

Too expensive	1	2	3	4	5	Affordable

4. Skilled labour (administrative officers, graders, machine operators, etc) is:

Difficult to obtain	1	2	3	4	5	Easy to obtain

5. Skilled labour is:

Not of a very high quality	1	2	3	4	5	Used productively by your business

6. The cost of skilled labour is:

Too expensive	1	2	3	4	5	Affordable

7. Professional labour is:

Difficult to obtain	1	2	3	4	5	Easy to obtain

8. The quality of professional labour is:

Not nearly good enough	1	2	3	4	5	Amongst the best in the world

9. The cost of professional labour is:

Too expensive	1	2	3	4	5	Affordable

10. Administration cost associated with labour matters is:

Extremely high	1	2	3	4	5	Affordable

11. The national infrastructure (roads, communication, electricity, water, etc.) is:

Poorly developed and inefficient	1	2	3	4	5	Amongst the best in the world

12. The cost of using the infrastructure in Swaziland is:

Extremely high	1	2	3	4	5	Affordable

13. Quality technology is:

Difficult to obtain	1	2	3	4	5	Easy to obtain

14. The cost of quality technology is:

Extremely high	1	2	3	4	5	Affordable

15. Water for industrial/production purposes is:

Not available	1	2	3	4	5	Readily available

16. The cost of using water for industrial purposes is:

Extremely high	1	2	3	4	5	Affordable

2 DEMAND CONDITIONS

17. Local buyers of your products and/or services are:

Unsophisticated and base choices on the lowest price	1	2	3	4	5	Knowledgeable and demanding and buy innovative products

18. Local buyers of your business' product and/or services are:

Slow to adopt to new products and processes	1	2	3	4	5	Actively seek out the latest products, technologies and processes

19. Internationalisation of local buyers:

Behind the rest of the world	1	2	3	4	5	In pace with the rest of the world

20. Local buyers of your business' product and/or services are:

Not concerned of ethics and production methods	1	2	3	4	5	Very concern over ethics and production methods

21. Local customers demand environmentally friendly products:

Not at all	1	2	3	4	5	Very important for local consumers

22. Is the local market size, in terms of obtaining economy of scale:

Too small	1	2	3	4	5	Large enough

23. Is the growth in the local market:

To slow for investment in new technology	1	2	3	4	5	Fast enough for investment in new technology

24. Is the changing consumer trends in Swaziland:

A big threat to your business	1	2	3	4	5	An opportunity for your business

3 SUPPORTING INDUSTRY CONDITIONS

25. Credit facilities are:

Difficult to obtain	1	2	3	4	5	Easy to obtain

26. The cost of financing in Swaziland is:

Extremely high	1	2	3	4	5	Affordable

27. The cost of transport is:

Extremely high	1	2	3	4	5	Affordable

28. The cost of supplies/inputs is:

Extremely high	1	2	3	4	5	Affordable

29. Financial institutions in Swaziland are generally:

Constraining your business' competitive success	1	2	3	4	5	Enhancing your business' competitive success

30. Scientific research institutions for your industry in Swaziland are:

Non-existent	1	2	3	4	5	The best in their fields

31. Transport companies/contractors in Swaziland are:

Constraining your business' competitive success	1	2	3	4	5	Enhancing your business' competitive success

32. Local suppliers of your business' primary inputs are:

Mostly non-existing	1	2	3	4	5	Numerous and include the most Important materials, components, equipment and services

33. The quality of local suppliers of your business' primary inputs are:

Inefficient and have little technological capability	1	2	3	4	5	Internationally competitive and assist in new product and process development

34. The sustainability of local suppliers of your business' primary inputs is:

A huge problem	1	2	3	4	5	No problem at all

35. Electricity supplier in Swaziland is:

Insufficient and unreliable	1	2	3	4	5	Very sufficient

36. Telecommunication and internet service providers in Swaziland:

Constraint your business	1	2	3	4	5	Enhance your business

37. Specialised information technology services are:

Not available	1	2	3	4	5	Available from world-class local institutions

38. Quality and trustworthy industry information is:

Non-existent	1	2	3	4	5	Regularly available

39. Training and skills development institutions are:

Inaccessible and irrelevant	1	2	3	4	5	Very accessible and relevant

40. Regulatory standards (e.g. products standards, energy, safety, environment) in your industry are:

Lax or non-existent	1	2	3	4	5	Of the world's most stringent

4 FIRM STRATEGY, STRUCTURE AND RIVALRY CONDITIONS

41. Your business:

Does not spend money on Research and Development (R&D)	1	2	3	4	5	Spend heavily on R&D relative to international peers

42. Relationships and networks in the industry:

Constrain your ability to compete	1	2	3	4	5	Enhance your ability to compete

43. The competitive advantage of your business is based on:

Low cost on low wages or natural resources availability	1	2	3	4	5	Unique products, services and processes

44. The competitive advantage of your business is due to the selling of:

Relative cheap products of inferior quality	1	2	3	4	5	Affordable high quality products

45. To produce or sell environmentally friendly products is:

Not a very important strategy	1	2	3	4	5	One of the most important strategies

46. Production processes in your business

Use obsolete technology	1	2	3	4	5	Apply the best and most efficient technology

47. Your business approach to human resources is:

To invest little in existing staff	1	2	3	4	5	To invest heavily to attract, train and retain staff

48. Compensation of management in your business:

Is based exclusively on salary	1	2	3	4	5	Includes substantial incentives like bonuses and stock options

49. Competition in the local market is:

Very limited	1	2	3	4	5	Very intense

50. Competition in the local market comes primarily from:

Imports	1	2	3	4	5	Local firms or local subsidiaries of multinationals

51. Entry of new competitors:

Almost never occurs in the local market	1	2	3	4	5	Is common in the local market

52. Substitutes of your business' products or services range is:

No problem	1	2	3	4	5	A big threat

5 GOVERNMENT SUPPORT CONDITIONS

53. Administrative regulations in Swaziland are:

Burdensome	1	2	3	4	5	Not burdensome

54. The competence of personnel in the public sector at national level is:

Lower than the private sector	1	2	3	4	5	Higher than the private sector

55. The effectiveness of personnel in the public sector at local level (provincial/municipal) is:

Constraining service delivery	1	2	3	4	5	Enabling sufficient service delivery

56. The tax system:

Hinders business investment and risk-taking	1	2	3	4	5	Promotes business investment and risk-taking

57. Environmental regulations in Swaziland are:

Not enforced or enforced erratically	1	2	3	4	5	Enforced consistently and fairly

58. Swaziland's trade policy:

Enables international trade	1	2	3	4	5	Restricts international trade

59. International trade regulations:

Constrain your business by allowing unfair trade	1	2	3	4	5	Enhances you business' ability to compete internationally

60. Swaziland's labour policy:

Constrain and inhibits employment	1	2	3	4	5	Creates a good working place at your business

61. Swaziland's macro-economic policy:

Constraint your business'	1	2	3	4	5	Enhance your business

62. Swaziland's competition law:

Inhibits competitive business operations	1	2	3	4	5	Provides for a fair and competitive business environment

63. Your trust in the honesty of politicians/government officials is:

Very low	1	2	3	4	5	Very high

6 CHANCE CONDITIONS

64. Crime in Swaziland:

Imposes significant costs on your business	1	2	3	4	5	Does not imposes significant costs on your business

65. HIV/Aids in Swaziland:

Imposes significant costs on your business	1	2	3	4	5	Does not imposes significant costs on your business

66. Was the exchange rate [+/- R9.1/US$(2009)]:

Constraining your business	1	2	3	4	5	Enhancing your business

67. Is the global political developments:

Constraining your business	1	2	3	4	5	Enhancing your business

68. Did the changing political environment in Swaziland over the past year:

Undermine your competitiveness	1	2	3	4	5	Enhance your competitiveness

69. Any recommendations/suggestions of strategies to enhance the competitiveness of the agribusiness sector in SD??

_____

_____

_____

Thank you for your time