INVESTIGATING THE IMPACT OF VALUE ADDITION IN THE AGRICULTURAL SECTOR WITH SPECIAL REFERENCE TO THE PORK MARKET-SHARE PROMOTION SCHEME

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Firstly; I would acknowledge our heavenly Father who blessed me with good health to complete this study.

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Finally my appreciation goes to Dr Stewart Peter Kaupa, my supervisor who guided me during my research.

DEDICATION

I would like to dedicate this research to my wife Elaine and three children Aiden, Desmond (Jnr.) and Elona. Since ancient times it's expected from the husband to provide for his family. This MBA will assist me to grow professionally and the benefits will be there to be shared.

ABSTRACT

Namibia's topographical nature, lends it ideally suited for livestock production. Livestock in Namibia is very competitive since it's raised on natural free ranging pastures. Unfortunately due to its small domestic market, Namibia is a net exporter of livestock meat and meat products. This has resulted in the Namibian government developing policies and strategies to add value to the abundance of raw material, with the main objective being that of employment creation and improved foreign exchange earnings. This was done as part of the Growth at Home Strategy, which has seen the development and implementation of the Pork Market Share Promotion Scheme, (PMSPS), in 2012. The PMSPS was developed to protect the relatively small Namibian pork industry that needs to compete with its more advanced South African counterparts in terms of importation of low priced pork meat and products, with the main aim of developing the local industry. The research adopted a mixed research method of quantitative and qualitative research design. Data was collected by means of questionnaires and interviews. The population was divided into three groups, namely; the pork producers, importers and retailers who received emailed questionnaires, while policy-makers were interviewed. The major findings were that the PMSPS performed as expected in terms of market access and profitability, however new entrants into the scheme remains a major challenge due to a lack of startup capital, lack of skills and knowledge and the high feeding cost. This could be addressed by redesigning finance packages for prospective producers, reviewing of the Green Scheme Policy to include fodder production and an intensive campaign to encourage pork farming nationwide.

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LIST OF ABBREVIATIONS AND/OR ACRONYMS

ABBREVIATION	MEANING
MAWF	Ministry of Agriculture, Water and Forestry
MITSMED	Ministry of Industrialization, Trade and SME Development
PMSPS	Pork Market Share Promotion Scheme
DAPEES	Directorate of Agriculture Production, Extension and Engineering Services
DPBD	Directorate of Planning and Business Development
DVS	Directorate of Veterinarian Services
NPC	National Planning Commission
PWC	Price Waterhouse and Cooper
GDP	Gross Domestic Product
MLA	Meat and Livestock Australia
USDA	United States Department of Agriculture
LPF	Livestock Producers Forum
RMAA	Red Meat Abattoirs Association
EU	European Union
OIE	World Organization for Animal Health
SADC	Southern Africa Development Community
FMD	Foot and Mouth Disease
NCA	Northern Communal Area

DECLARATION

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

……	……	……
Name of Student	**Signature**	**Date**

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CHAPTER 1

BACKGROUND OF THE STUDY

1.1 Introduction

This chapter presents the background of the study, outlining the problem statement under investigation, the chapter further presents the research objectives, research questions as well as the significance of the study, limitation of the study and delimitation of the study.

1.2 Background of the study

Since the attainment of Independence in 1990, the Government of the Republic of Namibia has initiated policies to improve the life of its people and grow its economy. From the onset, the Government recognised that, in order to do so, it would have to institute policies that would support the promotion of internal development and growth, and that promote a balance between free market conditions and the advancement of its own internal industrial development policy objectives.

In terms of Vision 2030, Namibia is to be transformed into an industrialized country with diversified, competent and highly productive human resources and institutions, (NPC, 2010). As part of this industrialization process, a White Paper on Industrial Development was drafted in 1992. The need for local value addition was already raised

in this first White Paper on Industrial Development in 1992, which was subsequently reviewed in 1997 and thereafter adopted as the Second Industrial Policy and Strategy of 2002. The main aim of this White Paper was to redirect the Namibian economy from a focus on primary production and the export of raw materials to adding value and exporting finished products (Namibia Manufacturing Association, 2008).

This was echoed by the industry which formulated the following definition of value addition:

"Value addition is when additional production and/or manufacturing operations in terms of land, labour, capacity, utility, quality, appearance or form create incremental financial value at any particular stage of production by rendering the end product in monetary terms more competitive in the market without impacting negatively on any of the components of such value chain" (Meat Board of Namibia, 2006).

Cabinet redefined value addition as per the Cabinet decision *6/17.04.07/007,* to read as follows:

"Value addition is the transformation of an original product into a new product or products by processing and/or manufacturing operations across the value chain of the industries with special emphasis on the degree of transformation".

According to the Namibian Manufacturing Association (2008), a clear distinction between primary, secondary and tertiary value addition needs to be made. Where primary value addition is the part of the production process that takes place from the producer up to delivering to the processor. Secondary and tertiary value addition is

defined as the process from the processor stage up to where the final product is delivered to the consumer. This implies that all stakeholders in the value chain should benefit from the eventual value added product presented to and purchased by the consumer.

To compliment this, the Namibian government adopted the Growth at Home Strategy, also referred to as "Namibia`s Execution Strategy for Industrialization". In other words, the Growth at Home Strategy, provides a road map for the execution of Namibia's Industrial Policy (MTI, 2014). This Strategy focuses on three Strategic Intervention Areas that have been derived from the Policy framework, sector consultations, and stakeholder discussions, including the growth at Home conference.

Growth at Home Strategy focuses on three strategic intervention areas:

- Supporting value addition, upgrading and diversification for sustained growth.
- Securing market access at home and abroad; and
- Improving the investment climate and conditions.

Interventions such as the Small Stock Marketing Scheme and the Pork Market Share Promotion Scheme, aimed at supporting value addition will promote and provide a needs oriented and comprehensive support to industrial development and upgrading projects which will contribute towards structural transformation of the Namibian economy. The interventions will also help enhance domestic value addition. Interventions on promoting market access at home and abroad will stimulate the development of local industries by utilizing the potential of local procurement measures and by generating synergies

between local producers and large retailers. Another main focus under this strategic area will be creating conditions that will boost Namibian exports, as well as the capacity of Namibian firms to supply and export goods at a competitive level (MTI, 2014).

Namibia is a net importer of pork and raw pork products. The South African pork industry due to its economies of scale, can easily dominate the Namibian market, since they are capable of producing the equivalent of what Namibian producers, produce annually in just 7 days. This has resulted in the pork industry deliberating on mechanisms to protect the local industry and to make it more sustainable. The industry agreed on the fact that restrictive measures would be the only tool to make the industry competitive and to regulate the importation of cheap pork and pork products into the Namibian market. This has lead, to the development of the Pork Market Share Promotion Scheme (PMSPS) to be implemented by the Meat Board of Namibia, which has eventually saved the industry from collapse. This move, together with higher international prices, has triggered producer prices to recover, as pork imports from South Africa have been drastically reduced since July 2013 (Meat Board of Namibia, 2013).

The Pork Market Share Promotion Scheme aims to promote local pork production, as well as to protect the industry against the importation of low priced pork meat and products as part of the Infant protection policy. This is with the intention of growing the pork industry towards self-sufficiency in local pork supplies (Meat Board of Namibia, 2013).

The aims of the scheme were:

- To ensure the viability of the pork industry
- To ensure the co-existence of the pig production and processing sector
- To protect the production sector against external influences, (dumping, stockpiling etc.)

1.3 Statement of the Problem

As part of the Growth at Home Strategy, where the Namibian government aims at adding value to raw materials so that benefits are derived in other secondary industries such as slaughtering and processing, which in turn will have direct spinoffs in terms of employment creation and poverty eradication. The Namibian pork industry is relatively small as compared to other agricultural commodity industries. As a result, Namibian pork producers have to compete with their more advanced South African counterparts. The Namibian government implemented the PMSPS during 2012, to be administered by the Meat Board of Namibia. The PMSPS aims to promote local pork production as well as to protect the industry against the importation of low priced pork meat and products as part of the Infant Protection Policy. This is with the intention of growing the pork industry towards self-sufficiency in local pork supplies. Given this background, this study aims at Investigating the Impact of Value Addition in the Agricultural Sector, with Special Reference to the Pork Market Share Promotion Scheme.

1.4 Research Objectives

The main objective of this study is to investigate the impact of value addition in the agricultural sector, focusing mainly on the Pork Market Share Promotion Scheme. This objective is supported by the following specific objectives:

- Examining the economic impact of the Pork Market Share Promotion Scheme on Value Addition.
- Analysing the performance of the Pork market Share Promotion Scheme since its inception.
- Identifying strategies to make the Pork Market Share Promotion Scheme competitive.

1.5 Significance of the study

This study aimed to establish whether the PMSPS had an impact on value addition by evaluating its performance and propose strategies to make it competitive. This would assist Policy makers in the Ministry of Industrialization, Trade and SME Development and the Ministry of Agriculture, Water and Forestry and other economic participants to make meaningful decisions in grafting future value addition interventions. The challenges producer's faces as identified during the study are addressed to make the participation in the scheme for future entrants very much attractive. Finally the findings of this study will assist in the accomplishment of Vision 2030 that envisaged Namibia as an industrialized and prosperous nation.

1.6 Limitations of the study

There are only two producers participating in the PMSPS, and these producers were not willing to provide essential data pertaining to expenses and income due to the confidential nature of the business. However the researcher adjusted the study objectives by eliminating those that required information pertaining to income and expenses. This was done to gather enough quality and reliable data to ensure that the validity and reliability of the findings of this study were not compromised.

1.7 Delimitation of the study

The study only concentrates on the pork sector south of the Veterinary Cordon Fence and excludes the Northern Communal Areas, (NCA). Statistics reveal that a huge number of small scale pork producers are found in the Ohangwena and Omusati regions that are not part of the main stream value chain. The study should be extended to include this area as well, taking into account the unique marketing situation prevailing in that region.

The study further does not include the potential of the communal farming system per se, as part of diversification from the main production lines of livestock farming. A big number of small scale producers will surely go a long way in improving local supply. Their unique features and needs should be included in future research.

1.8 Thesis Structure

Chapter one provides a brief background and overview of the problem definition, the type of problems the research intends to resolve and what the project is all about.

Chapter two addresses the literature related to the problem statement, where literature associated with the market structure of the port market and other relevant issues related to value addition in the livestock sector, with special reference to the pork industry are presented and discussed.

Chapter three presents the research methodology that was adopted for this study. The chapter further highlights how the data was collected, analyzed and presented in order to address the research problem investigated in this study.

Chapter four presents the key findings and discussions while chapter 5 presents the conclusion and recommendations from the study.

1.9 Summary

Chapter one highlights the introduction and background, which provides an overview of value addition in general and specifically its objectives in the agricultural sector. It furthermore addressed the problem statement, research objectives, research questions and the significance of the study that provides reasons why this research is important. Lastly it addresses the limitations and delimitations of the research giving an overview of the challenges experienced and the scope of the study respectively.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter deals with the review of past research, which will assist in identifying the conceptual and methodological issues relevant to the study, as well as the gaps that will be covered by this study. This will enable the researcher to collect relevant data and subject it to sound reasoning and meaningful interpretation. Keeping in mind, the objectives of the study, reviews are presented under the following headings:

2.2 Background of the Namibian Agricultural Sector

Agriculture, as the backbone of Namibia`s economy, has a major role to play in achieving Vision 2030, since approximately 70% of Namibia's 2.1 million people live in rural areas and are directly reliant on subsistence agriculture for their livelihood (Brown, 2009).The Namibian agricultural sector is the second largest primary industry after mining (PWC, 2012). It is further claimed that with the inclusion of the meat processing industry, agriculture is the 7th largest contributor to GDP, after mining, the wholesale and retail trade, real estate and business services, education, government services and other manufacturing activities respectively.

The agricultural sector offers five ways in which it contributes to the overall economic growth: Meeting the food demands of a wealthy and growing urban population; increased agricultural exports as a means of earning foreign exchange; providing labour for the expanding sectors of the economy; providing capital for investment in the growing industrial sectors of the economy, and increased cash incomes in the rural sector, which serves to increase demand for the products of the industrial sector (Mushendami, Biwa & Gaomab II, 2008).

Namibia is characterised by a dualistic agricultural sector, where a strong commercial sector exists along with a sector comprised of households in freehold or non-freehold areas (Mushendami, Biwa & Gaomab II, 2008). This dualistic character of the sector has been inherited from the apartheid regime, where the minority of the population obtained most of the land, and with the assistance of the state, turned it into viable commercial land.

2.2.1 The Commercial sector

Commercial farmland in Namibia covers approximately 44% of the total land area and it houses 10% of the population (NTA, 2014). They further stated that the commercial sector which is well developed, capital-intensive and market oriented, (including exports), is found south of the Veterinarian Gordon Fence, (red line), which comprises the southern two thirds of the country. There is presently an estimated, 4,500 commercial farmers, on title deeds land. The Meat Board of Namibia (2012) revealed that approximately 37 million ha of land was in the form of title deeds ownership, of

which 25%, (amounting to approximately 9,400,000 ha) was owned by so-called previously disadvantaged individuals and the state. Commercial area livestock production accounts for almost 70% of national agricultural output and comes from 52% of the farming/grazing land. Red meat production is the largest contributor to commercial farming income.

The commercial areas are divided into fenced ranches, further subdivided into a number of camps, through which some form of rotational grazing is normally practised. Compared to the communal areas, stocking rates tend to be more conservative. Due to factors such as limited bush and tree cutting for fuel and fewer browsing animals, large areas of the medium to higher rainfall savannahs, have become severely bush infested, to the detriment of the grazing potential for cattle and sheep. In response, there has been a marked increase in game farming and wildlife tourism in the commercial areas, in recognition of the difficulties and consequences of farming with mono-specific (grazer) domestic stock. This sub-sector is also characterised by an increasing number of so-called, "weekend farmers" – who are absent from the farm during the week, (or even longer periods at a time) (NTA, 2014).

2.2.2 The Communal Sector

Communal areas comprise 41%, of Namibia`s landmass, (48% of the total farming area), and is called home by approximately 60% of the population. These areas differ markedly from the freehold areas in their production systems, objectives and property rights – with only the cropping areas normally allocated to individual households, while the grazing areas are shared by members of a community. It should however be noted that, there is

an emerging trend of large fenced off exclusive ranches being established in the communal areas where a group of large and wealthy communal farmers are developing, (whilst it should be noted that this is an illegal practice and government has made some efforts to make people remove such illegal fences) (NTA, 2014).

Overall, the communal sector is characterised and dominated by so-called subsistence farming enterprises, (small fields of cereals, some vegetables and small numbers of cattle and goats used largely for own household consumption). These farms are low input - low output enterprises, based mainly on family labour with limited use of technology and external inputs. Whilst there are some exceptions and a significant number of communal farmers have substantial herds of cattle, the majority of communal farming households' cash income is derived from non-farming sources (NTA, 2014).

Furthermore, the commercial and communal agricultural sector in Namibia can be categorised into two main areas namely: livestock farming and crop farming. Livestock farming in Namibia comprises cattle, sheep, goats and pigs. In terms of output, beef production is the major economic contributor in terms of livestock and is distributed through the various geographical regions of Namibia (Van Wyk & Treurnicht, 2012).

2.3 The Global Pork Industry

Pork is eaten in the world more than any other meat (McGlone, 2013). As a result, global pork imports have increased on average by over 5% per annum over the past 8 years, (Bureau of Food and Agriculture Policy, 2014). The population of the world is

increasing slowly, but it is expected to plateau in the next 30–50 years. Growth in the population increases the demand for pork, (and other meats). Furthermore, as developing countries become more affluent, the population consumes more meat. World meat consumption will likely double in the next 30–50 years. This has forced industrialized nations to develop systems that would support mass production in an efficient and effective manner as compared to the mixed and grazing systems of a century ago (McGlone, 2013).

Table 2.1: Top 10 Pork Producing Countries in the World. Source: USDA Foreign Agricultural Services, 2016.

Country	**Thousand Metric Tons**	
	2015	**2016**
1. China	54,870	53,500
2. European Union (EU)	23,350	23,230
3. United States of America (USA)	11,121	11,334
4. Brazil	3,519	3,609
5. Russia	2,615	2,675
6. Vietnam	2,450	2,475
7. Canada	1,890	1,925
8. Philippines	1,370	1,385
9. Mexico	1,323	1,385
10. Japan	1,254	1,280

Figure 2.1: Top 10 Pork Producing Countries in the World – 2015: Source USDA, 2016

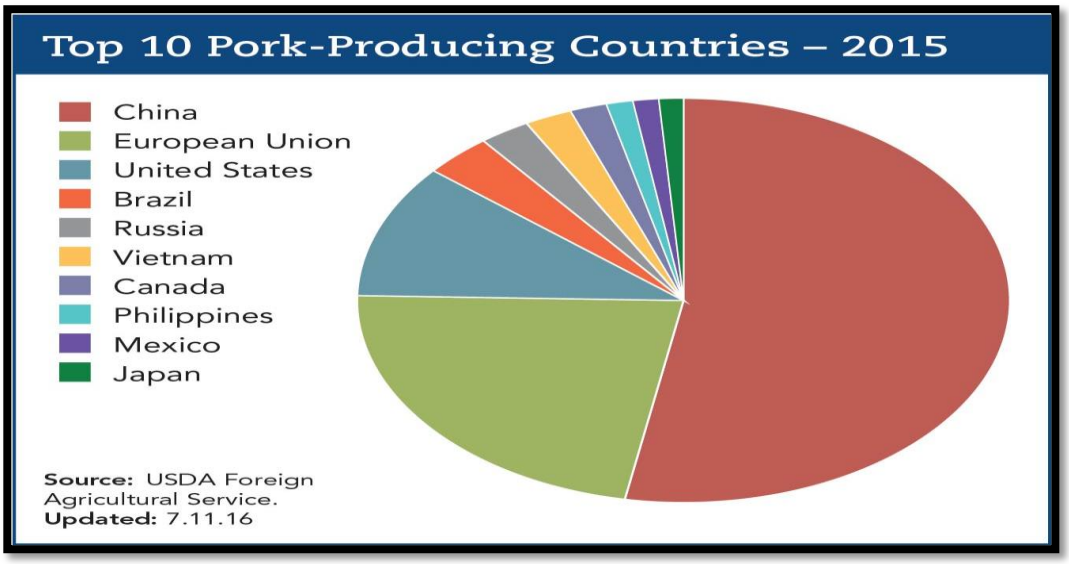


Figure 2.1 above clearly illustrates that China is the world's largest producer of pork, and accounts for more than one-half of it. China is followed by the European Union, (EU), who is the second-largest pork producer and the largest net exporter of pork, while the United States of America, (USA), is the world's third-largest producer of pork, and the largest exporter. U.S. pork production accounted for approximately 10 percent of global production throughout 2008–13. The EU accounted for just over 20 percent of global pork production throughout 2008–13. U.S. swine production is largely by large-scale commercial operations. Most U.S. pigs are raised by producers with over 5,000 swine and most are owned by firms that each own over 50,000 swine. The U.S. pork processing industry is also very concentrated, and has been throughout the period (United States International Trade Commission, 2014).

The USA was the world's largest exporter of pork globally during 2014. The USA exports, as a share of its total production had increased from 20% in 2008, to 23% in 2011 and 2012, before declining slightly to 22% in 2013. Exports also help to make U.S. pork production more profitable, not only by increasing overall demand, but because consumers in major export markets largely prefer cuts that are less valued in the U.S. market. For instance, U.S. consumers favor leaner cuts, while Chinese consumers favor cuts with more external fat (United States International Trade Commission, 2014).

Figure 2.2: World Pork Export Shares – 2015. Source: USDA Foreign Agricultural Services, 2016.

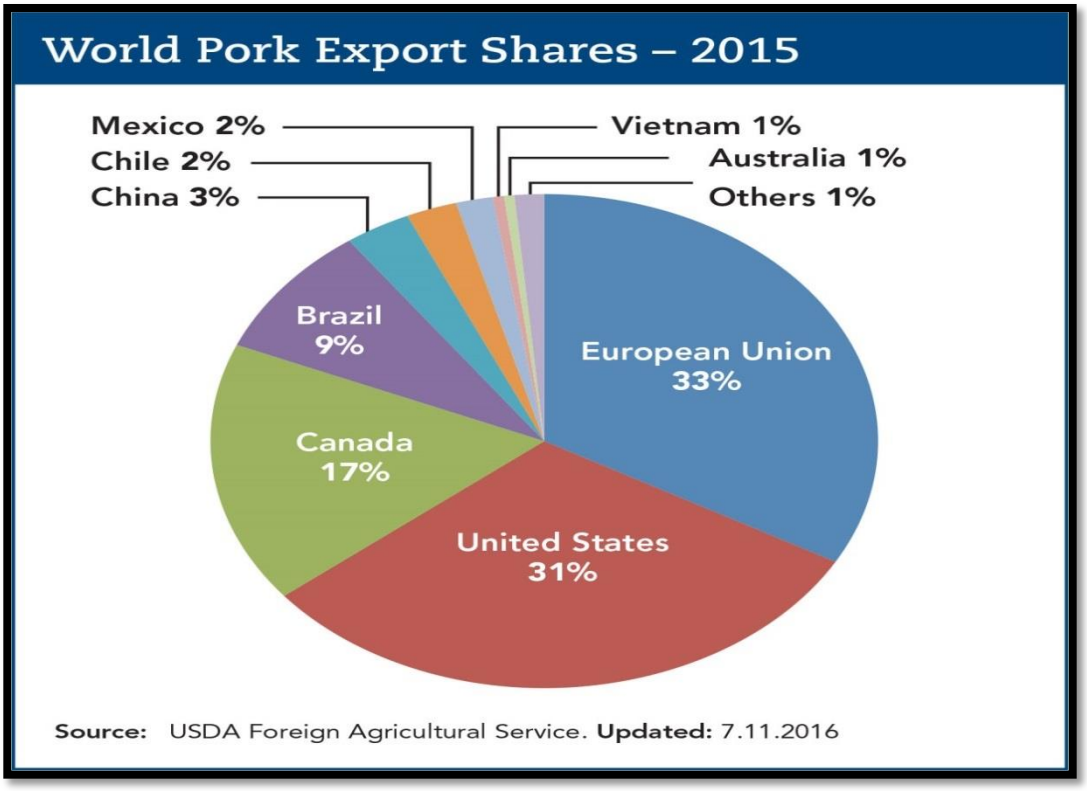


Figure 2.2 above depicts the top 9 export countries globally. The EU overtook the USA during 2015 as the leading exporting country. The EU exports accounted for 33% of the export share while the USA at 31% and Canada at 17% made up the top three (USDA, 2016).

In terms of global pork consumption China dominates with just over 50% followed by the EU at 19.4% and Russia 3% (Bureau of Food and Agriculture Policy, 2014).

In a study conducted by the Bureau for Food and Agricultural Policy (2014), they found that pork followed closely by poultry is the leading proteins consumed globally. The pie chart below clearly illustrates consumer preferences and the differences are expected to increase significantly in future. Due to the ever increasing access, limitations to land needed to rear cattle and sheep, the cost of pork and poultry production will become more and more competitive.

Figure 2.3: Global meat consumption in 2013. Source Bureau for Food and Agricultural Policy, 2014

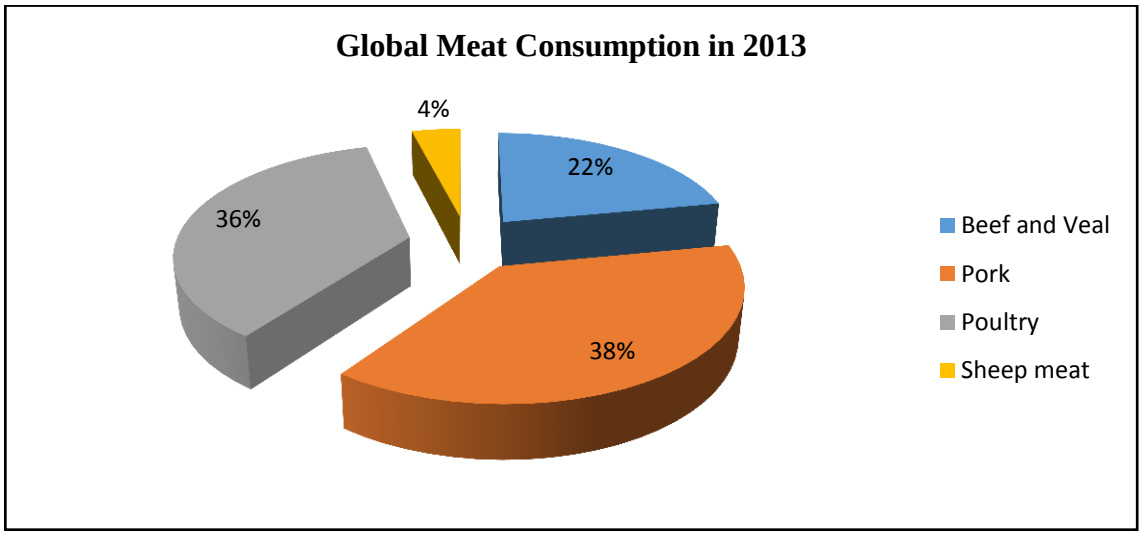


Figure 2.3 above clearly indicates that globally, consumers prefer pork and poultry at 38 and 36 % respectively, rather than beef and veal at 22%. Sheep meat consumption is around 4% due to religious and cultural beliefs (MLA, 2016).

This study will investigate whether consumer preferences in Namibia also relate to the global trend of increased pork and poultry consumption in terms of animal protein.

2.4 The South African Pork Industry

The South African pork industry is relatively small, in terms of the overall South African agricultural sector, as it contributes around 2.05% to the primary agricultural sector. The pork industry average gross value, over the past 10 years, amounted to R 2.7 billion per annum (Department of Agriculture and Forestry, 2015). In comparison with the global production trends, the South African pork industry contributes only 0.18% of total pork produced worldwide, rendering it an insignificant player in world markets, while at the same time making it vulnerable to changes in global pork markets (Bureau of Food and Agriculture Policy, 2014).

South Africans consumes about 2.9 million tons of poultry, beef and pork meat per annum, (1.8 million tons of poultry meat, 875, 000 tons of beef and 240, 000 tons of pork), while local production is about 2.4 million tons. As a result, local production needs to be complimented by imports.

South Africa's imports of pork are relatively small, compared to global imports and only represents about 0.2% in value and quantity. However, South Africa's pork imports show an increasing trend the past 15 years, but have not reached levels above 35,000 tons per year. South Africa's pork imports are primarily focused on rib imports from Europe and mainly from Germany. Canada also plays an important role in pork exports to South Africa, with about 20% market share in the imported products (Bureau of Food and Agriculture Policy, 2014).

2.5 The Namibian Pork Industry

Pig production, sale and the conversion to pork and meat products is not alien to the Namibian meat sector. In 1960, the requirements of Namibia were fully addressed by local production, with Damara Meat Packer, the largest supplier to the butchery sector of Namibia. Furthermore, many farmers in the area, south of the Veterinary Cordon Fence, produced milk for cream production and the skimmed milk was used to feed pigs, maybe not on a highly scientific level but good enough to give the many butchers, which were in every small town and hamlet, the necessary raw material to produce a good and acceptable product that was especially well received by the relatively large German population (Venter, 2014).

In the Northern Communal Areas, nearly every household had a pig or more. These pigs were mostly bred to have a maximum amount of lard and not much meat as fat was of prime concern to the daily staple diet of mahangu or Pearl Millet porridge. However, even before independence, the production of pigs on normal farms went down

considerably, because the farmers ended the production of cream in favour of beef cattle and the shift also ended the pig production on a small scale but with a large effect on the cash flow of these farmers. The production of pigs became more an independent operation and by 1990 a few but large piggeries supplied nearly all the requirements of Namibia. The normal size of these piggeries was about 300 to 400 sows with a targeted production of 20 to 22 piglets for every sow of which about 16 - 18 baconers were slaughtered after a period of 5-6 months. The yearly turnover of these entities was about 5 100 baconers and about 300 sausage pigs. At the time a lot of small butchers went out of business, mainly because of a dwindling supply of pigs (Meat Board of Namibia, 2012).

After independence, in 1990, one of the first Free Trade Agreements were concluded with Zimbabwe and immediately, baconers and sausage pigs were imported from Zimbabwe at about 20% lower prices than what the Namibian bigger producers could supply pigs and pig meat to the Namibian trade. Consequently most of the larger piggeries seized their operations and only Windhoek Schlachterei, produced their own pigs for slaughter in their butchery (Venter, 2014).

Table 2.2: Pig numbers per regions (Adapted from the 2015 Livestock Census). Source DVS, 2015.

Region	**Number of Pigs**
Erongo Region	1,152
Hardap Region	15,182
Khomas Region	662
Karas Region	776
Kavango East Region	1,376
Kavango West Region	1,698
Kunene Region	428
Ohangwena Region	11,084
Omaheke Region	187
Omusati Region	229,173
Oshana Region	7,757
Oshikoto Region	7,624
Otjozondupa Region	816
Zambezi Region	96
Total	**278,011**

Table 2.2 above provides an understanding of pork farming in terms of numbers per region. Traditionally, households in the NCA kept pigs as part of their farming operations. This is underscored by the huge numbers in the Omusati, Ohangwena and Oshana regions. The number for Omusati region is questionable when compared to the other regions and it's suggested that a typing error crept in during the compilation of the livestock census data. The Oshikoto and Hardap regions are well known for housing the

biggest pork producers in Namibia: Hailoli Piggery, in Tsumeb, (Oshikoto region) and Willrow Piggery in Mariental, Hardap region. Producers in the other regions mostly keep pigs in small numbers.

Despite the challenge of high feed prices in Namibia, the number of pigs slaughtered has reportedly increased four-fold to 28,700 head in 2009 from 7,500 head in 2000, with the animals increasingly sourced over the period from local suppliers. It is estimated that there are about 600 pig producers in the country, more than two-thirds of whom raise 3–10 pigs; meanwhile, the number of commercial producers who are members of the Pig Producers' Association, (PPA) has risen from three producers to over 30, (World Bank, 2012). This study will investigate why the growth in pork production in Namibia, is not as intense as compared to beef and sheep production, albeit the conducive environment created through the PMSPS.

Annual pig meat imports averaged 2,000–4,000 tons, between 2000 and 2009, which according to the PPA accounts for approximately 75 percent of local consumption. In contrast, imports of live pigs have fluctuated considerably from year to year, due to disease outbreaks in supplying countries. Pig prices nearly doubled between 2000 and 2009, (to N$1,138/head from N$534/head). After the FMD outbreaks in 2010 – 2011, many processors, wholesalers, and retailers reported being unable to obtain processed pig meat products.

2.6 Value Addition

Value addition is a concept derived from the term ‘add value’. Anderson & Hanselka (2017) defines value added agriculture as changes made to primary agriculture products (crops and livestock) that increase the product's value, thereby creating new economic activity and jobs. This is done by a process of activities that create value for the product and/or introduce the product to new markets; diversification and/or modification of primary agriculture products; or Pre-production modifications that increase. Boland (2009) broadly described adding value as the process of changing or transforming a product from its original state to a more valuable state. He further stated that many raw commodities have intrinsic value in their original state therefore value addition comes as these commodities are being improved or changed into finished products.

A broad definition of value added agriculture is to economically add value to a product by changing its current place, time and from one set of characteristics to other characteristics that are more preferred in the marketplace. A more narrow definition would be to economically add value to an agricultural product by processing it into a product desired by customers (Boland, 2009).

The USDA (2018) defined value addition as the change in the physical state or form of the product (such as milling wheat into flour or making strawberries into jam). It further stated that the physical segregation of an agricultural commodity or product in a manner

that results in the enhancement of the value of that commodity or product (such as an identity preserved marketing system).

As a result of the change in physical state or the manner in which the agricultural commodity or product is produced and segregated, the customer base for the commodity or product is expanded and a greater portion of revenue derived from the marketing, processing or physical segregation is made available to the producer of the commodity or product.

Anderson & Hanselka (2017) stated that "Value" is usually created by focusing on the benefits associated with the agribusiness product or service that arises from:

- Quality — does the product or service meets or exceeds customer expectations?
- Functionality — does the product or service provides the function needed of it?
- Form — is the product in a useful form?
- Place — is the product in the right place?
- Time — is the product in the right place at the right time?
- Ease of possession — is the product easy for the customer to obtain?

That brings us to the question, **what's driving "Value Addition"?**

Agribusiness, particularly the food sector, is rapidly consolidating and increasingly responding to the changing tastes and preferences of consumers. Consumers have higher incomes than ever before. They are focusing more on convenience, quality, variety, service, health and social consciousness. They are also faced with the increasing value of (and demands on) their time. In a nutshell, consumers are more value conscious than ever. Consumers' rising disposable incomes and the market fragmentation caused by retail consolidation exacerbate competition, but at the same time leave many niche markets to be exploited. This creates opportunities for producers to add value to their products (Anderson & Hanselka, 2017).

Value addition goes hand in hand with value chains since value addition to a product does not only starts at the beginning of the value chain but takes place along the chain. Porter (1985) who defined it as a representation of a firm's value-adding activities based on its pricing strategy and cost structure. He further stated that his approach by was based on actual and potential areas of competitive advantage for the firm upon which he argued that individual firms each have their own value chains that are embedded in value systems, each of which have different functions within an industry or sector that influence and are influenced by other actors in the network.

Ngore (2010) in a study where he evaluated factors influencing value addition by butchery agribusinesses in Igembe north district, Kenya, found that value addition is

influenced by, socioeconomic, market and product factors as well as business strategic goals. He further stated that business strategic goals that the operator wishes to achieve through value addition. Socio-economic factors are background factors that result from influences exerted on the business by other activities, responsibilities as well as inbuilt human characters of the entrepreneur. Market factors are characteristics of the local or the wider meat market and other markets (like credit) that are beyond the control of the entrepreneur and affect his agribusiness. Finally value addition activities depend on the nature and other product specific factors. These four categories of factors interact to influence whether the operator adds value and the level of value addition (Ngore, 2010).

Mapiye *et al.* (2007) analyzed the potential for value addition of Nguni cattle products in the communal areas of South Africa. They concluded that development and research programmes aimed at reintroducing the Nguni breed in the rural areas should take a holistic and participatory approach in agro-processing and value-addition of Nguni cattle products. Increased value addition can be achieved by provision of appropriate incentives for the establishment of agro-processing industries in the rural areas and promotion of partnerships between communal farmers and agribusiness.

Admassu (2007) found that consumers' decision on beef consumption was heavily influenced by quality and safety attributes. The significant attributes were found to be fat content, freshness, neatness of butchery and personnel, abattoir stamp and price. Some other attributes like gender were found to be insignificant. Social economic

characteristics of the consumers were found to significantly influence amount of meat demanded by the households.

Consumers are becoming more aware of the relationship between diet and health and this has increased consumer interest in nutritional value of foods. This is impacting on demand for foods which contain functional components that play important roles in health maintenance and disease prevention. For beef, much attention has been given to lipids. It is evident that opportunities exist to enhance the content of health promoting fatty acids in beef and beef products offering opportunities to add value and contribute to market differentiation. However it is imperative that these approaches to deliver "functional" attributes do not compromise on the health value or the taste of the beef products (Scollan *et.al* 2006).

Ghandhi *et al.* (2001) pointed out that one of the constraints to agro industry development is lack of finance. Financial institutions are mainly geared to lending for fixed capital needs, while agro industries, have a large requirement of working capital. Banks lend working capital, if at all, at higher interest rates than other capital loans.

Kibaara & Nyoro (2007) did a comparative analysis of emerging models of agricultural finance that have expanded the agricultural finance frontier to the smallholder farmers. They found that agricultural finance is very important because farming credit takes the

highest proportion of rural credit needs. They also revealed that state run model of agricultural finance was the least sustainable while community based models were the most likely drivers of change in rural agricultural finance.

2.7 Theories of Value Addition

2.7.1 Theory of Collective Behavior.

Value-added Theory of Collective Behavior argues that certain social conditions are necessary for the development of social movements. The theory that collective behavior develops only when several elements are present in a social situation was found to be true. Each element adds to the likelihood of collective behavior occurring, but all must be present for it to occur. The elements are structural strain (perceived or real social conflicts); structural conduciveness (an acceptance by the collective, such as a crowd, that their grievance cannot be resolved through the normal channels); a shared belief about how to respond to the situation together with precipitating factors, which reinforce the shared belief; mobilization of participants to action by leaders and by communication among the crowd; and a lack of adequate social control (Bradenburger & Nalebuff, 2018).

2.7.2 Theory of Business

The Theory of Business creates value that can be captured is the essence of any business. There is a fundamental duality here: whereas creating value is an inherently cooperative process, capturing value is inherently competitive. To create value, people

cannot act in isolation they have to recognize their interdependence. To create value, a business needs to align itself with customers, suppliers, employees and many others. That is the way to develop new markets and expand existing ones (Bradenburger & Nalebuff, 2018).

2.7.4 The Game Theory

The Game Theory provides a different way of looking at the world. In contrast, conventional economics takes the structure of markets as fixed. People are thought of as simple stimulus-response machines. Sellers and buyers assume that products and prices are fixed, and they optimize production and consumption accordingly. Conventional economics has its place in describing the operation of established, mature markets, but it does not capture people's creativity in finding new ways of interacting with one another (Bradenburger & Nalebuff, 2018).

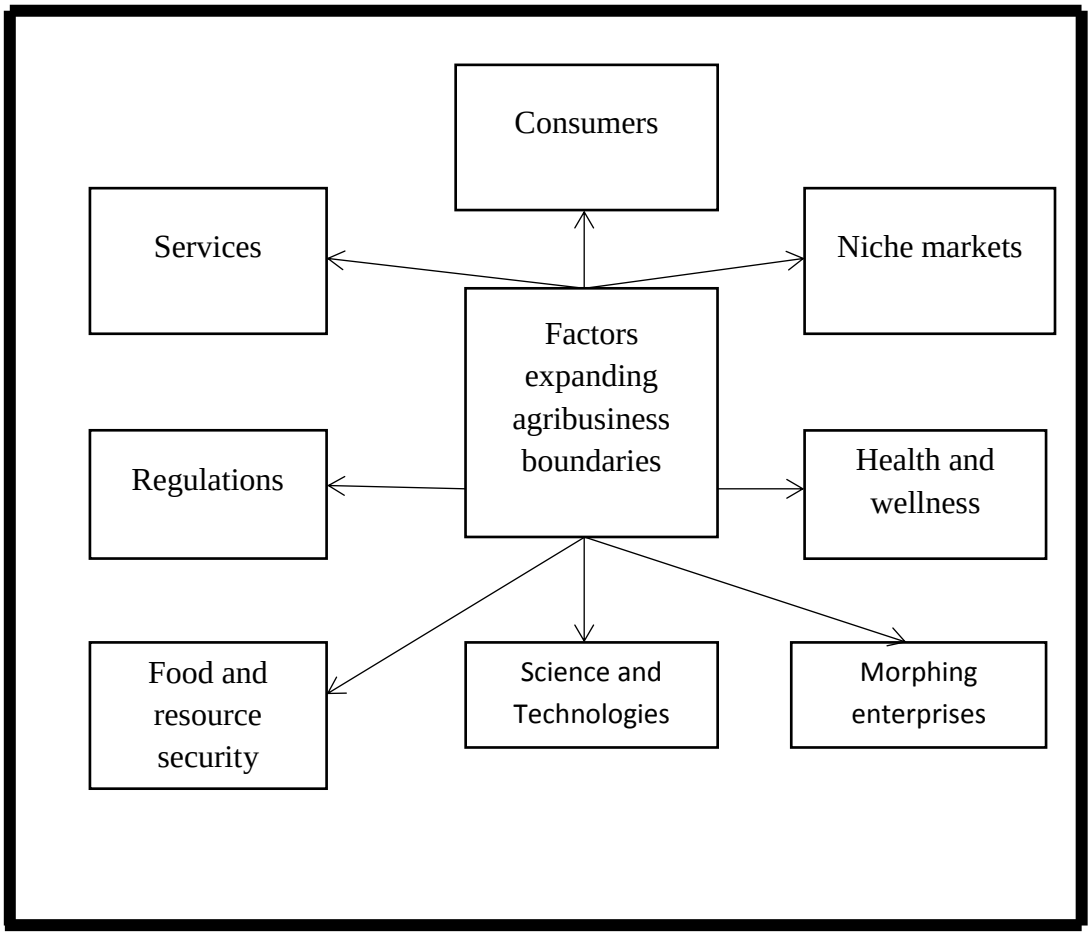
In game theory, nothing is fixed. The economy is dynamic and evolving. The players create new markets and take on multiple roles. They innovate. No one takes products or prices as given. If this sounds like the free-form and rapidly transforming marketplace, that is why game theory may be the kernel of a new economics for the new economy (Bradenburger & Nalebuff, 2018).

2.8 Conceptual framework of value addition

Value addition is influenced by, socioeconomic, market and product factors as well as business strategic goals. Business strategic goals that the operator wishes to achieve through value addition. Socio-economic factors are background factors that result from influences exerted on the business by other activities, responsibilities as well as inbuilt human characters of the entrepreneur. Market factors are characteristics of the local or the wider meat market and other markets (like credit) that are beyond the control of the entrepreneur and affect his agribusiness. Finally value addition activities depend on the nature and other product specific factors. These four categories of factors interact to influence whether the operator adds value and the level of value addition (Ngore, 2010).

Edwards & Shultz (2005) discussed the forces driving shift of agribusiness from farm to the market centric. The framework below as depicted in figure 2.4 represents the factors that drive the shift.

Figure 2.4: Factors driving the shift from farm to market, Source, Ngore (2010)



2.9 Value addition in Namibia

Since the attainment of independence in 1990, the Government of the Republic of Namibia has initiated policies to improve the life of its people and grow its economy. From the onset, the Government recognised that in order to do so, it would have to institute policies that would support the promotion of internal development and growth, and that promote a balance between free market conditions and the advancement of its own internal industrial development policy objectives.

In terms of Vision 2030, Namibia is to be transformed into an industrialized country with diversified, competent and highly productive human resources and institutions (NPC, 2004). As part of this industrialization process, a White Paper on Industrial Development was drafted during 1992. The need for local value addition was already raised in this first White Paper on Industrial Development in 1992, which was subsequently reviewed in 1997 and thereafter adopted as the Second Industrial Policy and Strategy of 2002. The main aim of this White Paper was to redirect the Namibian economy from a focus on primary production and the export of raw materials, to adding value and exporting finished products (Namibia Manufacturing Association, 2008).

This was echoed by the industry which formulated the following definition of value addition:

…***"Value addition is when additional production and/or manufacturing operations in terms of land, labour, capacity, utility, quality, appearance or form created incremental financial value at any particular stage of production by rendering the end product in monetary terms more competitive in the market, without impacting negatively on any of the components of such value chain"…*** (Meat Board of Namibia, 2006).

Cabinet redefined value addition as per Cabinet decision 6/17.04.07/007 to read as follows:

..Value addition is the transformation of an original product into a new product or products by processing and/or manufacturing operations across the value chain of the industries with special emphasis on the degree of transformation…

According to the Namibian Manufacturing Association (2008) a clear distinction between primary, secondary and tertiary value addition needs to be made. Where primary value addition is the part of the production process that takes place from the producer up to delivering to the processor. Secondary and tertiary value addition is defined as the process from the processor stage, up to where the final product is delivered to the consumer. This implies that all stakeholders in the value chain should benefit from the eventual value added product presented to and purchased by the consumer.

To address this, the Government of the Republic of Namibia, introduced the Growth at Home Strategy also known as "Namibia`s Execution Strategy for Industrialization", (MTI, 2014). Some of the central tenets of Growth at Home include: local value addition; targeted and phased approach; promotion of regional value chains and bilateral cooperation; infant industry protection, including safeguarding of policy space; export promotion and continuous reform of the business environment, including investment attraction. Due to the abundance of natural resources in Namibia, some of the above-mentioned views of the GRN, aim at ensuring that value is added to these raw products

and no employment is exported to foreign countries, which will go a long way towards addressing the issue of poverty reduction.

This study will investigate whether the PMSPS has delivered on its goals and objectives as proposed with the inception of the scheme back in 2012. Thus, the design and implementation of conducive policies, especially in developing countries is of critical importance.

In a study conducted by Mwanaumo, (1999), by reviewing the reforms in the Zambian agricultural marketing strategies, it was found that policy reforms in Zambia are aimed at fully liberalizing markets to enhance private sector participation through free market development. This echoes the fundamentals of the growth at home strategy that firstly supports value addition, upgrading and diversification for sustained growth; secondly, securing market access at home and abroad; and finally improving the investment climate and conditions.

Mwanaumo, (1999), further revealed that one of the key factors to realizing the agricultural potential in Zambia, is an enabling and supportive policy environment. An enabling policy framework is integral to the transformation of Zambian agriculture into the mainstay of the Zambian economy. Whilst weather and other exogenous factors, may have limited the sector's ability to grow at above the population growth rate, by and large, agricultural policies of the period, before 1991, were unfavorable for agricultural sector growth.

The study will investigate the economic impact of the PMSPS, on value addition, since value addition of raw materials had been highlighted as a major challenge by the government of Namibia. The exportation of raw materials results in the exportation of employment creation and extra foreign exchange.

2.10 An overview of value addition in the livestock industry

Value-added agriculture is an important strategy to both agricultural entrepreneurship and rural development (Lu & Dudensing, 2015). They further explained that, however, current definitions of value-added agriculture lack a framework establishing economic linkages between consumers' preferences and farm practices. Thus, policies and grant programs targeting value-added agriculture may be ineffective in assessing consumers' propensity to spend, farmers' goals and assets, and community development strategies. Similarly, farmers may be chasing fads mismatched to their resources and advantages.
Value addition has the ability to create employment, absorb excess labour from agriculture, enable rural residents to capture more margins from agriculture, hence raising rural income levels (Ngore, 2010).

The Namibian livestock sector that has this long tradition of rearing and exporting around 85% of its production, due to its small domestic market, was the first sector to be targeted by the Growth at Home Strategy. Back then, SWAPO, during its congress of 2003, took a decision to support local processing and value addition, in order to stimulate job creation through restricting the export of raw materials. In a study done by Schutz, (2009), it highlighted government's efforts to address the exportation of raw

material by implementing a Cabinet decision that discouraged the export of live animals on hoof and unprocessed products thereof. In order to allow the livestock sector to adjust, Cabinet exempted the implementation of the measures per specie. Schultz, (2009), further alluded to the objective of this first Cabinet decision to promote value-addition, was per resolutions 22/17.09.02/007 and 29/14.10.03/009 that stated the following:

- The imposition of a 30 % levy on the exports of slaughter-ready, (mature), cattle and raw hides as well as a 15% levy on the exports of sheep and goat skins with effect from 1 November 2003;
- The exemption of live goats from the 15% export levy measure, for a period of two years, pending the development of markets for goat meat;
- The exemption of live sheep from the 15% export levy on condition that the existing slaughtering facilities and tanneries in the country are utilized to full capacity within four years as from 1 November 2003;
- The exemption of weaners from the proposed export levy system for a period of three years; The establishment of a dedicated fund under the custodianship of the Ministry of Finance, into which the levy revenue will be kept and administered towards the development of the beneficiary sector; and the establishment of an Implementing and Monitoring Committee consisting of the Ministries of Trade & Industry, Agriculture, Water and Rural Development; and Finance as well as the Meat Board to drive and co-ordinate the effective implementation of the export levy control measures and the realization of the local value-addition objectives in the livestock tannery sector.

The objectives of these measures were to:

- Promote and improve local value-addition;
- Promote employment creation;
- Develop, support and protect industry slaughter capacity and ensure diversification of trade in meat and meat products;
- Promote and improve income and foreign exchange earnings;

These Cabinet decisions were gazette into Government Notices as required by law. To this effect Notice 61/2004 was gazetted by the Ministry of Finance under the Customs and Excise Act, 1998 (Act No. 20 of 1998) while the Meat Board gazetted Notices 115/04, 129/04 under the Meat Industry Act, 1981 (Act No. 12 of 1981) (Schutz, 2009). Namibia developed all these different policies and strategies on value addition, but does it benefit the livestock industry?

In a study conducted by the World Bank, (2012), on the "Livestock competitiveness, economic growth and opportunities for job creation in Namibia", it found that government's stated objective is to add value to the raw material originating from the livestock sector, it is not clear that policies in place have optimized the sector's contribution to the economy**.** In fact, there is evidence that some policies have adversely affected the sector. However, the overall impact of the policy on the sector is difficult to measure, due to the lack of good quality data, in this case, animal numbers, and the complexity of disentangling the myriad of factors which affect markets, e.g. shifts in product demand, changes in the structure of the industry, etc. However, a preliminary

review of data and expert opinions indicates that animal numbers have declined despite the government's efforts to the contrary. Specifically in the sheep sector, with the implementation of the Small Stock Marketing Scheme in 2003, then the total number of sheep marketed was around 1.3 million. When compared to the number marketed during 2016, it's down by almost 50% to 675 000, considering that other factors such as drought also contributed to this downfall.

2.10.1 An overview of value addition in the sheep sector (Small Stock Marketing Scheme).

Cabinet resolved by decision, 29th/14.10.03/009, to stimulate local value-addition by the "exemption of live sheep from the 15% export levy on condition that the existing slaughtering facilities and tanneries in the country are utilized to full capacity within four years as from 1st November 2003 (LPF, 2016). In support of the above, the then Honourable Minister of Agriculture, Water and Rural Development, upon the request of the Meat Board, published on 1 June 2004, the following notice, (Notice No. 129), in the Government Gazette, No. 3214, to be effective from 1 July 2004:

> "***…in the case of the export of sheep from Namibia, to export only such quantity of sheep, which in number, does not exceed the quantity of sheep which such person has from that date delivered or caused to be delivered to an abattoir in Namibia for slaughtering and which has been slaughtered***", (i.e. the 1:1 sheep export formula).

The Meat Board, simultaneously gazetted and implemented the **"Small Stock Marketing Scheme",** on 1 July 2004 to affect and control implementation of the above export restriction.

Notice No. 129 was replaced by Notice No. 1, (Government Gazette No. 3365) on 3 January 2005, and allowed for the export of one sheep for every two sheep slaughtered locally, (i.e. the 1:2 sheep local slaughter: export ratio) as from 1 March 2005. This was necessitated by the increase in slaughter capacity as a result of the commissioning of two new abattoirs at Aranos and Keetmanshoop, respectively (LPF, 2014).

Notice No. 1, was withdrawn and replaced by Notice No 94/2006 to allow "in the case of the export of sheep from Namibia, to export only such quantity of sheep which in aggregate does not exceed one sheep for every six, which such person has, during the period of 90 days immediately preceding the submission of the application for such permit, delivered or caused to be delivered at an abattoir in Namibia, for slaughtering and which has been slaughtered" with effect from 01 September 2006 (LPF, 2016).

As a result of the 2013 drought, and upon the joint request of the Minister of the then Trade Industry and Agriculture, Water and Forestry, The Meat Board relaxed the 1:6 export ratio and implemented a 1:1 export ratio as a drought mitigating measure to relieve pressure on the pastures. This ratio is currently in place for the marketing of sheep (LPF, 2016).

Figure 2.5: Depicting the marketing trend of slaughtering exports versus live exports. Source, Meat Board of Namibia, 2015.

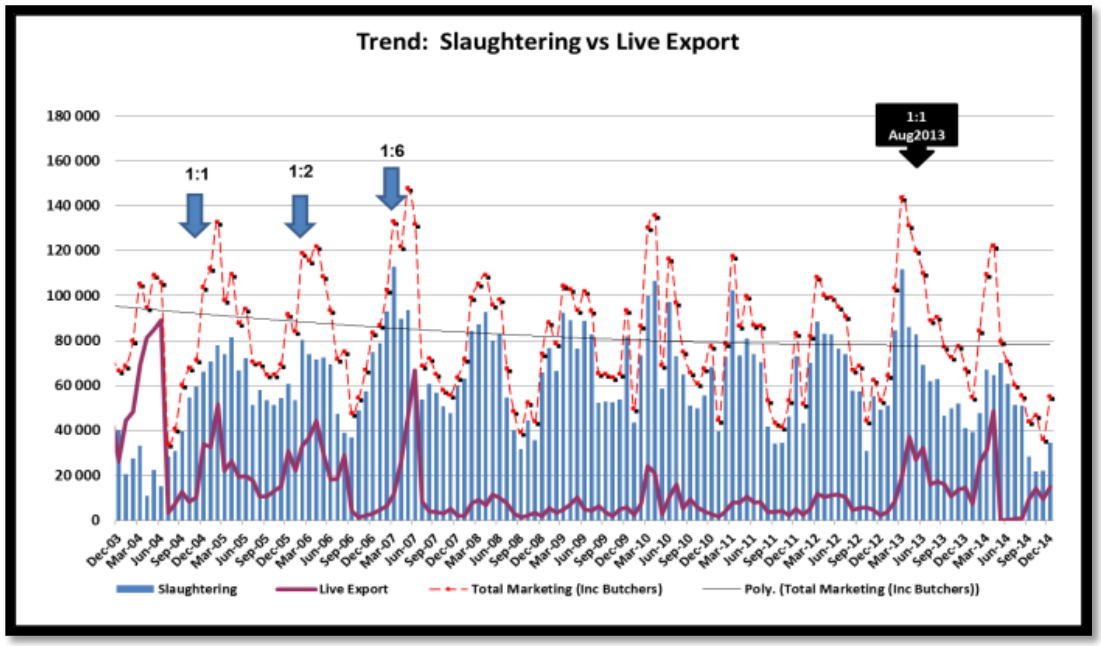
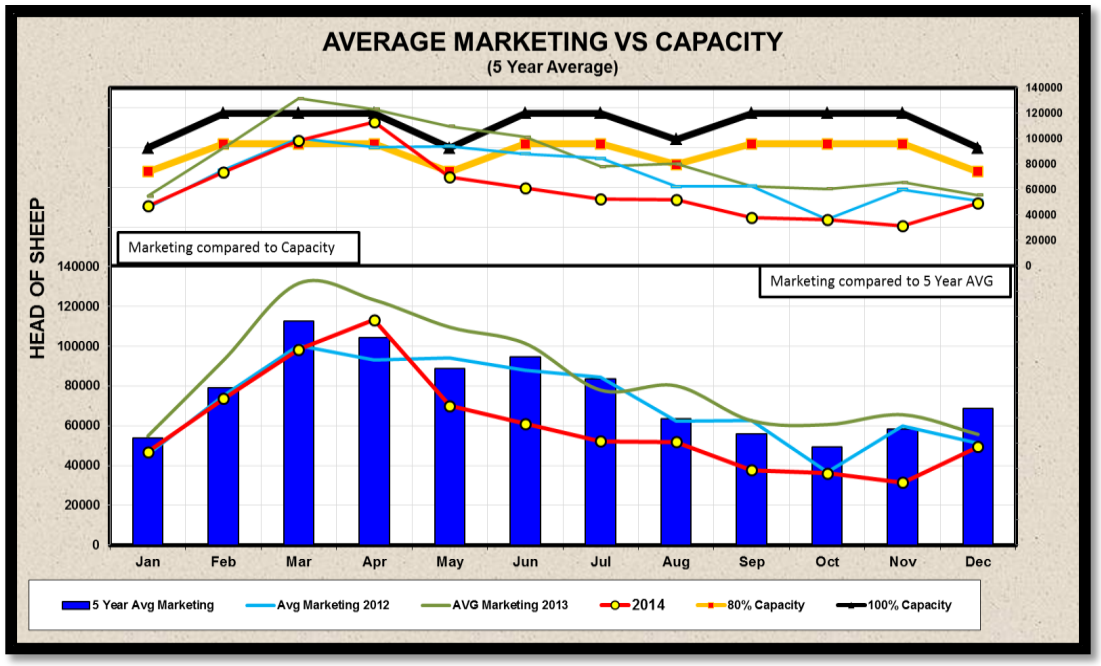


Figure 2.5 above depicts the long term declining marketing trend for small stock. Notably, the marketing of sheep depicts a downward trend, resulting in abattoirs operating below capacity, leading to increasing operational costs. The situation might even be worsened by the devastating drought Namibia is currently facing. Furthermore, sheep marketed during the drought period are usually of lower weight and grades and impact on markets and returns.

Figure 2.6 below visualizes that the marketing during the 2014 production year decreased by 21% compared to the 5 year average. Compared year to year, a total of 721 816 sheep (this figure includes export abattoirs and live exports), were marketed

during 2014, of which 559 160 sheep were slaughtered at export abattoirs and 162 656 exported on hoof to regional markets.

Figure 2.6: Average marketing versus capacity. Source, Meat Board of Namibia, 2015.

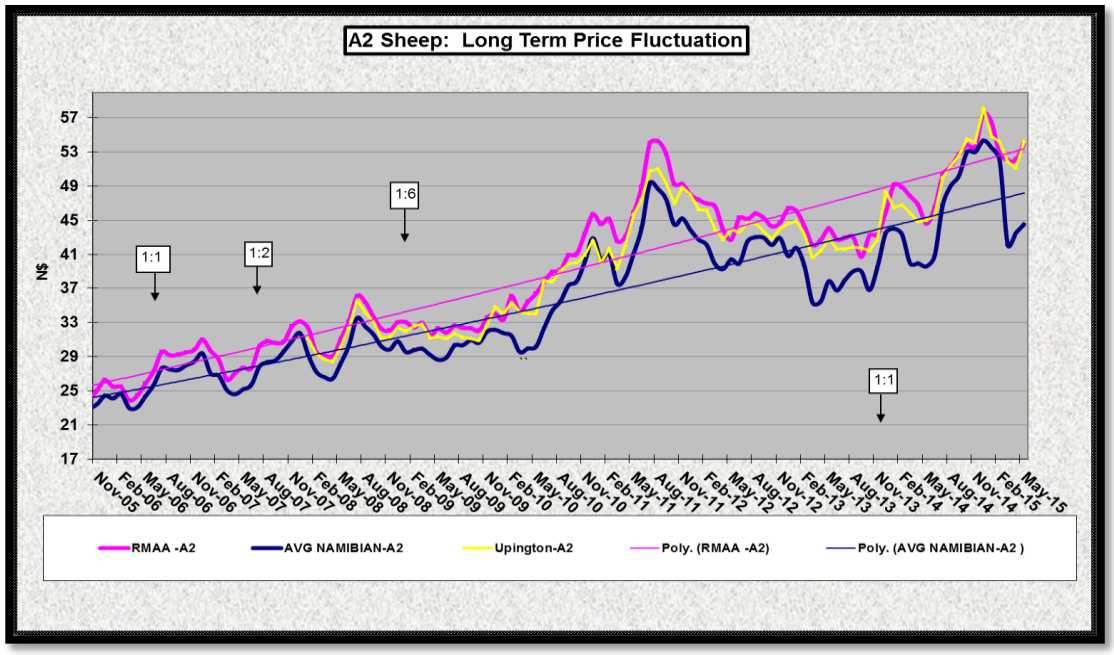


Regarding sheep prices, Figure 2.7 below (Extracted from the submission on the Long Term Marketing Strategy of Sheep, submitted by the Livestock Producers Forum to the Cabinet Standing Committee on Economics in June 2016), shows the price differentials between South Africa and Namibia. Both the Namibian real price and an NCPI-adjusted price per kilogram for A2 grade meat are shown, compared with the Red Meat Abattoir Association (RMAA) price in South Africa. Since 2006, with the implementation of the 6:1 export ratio, the Figure shows that the price paid by Namibian processors fell behind the South African price, with no real recourse to local producers to sell their sheep

elsewhere. This trend led to loss of employment opportunities in primary production by small stock farmers which scaled down their operations considerably.

Figure 2.7 below, further shows that the price differential reduced in 2013, with the reintroduction of the 1:1 export ratio. Currently, the widening price differentials are experienced in grades A2 as from January 2015, due to various factors mentioned in 5.1 and the current drought situation.

Figure 2.7: Price differentiation between Namibia and South Africa. Source, Meat Board of Namibia, 2015.



In their submission to the Cabinet Standing Committee on Economics and Natural Resources, the LPF proposed the following recommendations as "a long term marketing strategy for the sheep industry" (LPF, 2016):

- **Phase-out the current 60% levy on raw, dry/wet, salted/non salted sheep and goat skins and replace it with first of right refusal concept;**

  Currently, a 60% levy is payable on the export of raw and wet salted skins. The current market price per skin in Namibia stands at N$80 while the same skins fetch a higher margin of N$160/skin in RSA markets. When translated into a kg price, this result in an N$4/5 differences less for Namibian producers.

- **Maintain 1:1 sheep local slaughter: export ratio;**

  The Meat Board should maintain the current 1:1 sheep local slaughter: export ratio. This measure will be successful if it is implemented concurrently with a. above. In light of Namibia's dependence on RSA markets, it is strongly recommended to encourage and strengthen local institutional capacity for retaining and on an economical basis rear Namibian livestock to the weight at which it can be slaughtered, through the creation of feedlots integrated with abattoirs.

- **Bone-in export to EU/Norway;**

  Bone-in exports to the EU is a long outstanding issue for Namibia. If realised, it has the potential to unlock current unutilised capacity within the country for small stock. It is thus critical that this issue receives the dedicated focus from the Ministry and be prioritised with utmost urgency.

  Considering that South Africa is a carcass market, no real value addition opportunities are considered viable for this market. Therefore, bone-in exports to the

EU is considered as the viable option for abattoirs to add value to sheep. With bone-in exports, about 90% of the carcass can be exported with a premium of between N$3.00-N$5.00 per kg.

2.10.2 An overview on value addition on the poultry industry in Namibia

Another value addition strategy adopted by the Government of Namibia is the **"Restrictions on importation of poultry products into Namibia"** that resorts under the **Import and Export Control Act, 1994** (MTI, 2013).

Cabinet by its Decision No. 1st 12.02.13/009, approved the imposition of an import permit requirement for poultry products as a complementary measure to be limited to a maximum of 600 tons per month for importation into Namibia of poultry products derived from slaughtered fowls of the species *Gallus domesticus* intended for human consumption. On 5 April 2013, a Government Gazette Notice No. 5167, with regards to restrictions on importation of poultry products into Namibia was published. The Meat Board of Namibia was tasked to administer the quota system on behalf of the Ministry of Trade and Industry (MTI, 2013).

This scheme contains the following parameters:

- A quota issued by the Meat Board of Namibia.
- Summary of imports of poultry products over the past 12 months as per actual tariff schedule.

- Name of the importer (if the importer is represented by a customs broker, the name and address of the broker must be provided).
- Country of origin of the products to be imported (documents required).
- Country from where the product is being imported into Namibia
- Namibian port of entry;
- Date of shipment from the country of export
- Proposed date of entry of consignment into Namibia
- Product code, quantity and value in Namibian dollars of the products to be imported per current application.
- Veterinary import permit issued by the Ministry of Agriculture Water and Forestry.
- Proof of import utilization of the previous import permit issued.
- Proof of business registration in Namibia
- Proof of VAT registration in Namibia

An individual import permit is required for each consignment / shipment. Import permits issued will have a validity period of 30 days around the date of arrival, specified by importers, (5 days prior to it and 25 days after). Under no circumstances will utilization of permits for one quota period be allowed in the next quota period. Requests for import permits will be accepted within 30 days prior to the expected date of arrival of the shipment in Namibia. Furthermore, import permits are not transferrable amongst firms and an application will not be processed if incomplete information is provided. Finally it's critically important that the description and statistics of goods for which an import

permit is required, is clearly indicated on the application form (Meat Board of Namibia, 2013).

2.10.3 Overview of value addition in the pork industry

Namibia is a net importer of pork and raw pork products. The South African pork industry, due to its economies of scale, can easily dominate the Namibian market. Their production output per week is comparable to the annual production capabilities of Namibia's pork producers. However, the South African industry experienced a very challenging period since the end of 2011 to the third quarter of 2013, due to low prices and high feed costs. In the same time, pork production in Namibia grew by more than 300%, since the beginning of the year 2000, but also came under severe financial pressure in 2011/12, due to high feed costs since it has to import its feed rations from the RSA. A study conducted by Venter (2014) found that feeding costs in pork farming makes up 72% of the total production cost.

This has resulted in the pork industry deliberating on mechanisms to protect the local industry and to make it more sustainable. The industry agreed on the fact that restrictive measures would be the only tool to make the industry competitive and to regulate the importation of cheap pork and pork products into the Namibian market. This lead to the development of the Pork Market Promotion Scheme, (PMPS), to be implemented by the Meat Board of Namibia which eventually saved the industry from collapse. This move, together with higher international prices, triggered producer prices to recover as pork

imports into South Africa were drastically reduced since July 2013 (Meat Board of Namibia, 2013).

The Pork Market Share Promotion Scheme aims to promote the local pork production as well as to protect the industry against the importation of low priced pork meat and products as part of the Infant protection policy. This is with the intention of growing the pork industry towards self-sufficiency in local pork supplies (Meat Board of Namibia, 2013).

The aim of the scheme was:

- To ensure the viability of the pork industry
- To ensure the co-existence of the pig production and processing sector
- Protect the production sector against external influences (dumping, stockpiling etc.)

2.10.3.1 The scheme was implemented as follows:

- A quantitative restriction on the importation of fresh /frozen pork carcasses/cuts by a ratio of 1:3 (Local purchases (kg): Imports (kg));
- All importers and producers partaking in the scheme, re-registered with the Meat Board and that no permit will be issued to unregistered producers;
- Producers/Importers/Processors partaking in the scheme handed in a 3 monthly production/import requirement schedule to the Meat Board, as well as a monthly performance report;

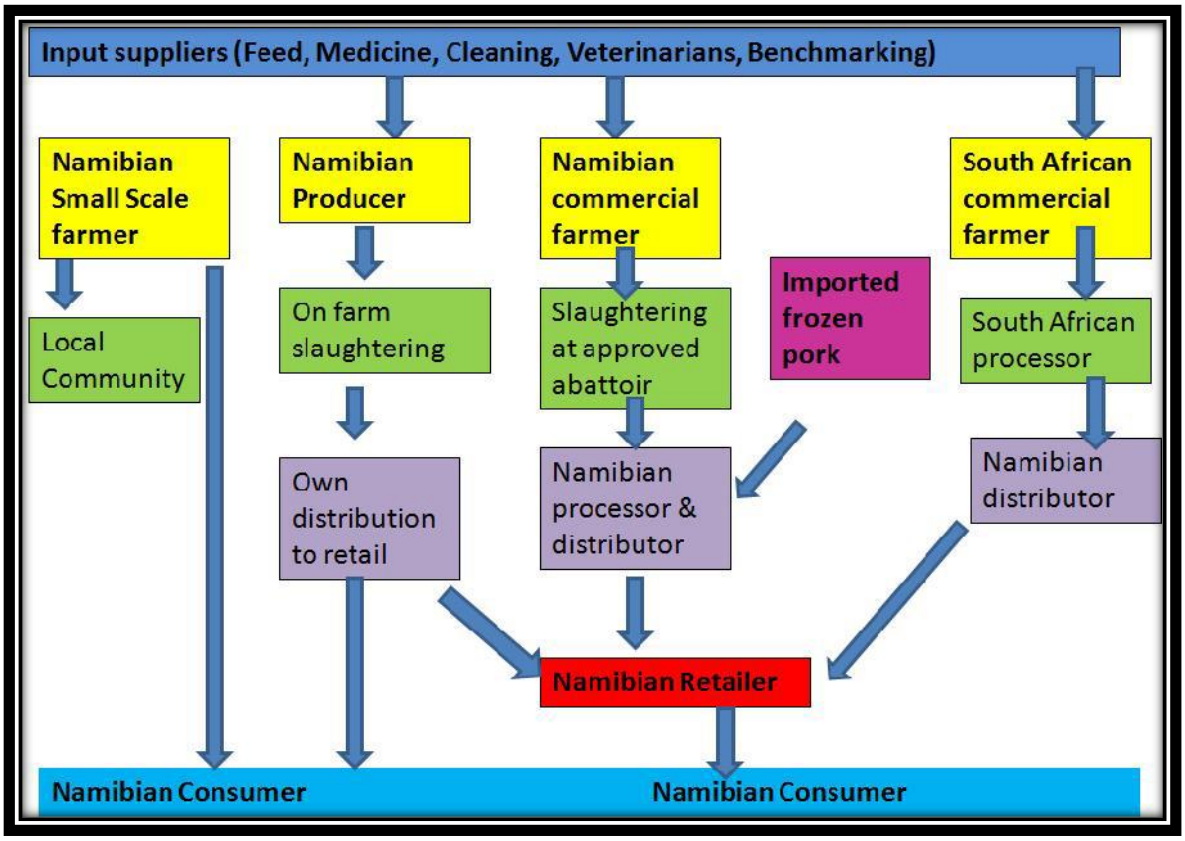
- Exporters can claim the share of processed pork products exported for consideration outside the scheme quota;
- No/part delivery of a pork supply contract by a producer to a processor may be considered outside the scheme (Proof is to be submitted by either processor/producer);
- In the event of local pork shortages, imports will be allocated to buyers on a percentage based on the previous three months' local purchases;
- No pig producer will be allowed to import pork;
- The maximum/ceiling pork price per kilogram will be calculated monthly as:

> ***RVAV*** *(Avg. BO/BP grades) +* ***Transport*** *(AVG Cape Town and JHB to Windhoek) +*
>
> ***Meat Board Import Levy*** *+* ***Slaughter fee*** *+ 20% Incentive*

- Processed products as well as casings are excluded from the scheme.

Historically, from the year 1999 - 2005, Namibia used to import a lot of pork meat, however since 2006 to 2014 local production increased. With the introduction of the Pork Marketing Share Scheme in 2012, local production increased to the extent that it surpassed the importation of pork meat. The Namibian pork industry is not large enough to cater for the international market, as a result, the piggeries only slaughter for the local market which is somewhat not enough, and thus there is still a significant quantity of pork meat imports, (Ijambo & Ingula, 2016).

Figure 2.8: Pork value chain: Source Venter, 2014.



2.10.3.2 Auditing of the Pork Market Share Promotion Scheme

An audit on all pork products imported into Namibia will be conducted by an independent auditor to be appointed by the Meat Board. The scope of the audit assignment will be the verification of the correctness of all documentation, control and management of the Pork Market Share Scheme (Meat Board of Namibia, 2012).

In a general market overview of the Namibian pork market, "Before and after the PMSPS came into force and the reasons for the introduction of PMSPS conducted by the Meat Board of Namibia, (2017), it was highlighted that South Africa as Namibia's

principle trading partner, enjoys economies of scale when it comes to pork production. This therefore means that they are able to produce pork at a larger scale and at a much lower cost. It is also important to note that South African producers obtain feed at a much lower cost, compared to the Namibian producers, who otherwise have to import feed. Coupled with the transportation costs involved, pork production in Namibia is a very costly exercise, therefore also evident in the producer price.

Before the protection was granted, retailers could import all of their pork requirements from South Africa, at a much lower cost than what they would otherwise purchase it locally. As a result, pork producers did not have a market where they could sell their products. Although Namibia is a net importer of pork, the Pork Market Share Promotion Scheme creates a level playing field, by ensuring that importers purchase local pork products that are under the scheme, thus controlling the potential surge in cheap imported pork products into the country.

Thus far, the PMSPS reaped the benefits as intended but it's cautioned to keep on monitoring the progress made to avoid the scenario of "**The impact of price and trade policies on livestock competitiveness: The case of Argentina"** (World Bank, 2012).

The study will analyze the performance of the PMSPS since its inception.

In Argentina, restrictive trade policies and domestic price setting for beef, introduced by the Government over the past three years have driven away investors, reduced the size of Argentina's herd by 6 million head, and allowed Uruguay, the nation's smaller neighbor,

to capitalize on a three-year decline in Argentina beef exports, estimated to have fallen by 60 percent (Bervejillo, 2015). He further stated that the political decision to micro-manage the sector in an effort to reduce domestic food price inflation led to introduction of export restrictions and price controls on certain beef cuts.

Reduced returns to the industry prompted many ranchers to convert their pastures for soybean cultivation. In 2011, policy distortions continued to make it difficult to source eligible cattle for the lucrative EU "Hilton High Quality" beef quota (28,000 tons), and exports are estimated to continue to decline. Meanwhile, despite the devastating impact of these policies on the sector, the government persists in setting prices; maximum retail and sales prices paid to producers and wholesalers of meat products were set as recently as June 2011, and specific prices were announced for live cattle and carcasses (Bervejillo, 2015).

The researcher identified that there is a severe shortage in literature available that amicably addresses current research in the field of value addition especially in pork production in developing countries. In addition, another shortage identified was the availability of more recent research in terms of value addition in agriculture. The majority of research found to be older than 10 years and beyond.

2.11 Summary

This chapter presented the review of past research, including an overview of the Namibian Agricultural Sector, global pork industry and that of the Republic of South Africa to set the background for the research. Furthermore an overview of the Namibian pork industry, its history and current status were provided. Lastly the chapter zoomed in on Value Addition in Agriculture in Namibia and highlighted case studies where Value Addition strategies had been implemented, e.g. livestock with reference to the Small Stock Marketing Scheme, poultry and the Pork Market Promotion Scheme.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Chapter three presents the research methodology and design that was adopted to address the research problem. The use of appropriate methodology is important to carry out a systematic analysis of any research problem. This chapter presents how the research was designed, define the population, the sample, research instruments used, the procedure for data collection and how the data was analyzed. All this enabled the researcher to make proper recommendations and conclusions.

3.2 Research design

The research adopted a mixed research method research design. By using both methods the research was able to provide a deeper and broader understanding of the underlying impact of the PMSPS. Mixed research methods was deemed appropriate for this study because no published research in Namibia was undertaken to investigate the effect of the PMSPS on value addition. Hence qualitative research design assisted the researcher to appreciate the opinions of retailers and policymakers regarding the impact of the PMSPS. Quantitative research design quantified the issues under investigation that enabled triangulation of data and improved the reliability of the outcome. Data collected from the surveys was expressed in numerical forms and graphs which allowed for easy

interpretation. In other words the researcher used descriptive statistics to analyse the data and portray it in visible forms that made it easier to understand.

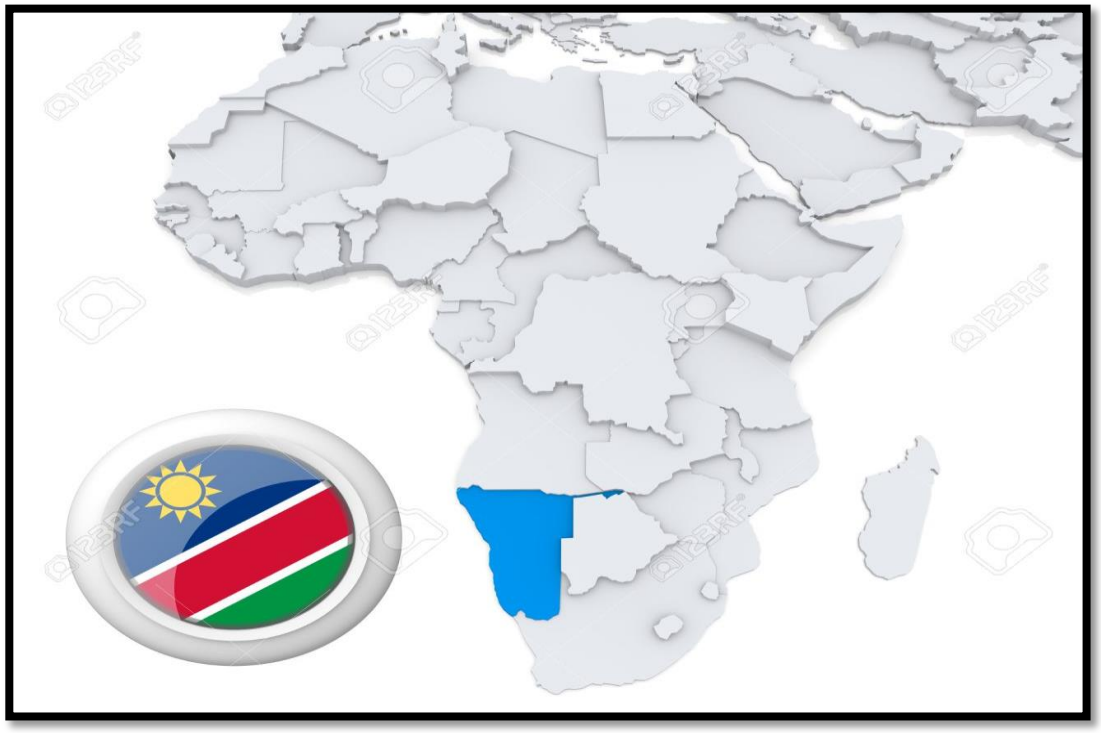
Tellis (1997) stated that a variety of tools can be used to collect data for case study research, including: documentation, archival records, interviews, direct observation, participant observation and physical artifacts. The aforementioned author further argued that by using multiple sources of data and analysis techniques it is possible to do a triangulation of data which increases the reliability of the research findings and conclusions. According to Schutz (2009), a further advantage of using a case study, (as for this research), is the possibility to be open to new avenues and insights, while in the evaluation and analysis process. This includes creating data arrays, matrices of categories, flow charts or tabulating the frequency of events.

The researcher used past history to report on current events, utilized interviews, and did content analysis of records such as annual reports and financial statements, this refer to management policy statements and distribute questionnaires to gather data on the subject (Mancosa, 2001). This clearly describes the methodological process that was followed to evaluate the policy of value addition, as implemented by Namibia. The ultimate aim is to transform this very complex issue into one that can be understood and interpreted with ease, as a large sub-sector of the industry is not well versed in statistics and complex analysis (Tellis, 1997).

3.3 Study area

Namibia is situated on Africa`s south-western seaboard, with a total surface area of 824 292 km². Its neighbouring countries are Angola to the north, Zambia and Zimbabwe to the north east, Botswana to the east, South Africa to the south with the Atlantic Ocean forming its western border, (Namibia Trade Directory, 2016).

Figure 3.1: Africa map with where Namibia is located. Source, Google, 2017.



Namibia is divided into 3 distinct animal health zones. These zones dictate the type of farming systems in operation, including the market access as prescribed by the OIE.

Figure 3.2: Map of Namibia with the different Animal Health Zones. Source, DVS.

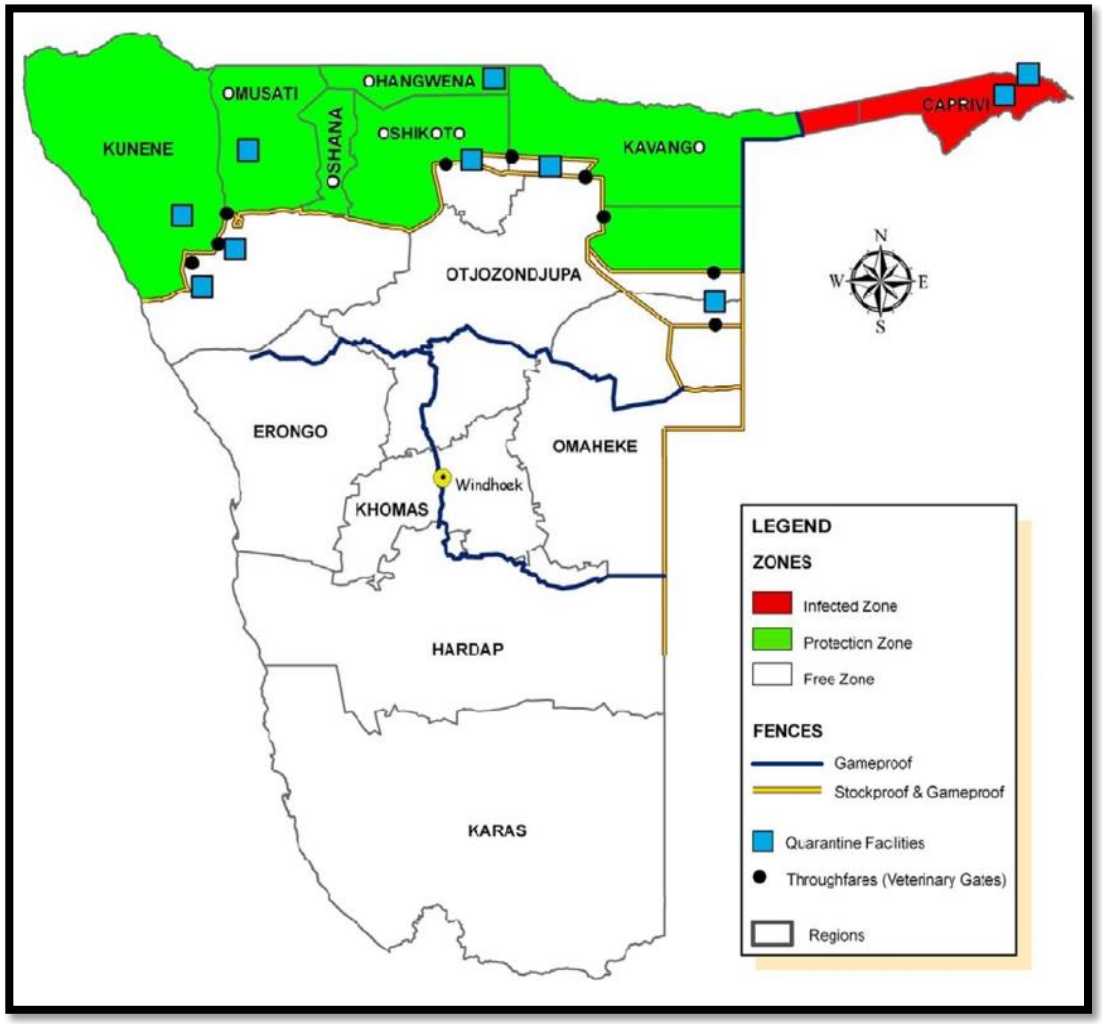


Figure 3.2 above clearly indicates the three distinct Animal Health Zones; namely the free zone where producers have unlimited access to an array of regional and international markets. Farmers in the protection zone (green), before 2015 had access to regional markets, namely South Africa, Angola and the rest of the SADC. However the animal health status has changed after the outbreak of Foot and Mouth Disease (FMD),

in 2015. Currently the OIE recognized animal health status is freedom from FMD with vaccination. The infectious zone in red stretches from the Ndiyona Constituency in the Kavango East up to the Botswana-Namibia border to the east of the Zambezi region, encompassing the entire Zambezi region. This zone experiences frequent outbreaks of FMD due to the unrestricted movement of wildlife including Buffalos from Zambia via Namibia to Botswana and back.

The research concentrated on those producers that conduct their pork farming operations in the free zone. This zone has been free of FMD outbreaks for the past 60 years and is the only zone recognized by the OIE from where meat and meat products could be exported globally (MAWF, 2017).

3.4 Population

The population consisted of twenty eight individuals and organizations combined. It was divided into three groups, namely; pork producers (two), importers and retailers (twenty three) and policy-makers (three) respectively. The producers were sourced from a list obtained from the Pork Producers Organization registered with the Namibian Agricultural Union. The importers and retailers information was sourced from the Meat Board since all importers and retailers are required to register with the Meat Board to partake in the scheme.

Producers were required to complete questionnaires to examine the economic benefits accrued from the PMSPS, whether there exists a conducive environment for pork farming locally and what strategies they proposed to improve the scheme. Importers and retailers were also issued with questionnaires to determine the impact of the PMSPS on their operations, as well as strategies they proposed on how to improve the PMSPS. Finally, the policymakers and the regulator were interviewed to find out whether the PMSPS in its current form has achieved the objectives of the Growth at Home Strategy, whether the scheme created a conducive environment for pork farming as well as strategies proposed to improve the scheme.

3.5 Sample

Literature and the content of similar studies were consulted to determine what a suitable sample size for this research was. This research used a combination of stratified purposive and cluster sampling method. Due to the small number of pork producers (only two) that participate in the PMSPS the researcher opted to consult both. The Meat Board as part of its mandate of regulating the import and export of livestock and livestock products requires that any individual or organization that intends to participate in imports or exports to register with them. According to the Meat Producers System (MPS) the official Meat Board registration system 23 importers and retailers are registered with the Board. The researcher initially sends questionnaires to all 23 but due to a poor rate of return, it was decided to reduce the number. The researcher again consulted Meat Board records and identified 12 of the major importers and retailers. Finally the MAWF, MITSMED and the Meat Board were considered due to their

national roles they fulfill in terms of value addition and regulation in the country. Thus the final sample size was twelve which consisted of two pork producers, seven importers and retailers and three policy-makers.

Firstly, a questionnaire was designed for primary pork producers to avail information for this study. The questionnaire aimed at addressing the question of the economic benefits accrued by these producers. This addressed the first research objective of examining the economic impact of the PMSPS on value addition since the scheme aimed at adding value to the primary product produced by these producers.

In addition the researcher used secondary data available from the Meat Board of Namibia to describe trends in domestic supply, versus imports as well as the market share between these two sources.

Furthermore, the researcher developed and emailed questionnaires to all importers and retailers that are registered with the Meat Board of Namibia as prescribed by the Standard Operating Procedures of the PMSPS. This assisted to understand the impact of the economic situation on their operations. The researcher experienced challenges with the response rate from this cluster. Some were of the opinion that the quantity of pork they import is not significant to make a meaningful contribution to the research while others did not reply at all. The researcher identified the key importers and retailers, called them directly and explained the importance of the study, which resulted in a positive response rate.

Finally, the researcher interviewed officials from the different organizations and the directorates involved in ensuring the implementation of value addition policies, design and implementation (Ministry of Agriculture, Water and Forestry, Ministry of Industrialization, Trade and SME Development and the Namibia Trade Forum), as well as the Meat Board of Namibia as the regulator of the livestock, meat and meat products in Namibia, also referred to as the official regulator of the different market share promotion schemes in the livestock industry. These policy-makers and their respective accounting officers or delegated officials were identified to form part of the sample. Their contributions ensured that purposeful strategies were identified to ensure that the PMSPS is competitive and would contribute to the sustainable growth of the pork industry in Namibia.

3.6 Research Instruments

The researcher used the following instrumentation: questionnaires and face to face interviews to collect data. The questionnaires assisted the researcher to gather quantitative data from pork producers, retailers and importers. Access to secondary data from the Meat Board of Namibia ensured that critical important trends in the domestic supply as well as imports were identified and accessed. The face to face interviews enabled the researcher to collect qualitative data from policy-makers, that enabled the meaningful interpretation of value addition along the value chain in the agricultural sector.

3.7 Data analysis

The Researcher made use of different data analysis tools for analyzing the two types of data. Qualitative data as collected from face to face interviews was analyzed by using Thematic Analysis. Quantitative data as obtained from the questionnaires of pork producers as well as time series data, accessed from the Meat Board of Namibia`s annual report statistics were analyzed using Excel and descriptive statistics. Descriptive statistics are numbers that summarize the data with the purpose of describing what occurred in the sample (Thompson, 2009). The aforementioned author further stated that descriptive statistics can also be used to compare samples from one study with another. It also helps researchers detect sample characteristics that may influence their conclusions.

Data analysis begins with calculation of descriptive statistics for the research variables. These statistics summarize various aspects about the data, giving details about the sample and providing information about the population from which the sample was drawn. Each variable's type determines the nature of descriptive statistics that one calculates and the manner in which one reports or displays those statistics, (Larson, 2006).

3.8 Validity

To ensure the validity of this research, data was collected and analyzed from different stakeholders as prescribed under the sample of the population. Mixed research data

analysis techniques were used to ensure the reliability of the results and this assisted the researcher in making meaningful recommendations.

3.9 Summary

This chapter highlights the introduction and research design that was used by the researcher in the research methodology adopted for this study. Furthermore it addressed the study area, population that was targeted as well as the sample. Lastly, it encompasses the methods of how the researcher collected the research data, how it was analyzed and how it ensured the validity of the research.

CHAPTER 4

RESULTS AND DISCUSSIONS

4. 1 Introduction

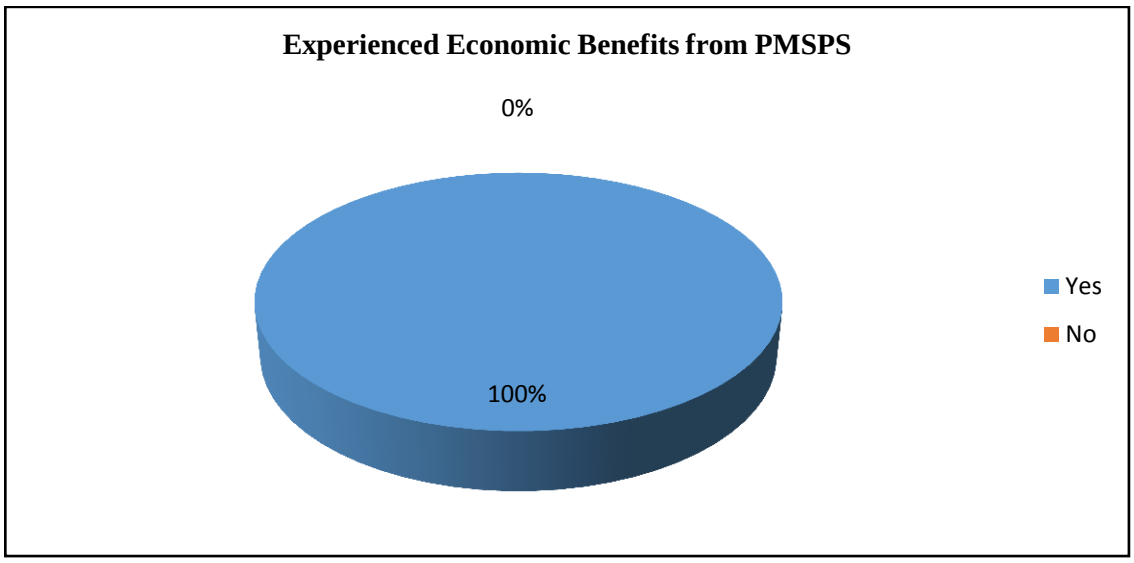
Chapter four presents the results and discussions of the study, from data that was collected as described in the previous chapter. The data was obtained from questionnaires that were emailed to pork producers, importers and retailers, while structured interviews were conducted with policy-makers in the MAWF, MITSMED and the Meat Board of Namibia.

The aims of the PMSPS are to ensure the viability of the pork industry, to ensure the co-existence of the pig production and processing sector and to protect the production sector against external influences (dumping, stockpiling etc.). Currently there are only two producers that participate in the scheme, Hailoli Piggery situated in Tsumeb in the Oshikoto region and Mariental Piggery in Mariental situated in the Hardap Region. These piggeries belong to formally advantaged Namibians and during this research the absence of previously disadvantaged Namibians was identified as a major concern.

4. 2 Examining the economic impact of the PMSPS on Value Addition

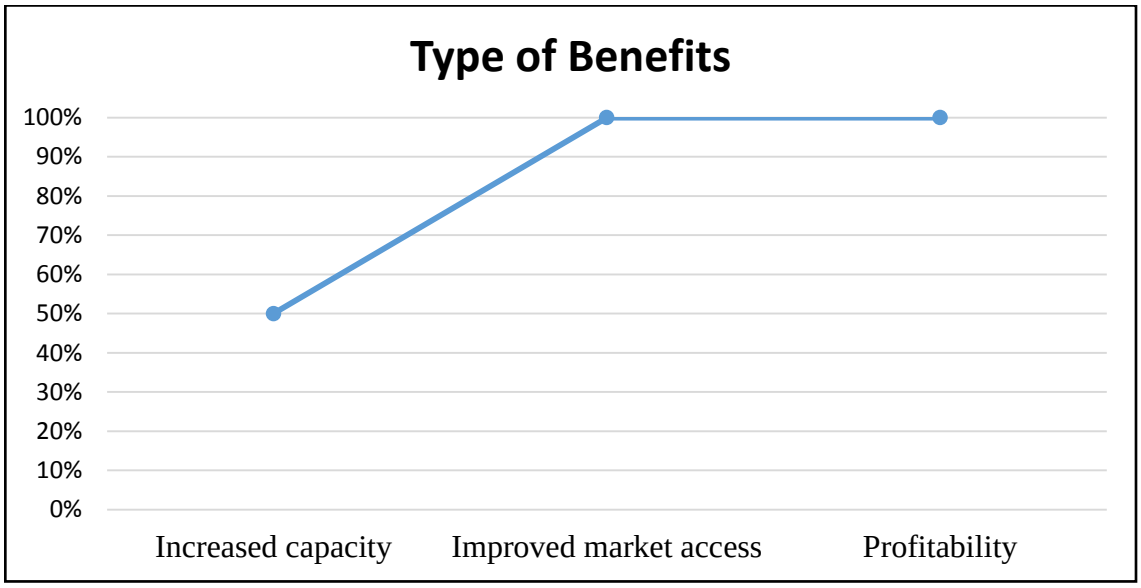
4.2.1 Results from pork producers

Figure 4.1: Producers experienced economic benefits from the PMSPS



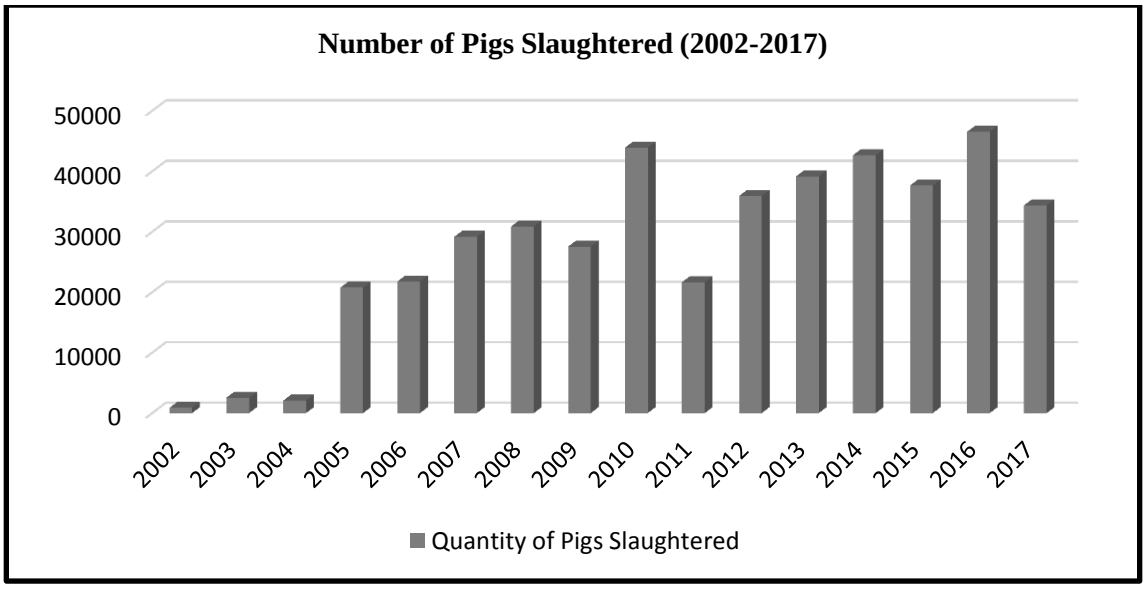
All the producers that received questionnaires indicated that the PMSPS ensured economic benefits as depicted in figure 4.1 above. Amongst others, they indicated that they never experienced any low season in terms of marketing their produce, since the inception of the PMSPS. This is as a result of the ceiling price which is part of the scheme that ensures fair prices are offered. Furthermore producers are protected against cheap imports and all their products on offer were procured.

Figure 4.2: Types of benefits experienced



Producers further indicted that other benefits experienced are increased capacity, improved market access and profitability as highlighted in figure 4.2 above. With the protection enjoyed as offered by the PMSPS, producers were of the opinion that with the improved market access, it automatically stimulates supply, and that resulted in increasing their reproductive herd. This led to increased off-take rates and improved throughput at their abattoirs, which eventually enhanced their profitability. Statistics collected from the Meat Board of Namibia, echoed these statements.

Figure 4.3: Number of pigs slaughtered from 2012 – 2017 in Namibia



According to figure 4.3 above, pork production increased at an increasing rate with a notable spike from 2005 onwards. With the introduction of the PMSPS in 2012, the increase is notable in terms of volume when compared to the period before the introduction of the scheme.

4.2.2 Results from importers and retailers

Importers and retailers are part of the pork value chain and conduct their operations to provide a service to their clients and to make a return on their investments.

Figure 4.1: How the PMSPS benefitted Importers and Retailers operations

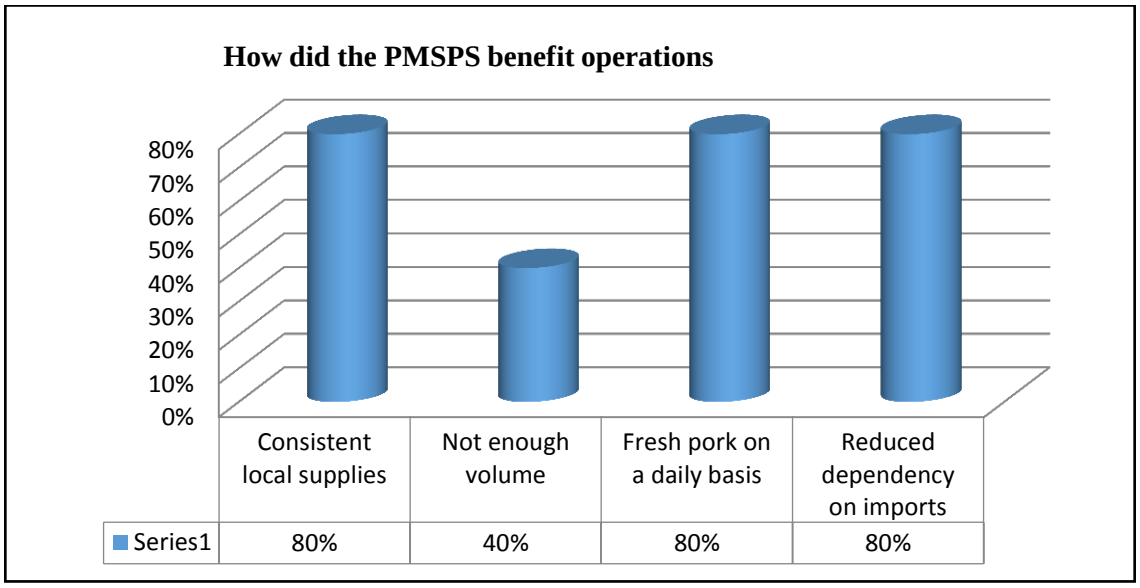
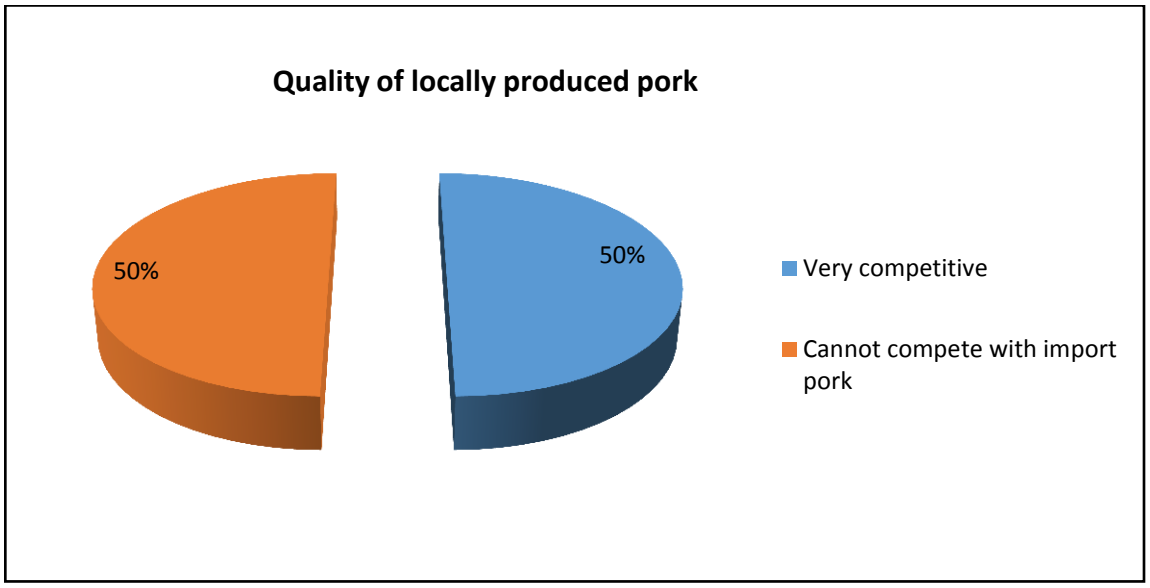


Figure 4.4 above clearly indicates that, 80%, of importers and retailers stated that, due to the PMSPS, they have a consistent supply of quality pork from local suppliers. They further explained that the pork supplied is fresh on a daily basis. In addition, 80%, reasoned that local supply has reduced their dependency on imports, however, 40%, complained that, although it's consistent, it does not meet their demand in terms of volume and preferred cuts.

Quality of a product plays an important role especially in the current market dynamics that are dominated by consumer perceptions. Therefore is it important not only to deliver the required volumes, but to also ensure the quality of the product will guarantee a sustained demand.

Figure 4.2: Quality of local pork versus imported pork



The quality of locally produced pork is very competitive as depicted in figure 4.5 above when compared to imported pork, according to 50% of retailers and importers. However, the remaining 50% indicated that it does not compare to that of imported pork. They reasoned that imported pork is subjected to a variety of quality control mechanisms, before it is exported. They further defended their comments by claiming that the shelf life of imported pork is longer than that of locally produced pork.

4.2.3 Results from Policy-makers

Figure 4.3: Challenges experienced by the PMSPS to stimulate pork production environment.

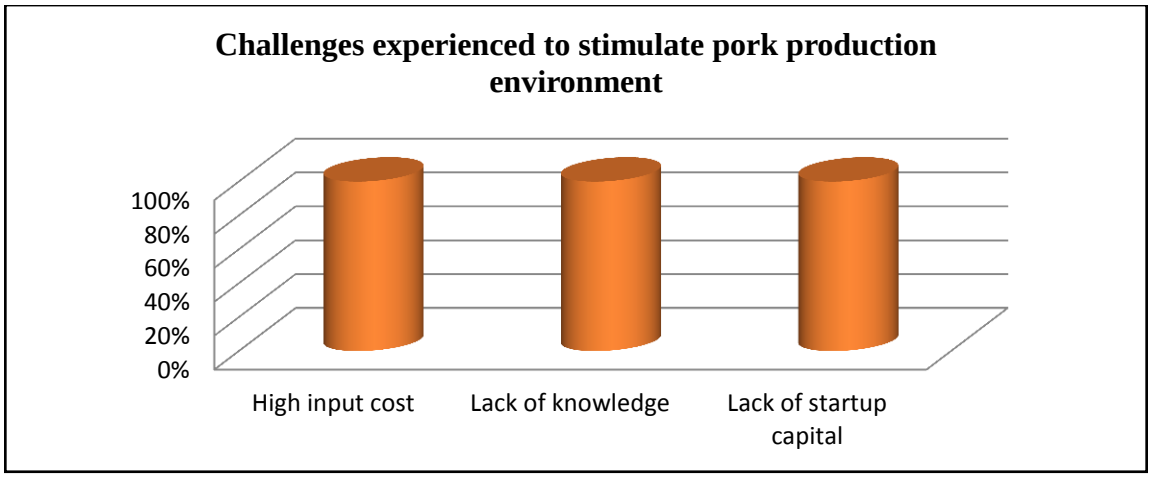
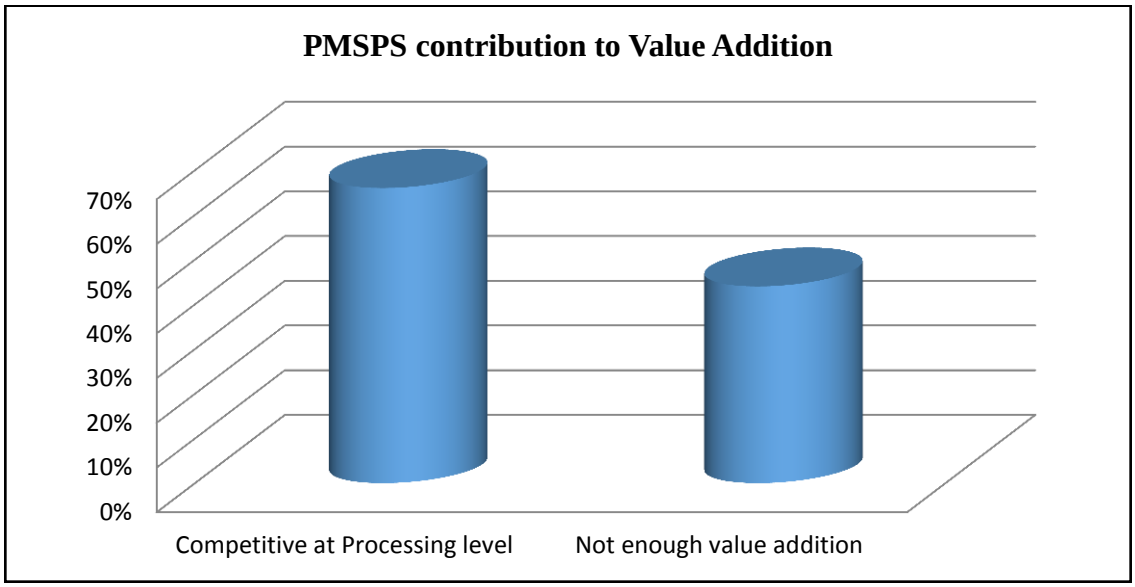


Figure 4.6 above, highlights the challenges experienced by the PMSPS in ensuring that a conducive environment had been created, that would have stimulated viable pork production. All stakeholders highlighted the high input costs, especially, feeding costs which were estimated to be around 73% of the total overheads. The lack of knowledge on intensive livestock farming in general and pork farming in particular was also highlighted as a challenge. Intensive farming systems require an in-depth knowledge base that is obtained over years of exposure. The last challenge raised was the lack of startup capital. An intensive farming operation, such as pork requires vast amounts of money to set up the breeding, fodder storage, handling and other livestock husbandry facilities.

The PMSPS aims to ensure the co-existence of pig production and the processing sectors along the value chain. Figure 4.18, below shows that around 66% of policy-makers agreed that sufficient value addition occurs at processing level. Producers supply intact carcasses to processors and retailers who in turn covert it into the preferred cuts as required by their clients. The remaining 44 % feel that not enough value addition takes place. This could be attributed to the high number of processed pork products imported.

Figure 4.4: How the PMSPS contributed to Value Addition.



4.3 Analyzing the performance of the PMSPS since its inception

4.3.1 Results from pork producers

Half of the producers, (50%), are happy with the environment created for enhancing pork production, while the other half indicated both yes and no. The latter part referred to the poor new entry rates of pork producers in Namibia. In total there are only two producers that participated in the PMSPS while in total, 17 producers are affiliated with the pig producers association.

Producers listed market access, production environment and startup capital as a result of the conducive environment created. Figure 4.8 below, clearly indicates that 50% of producers feel that the conducive environment created through the PMSPS, ensured that they have a consistent and sufficient market access for their products. Their products are protected by the ceiling price introduced, against cheap imports of pork from the RSA and Europe. Fifty percent also agreed that the production environment is more conducive, resulting in the management of risks involved in partaking in intensive farming operations such as pork farming. Finally all producers sensed that startup capital plays a critical role to start with such a capital intensive farming system. Feeding cost is estimated to be around 73% of any overheads in a pork operation, followed by labour.

Figure 4.5: Spin-offs created by conducive pork production environment.

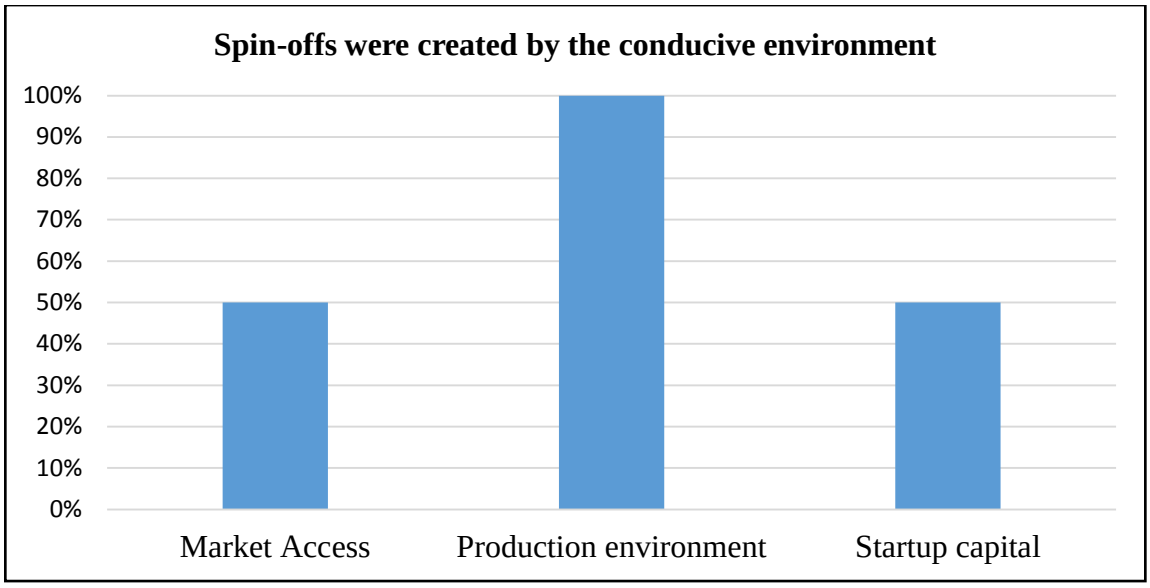
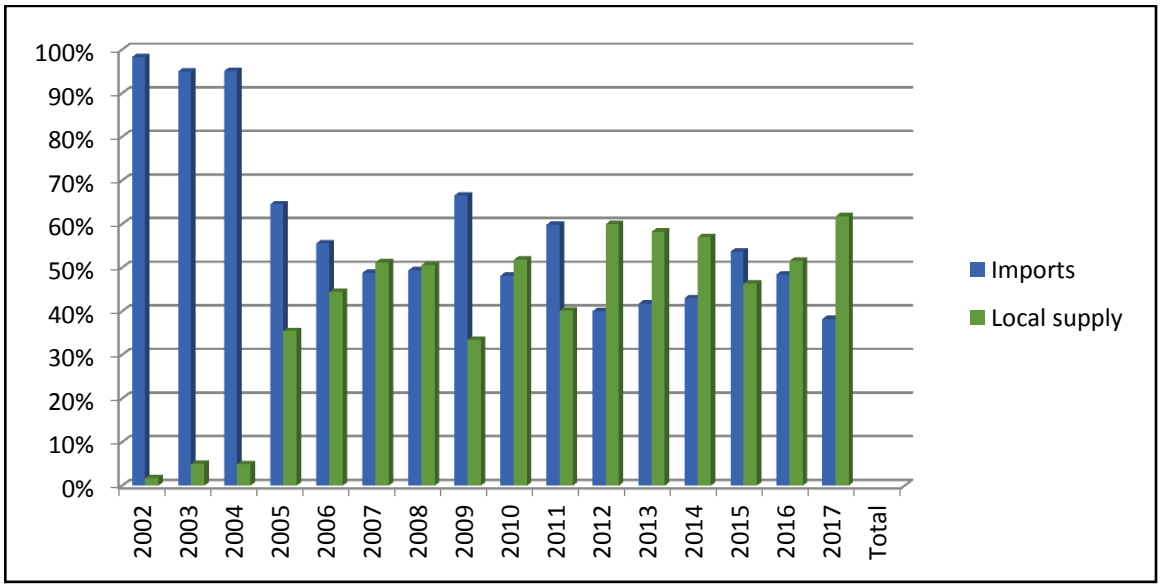


Figure 4.6: Market Share between Imported and Locally Supplied Pork

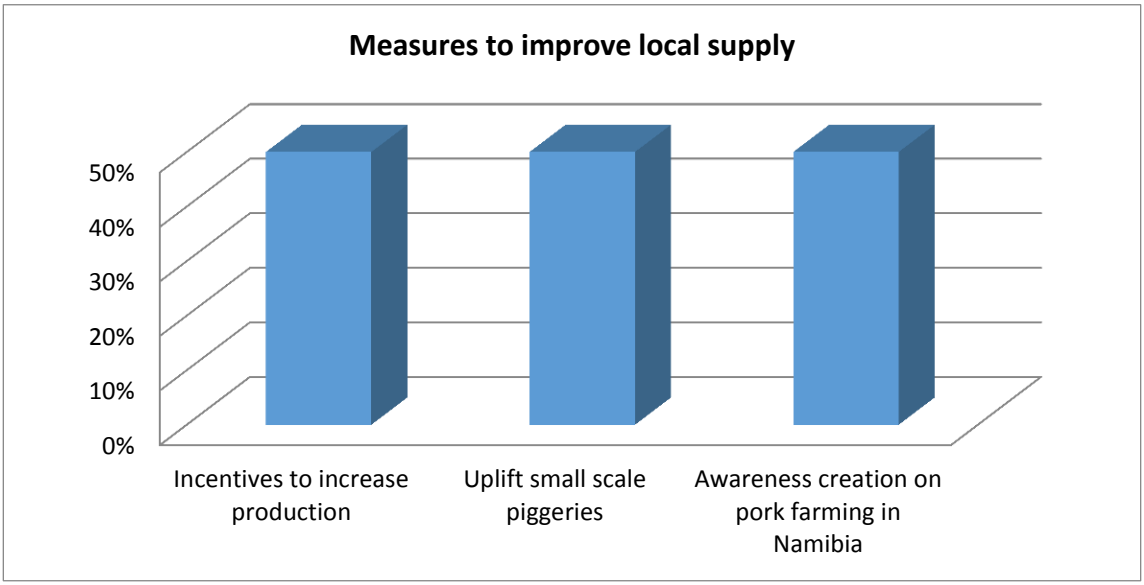


Secondary data, as collected from the Meat Board of Namibia and plotted in figure 4.9 above, reveals that the market share favored local supply, since 2012 with the introduction of the PMSPS.

4.3.2 Results from Importers and Retailers

Retailers and importers were found to be very much patriotic and sympathetic toward local pork production. They reckoned that they are willing to support the local suppliers since it will create employment and reduce poverty.

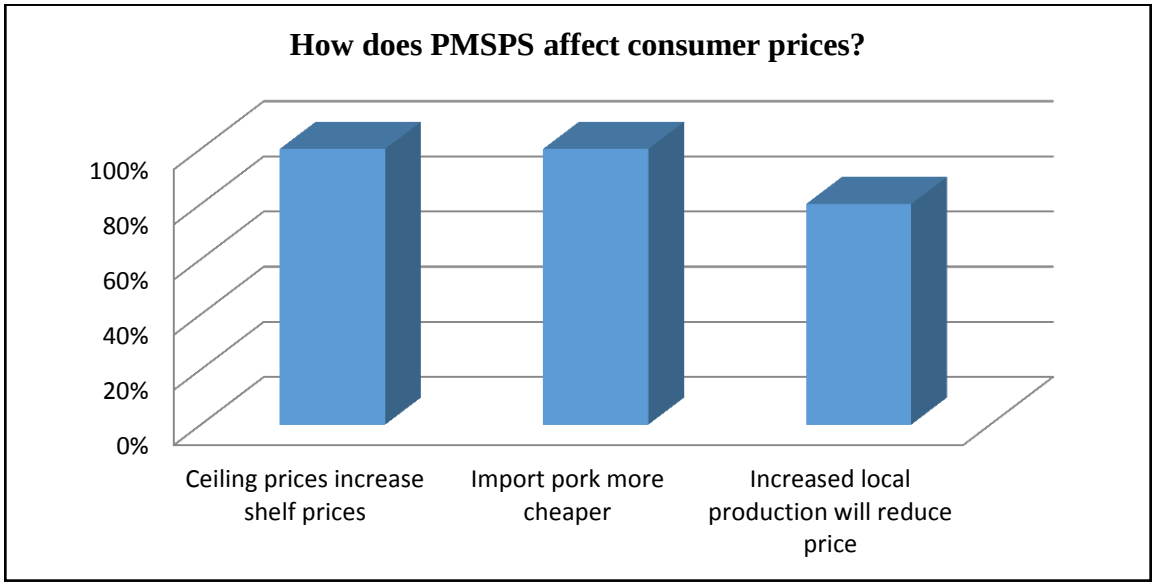
Figure 4.7: Measures to improve local pork supply



Fifty percent, (50%), of retailers and importers were of the opinion that government should investigate incentives to improve local production. Once production is more positive, it will result in an increased supply. Another 50%, argued that the regulators should develop and implement an effective awareness creation to stimulate local production by streamlining the small scale pig producers to have a memorandum of understanding with the larger producers or that smaller producers should merge to become more competitive.

Consumers are the role-players, found at the end of the value chain and the entire efforts along the value chain are as a result of their demand and perceptions.

Figure 4.8: How PMSPS affected consumer prices

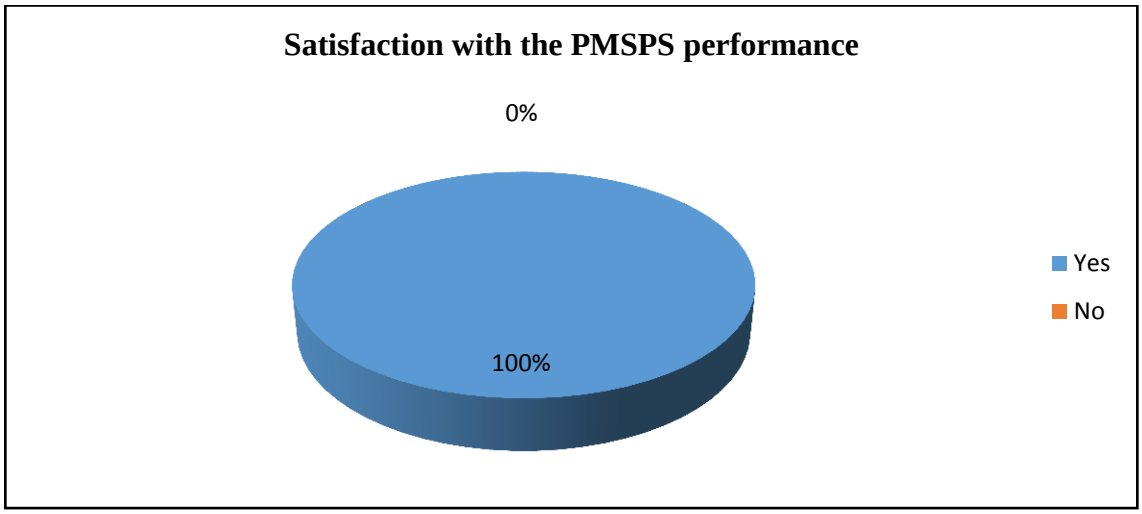


All retailers and importers reckoned that the ceiling price implemented as part of the PMSPS, plays a major role in calculating the consumer price. They are of the opinion that imported pork is available at a much lower price, which would have a positive bearing on the reduction of consumer prices. 80% of Retailers and importers, felt that once production and supply of locally produced pork increases, it will have a reduced effect on the overhead cost and as a result force down the ceiling price. With a reduced ceiling price, they could afford to reduce consumer prices.

4.3.3 Results from Policy-makers

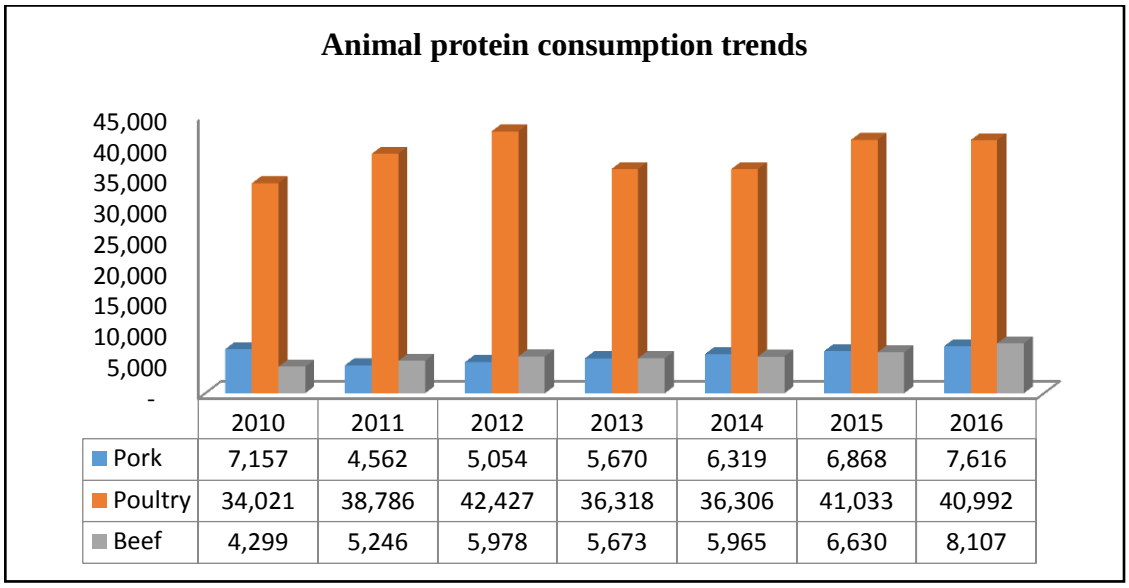
All role-players as highlighted in figure 4.12 below, expressed their satisfaction with the performance of the PMSPS, in terms of achieving its aims of ensuring the viability of the pork industry, ensuring the co-existence of pig production and the processing sector and protecting the production sector against external influences, (dumping, stockpiling etc.). They reasoned that producers never experienced a low season that resulted in the viability of the pork industry. Furthermore, they commented that the value chain, operates effectively with pork products produced and moved to the secondary level. Finally the PMSPS ensured that since its inception the pork market share was in favour of local supply against cheap imports due to its protection element.

Figure 4.9: Satisfaction with the performance of the PMSPS.



These challenges are also evident in the perception of consumers in terms of consumption trends. Figure 4.13 below highlights the consumption trends of Namibian consumers in terms of cheaper animal proteins, poultry and pork versus the traditional preferred option beef. Namibians prefer to consume more poultry than pork and beef due to the availability of poultry and its shelf price. Since the majority of Namibians resides in the communal areas, they experience challenges to access pork as compared to poultry and beef. In addition, consumer's perceptions and cultural beliefs also play a major role in consumption preferences. As a result the figure below clearly indicates that the demand for pork and beef are almost equal, while outperformed by poultry. Therefore awareness creation in terms of pork production as well as improved access will go a long way in stimulating a conducive environment for pork.

Figure 4.10: Animal protein consumption trends.



	2010	2011	2012	2013	2014	2015	2016
Pork	7,157	4,562	5,054	5,670	6,319	6,868	7,616
Poultry	34,021	38,786	42,427	36,318	36,306	41,033	40,992
Beef	4,299	5,246	5,978	5,673	5,965	6,630	8,107

4.4 Identifying strategies to make the PMSPS competitive

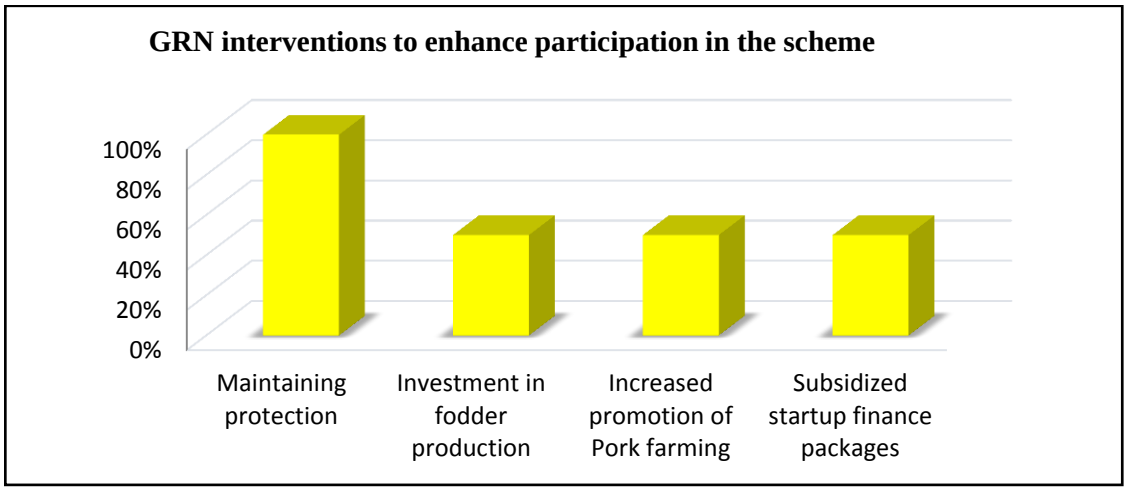
4.4.1 Results from Producers

Producers raised their concerns with the poor rate of new entries into the PMSPS. They are of the opinion that more emphasis should be placed on ensuring increased participation. Fifty percent of producers reckoned that the protection through the PMSPS should be continued indefinitely. This would stimulate interest in future participation in the scheme.

They also proposed that investment should be made for local fodder production. Feeding cost is calculated to be around 70% of overhead costs, which makes pork production a challenging enterprise. With cheaper fodder on offer, it will automatically stimulate interest to participate in pork farming in general.

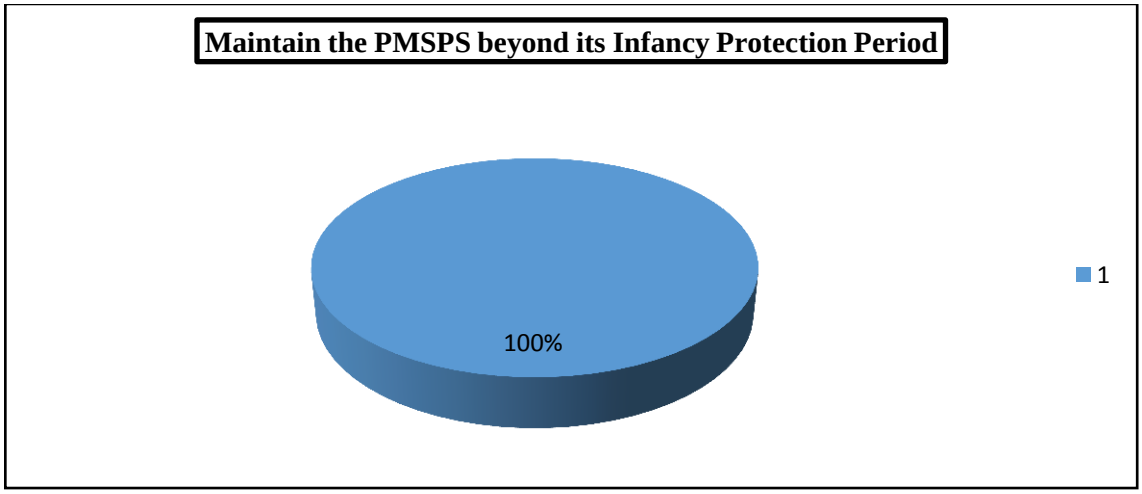
Producers, (50%), are of the opinion that an intensive awareness creation needs to be conducted. Many prospective pork producers are not aware of the current arrangements that are on offer in the industry. The Meat Board of Namibia is inundated with enquiries pertaining to new entrants into this intensive farming system. Finally, half of the producers interviewed raised their concerns with regards to startup capital assistance. They felt that with the lack of such assistance, coupled with the extreme high feeding cost, the future of pork farming in Namibia is doomed.

Figure 4.11: Interventions to enhance participation in the PMSPS.



All producers agreed that the PMSPS, in its current form, ensures a sustained pork farming industry in Namibia. This is relevant for those that are already participating, but concerns exist for the future prospective entrants. They further raised concerns about the future probability of intensive farming operations existing, with extreme high feeding costs. It was proposed that the scheme or some type of protection should be developed to remain in place even beyond the expiry date of the PMSPS.

Figure 4.12: Maintain PMSPS beyond its Infancy Protection Period



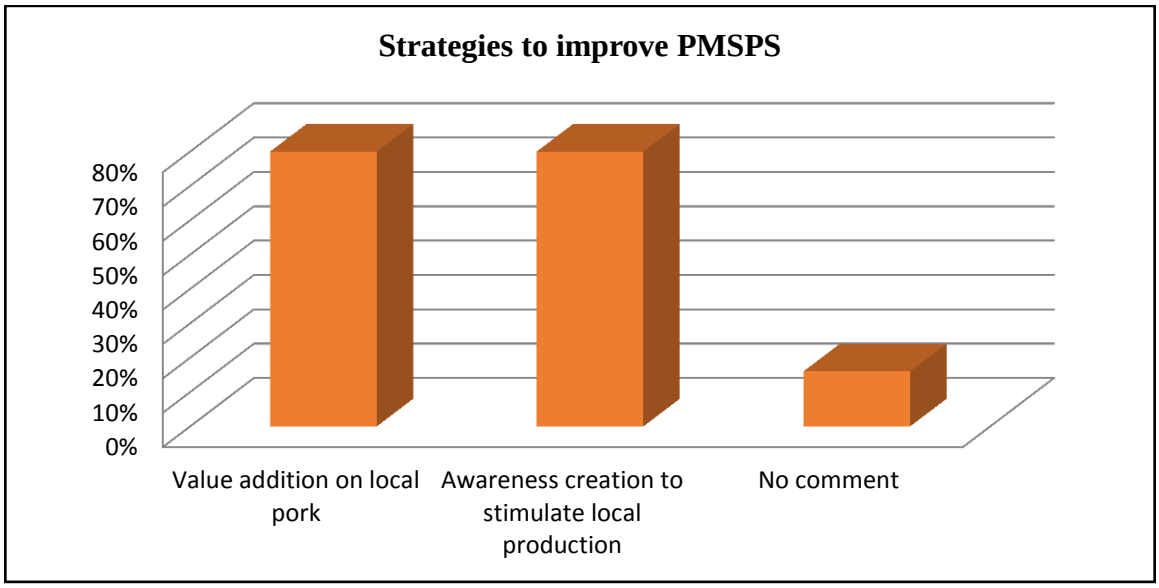
4.4.2 Results from Importers and Retailers

The Standard Operating Procedures of the PMSPS requires that any individual and or institution that wish to import pork and pork products into Namibia, must be registered with the Meat Board of Namibia, (Meat Board of Namibia, 2012). This ensures proper regulation from the Meat Board, since these importers must first procure locally to build

up a quota which they in turn will use to import products into Namibia. As per the Meat Board of Namibia records, a total of 30 organizations are registered as importers.

Retailers and importers are heavily dependent on the effectiveness of the PMSPS. With an improved scheme, with a lower ceiling price or an alternative price protection mechanism, it will automatically affect the operations of retailers and importers.

Figure 4.13: Strategies on how to improve the PMSPS.



Eighty percent, (80 %), of retailers and importers complained about the lack of value added pork products supplied by local suppliers. They buy an intact pig carcass from suppliers and had to do their own cutting and processing. Some were of the opinion that it is beneficial especially when they could produce cuts as required by their customers.

However others felt, especially those involved in large chain shops that the lack of value added products will result in additional overhead costs when it is required of them to perform their own cutting and processing. They prefer to order specific cuts and processed products as required by their customer.

Another 80%, of this group, proposed an intensive awareness creation to stimulate local pork production with value added products and cuts. This would reduce the dependency on imported cuts that are not part of the scheme. Some 16 % of retailers and importers, did not comment for the mere fact that they claim not to be qualified enough to comment on the improvement of the scheme.

4.4.3 Results from Policy-makers

Policymakers are one of the key stakeholders along any commodity value chain. They are mandated to create a conducive environment by developing industry friendly policies, strategies and regulations. The researcher interviewed staff members from the MITSMED, MAWF and the Meat Board of Namibia. The MITSMED, is responsible for the development and management of Namibia's economic regulatory regime, on the basis of which the country's domestic and external economic relations are conducted. This Ministry is also responsible for promoting growth and development of the economy, through the formulation and implementation of appropriate policies to attract investment, increase trade, develop and expand the country's industrial base,

(MITSMED, 2017). MITSMED, mandated the Meat Board of Namibia in 2012, to manage the PMSPS on their behalf and it was only fitting to obtain their inputs.

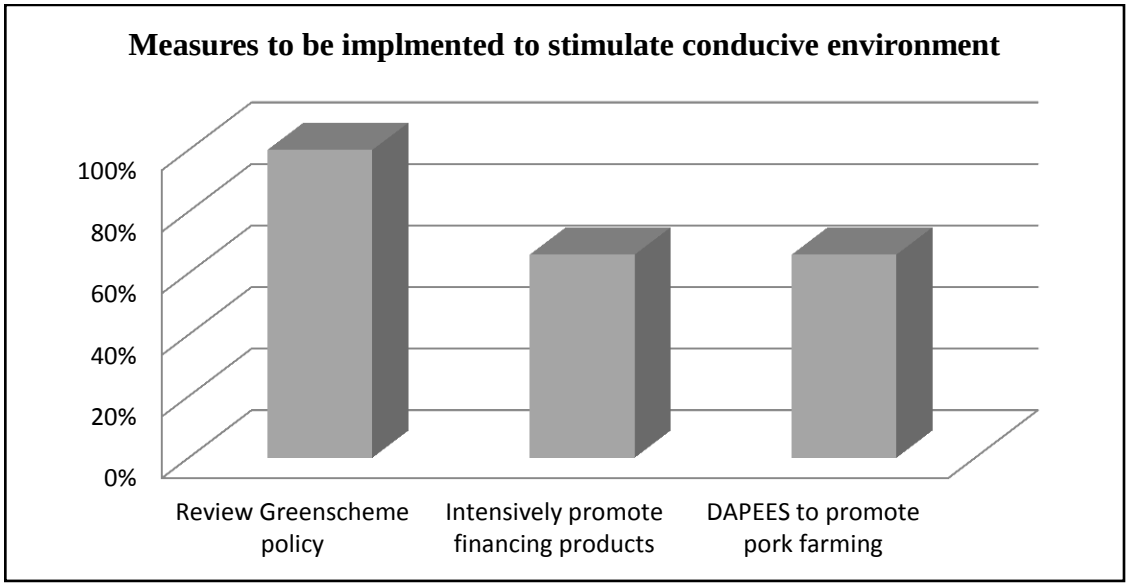
The next policymaker was the MAWF, Directorate Planning and Business Development (DPBD). The Ministry of Agriculture, Water and Forestry's Mandate, is to promote, develop, manage and utilize Agriculture, Water and Forestry resources (MAWF, 2017). The mission of the DPBD, is to inform and advise decision makers and other role players in the private and public sectors on policy issues as well as facilitating and implementing some of the policies, programmes and activities in the fields of agriculture and co-operatives (MAWF, 2017).

Finally the researcher, interviewed a staff member from the Meat Board of Namibia whose mission is to promote a conducive environment for sustainable livestock production, market growth and diversification for livestock, meat and meat products; and to maintain standards and quality assurance by way of appropriate regulatory intervention (The Meat Board of Namibia, 2016).

Policy-makers were of the opinion that with a developing country such as Namibia that is competing on a daily basis with cheap imports from a developed nation such as South Africa, it’s a mammoth task to create a conducive environment for pork production.

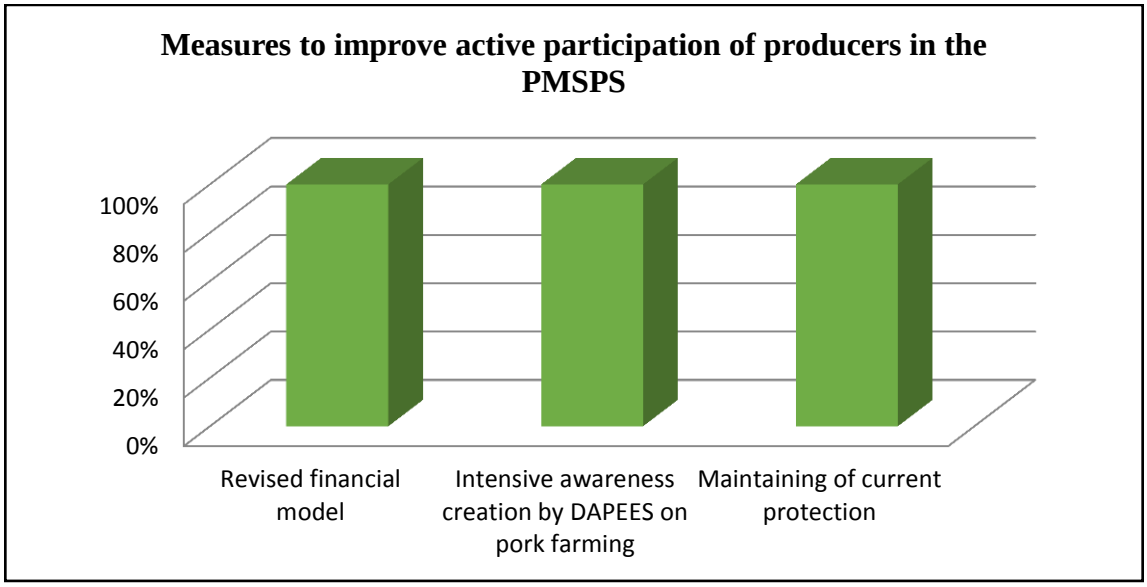
Figure 4.17, below indicates the measures as proposed by Policy-makers to stimulate a conducive environment for pork production. Firstly, they all felt that the Green Scheme Policy needs to be reviewed to include the production of fodder at all its current and future projects. At this moment, it only makes provision for the production of agronomic and horticulture products. Secondly, 66 % argued that financiers need to intensively market their finance products. This will ensure that prospective new entrants are enticed to venture into pork farming as this will also stimulate improved local supply. Finally it was proposed that the Directorate of Agriculture Production, Extension and Engineering Services intensively promote pork farming among the farming communities. This would help ensure that more new entrants would be interested in venturing into pork farming.

Figure 4.14: Measures identified to stimulate conducive environment



In general, it was observed with concern the poor participation of pork producers in the PMSPS. Policy-makers as part of their mandate to create a conducive environment, were asked what measures they propose to improve the participation of producers in the scheme. As highlighted in Figure 4.19 below, they unanimously agreed that firstly, they will encourage Financiers to revise their financial packages to make entry for prospective producers more acceptable. Secondly, MAWF will advise DAPEES to develop an effective and intensive awareness creation on the benefits of pork farming in Namibia. Lastly, to ensure that the Namibian pork industry maintain its progression and sustain viability, protection in its current form must be extended beyond the eight years as prescribed in the Infancy Protection Policy.

Figure 4.15: Measures to improve participation of producers in the PMSPS.



4.5 Summary

This chapter highlighted the results and discussions of the results from the analysis of the data that was collected as part of the study. The data was obtained from questionnaires that were emailed to pork producers, importers and retailers, while structured interviews were conducted with policy-makers in the MAWF, MITSMED and the Meat Board of Namibia to collect the qualitative data.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter 5 presents the key findings from the data that was collected, analyzed and discussed. Furthermore it highlights the recommendations from the study, based on the key findings as well as the areas for future studies including a revisit of the limitations experienced by the researcher during the study.

5.2 Summary of the study: Chapter 1 to 4

The Namibian government as part of it Growth at Home Strategy, implemented the Pork Market Share Promotion Scheme with the aim of growing the local pork industry and to protect it from cheap imports from competitive industries such as South Africa. The study aimed at "Investigating the Impact of Value Addition in the Agriculture Sector with Special Reference to the Pork Market Share Promotion Scheme". The study adopted 3 objectives, namely: *Examining the economic impact of the Pork Market Share Promotion Scheme on Value Addition, Analyzing the performance of the Pork market Share Promotion Scheme since its inception and Identifying strategies to make the Pork Market Share Promotion Scheme competitive*. The study reviewed literature of similar studies and found that Value Addition as defined by Department of Commerce Division of Economic Development & Finance (2011) as changes made to primary agriculture

products (crops and livestock) that increase the product's value, thereby creating new economic activity and jobs. The study adopted a mixed research method research design. By using both methods the research was able to provide a deeper and broader understanding of the underlying impact of the PMSPS. Mixed research methods was deemed appropriate for this study because no published research in Namibia was undertaken to investigate the effect of the PMSPS on value addition. The researcher forwarded questionnaires to pork producers and importers and retailers while policy-makers were interviewed. The main results indicated that PMSPS added value to locally produced pork especially in the secondary level. Producers never experienced a poor season since all their produced supplied had been absorbed into the market. Concerns are raised due to the poor progress made pertaining to new entrants into the scheme. Challenges such as high fodder cost and shortages of start-up capital had been identified as stumbling blocks. Results from this study echoed findings in a study conducted by Venter (2014) where he found that fodder cost makes up 72% of input cost. While Ngore (2010) in his study where he investigated credit facilities assisting rural agricultural communities that start-up capital remains one of the biggest stumbling blocks.

5.3 Key findings from the study

The key findings from this research are presented in line with the research objectives designed to address the problem statement or research gap under investigation in this study. The key findings from the study are as follows:

5.3.1 The economic impact of the Pork Market Share Promotion Scheme on Value Addition.

The study found that the Pork Market Share Promotion Scheme has thus far achieved its aims of ensuring the viability of the pork industry

- Ensuring the co-existence of pig production and the processing sector
- Protecting the production sector against external influences (dumping, stockpiling etc.)

According to the results, the Namibian pork industry has enjoyed a favorable turn around due to the PMSPS. The protection that local suppliers enjoyed in the scheme has ensured that value addition has been created in the processing sector. Local suppliers deliver intact carcasses to importers and retailers who in turn, cut and process it according to the needs of their clients. It also ensured that employment was created throughout the value chain from the primary and the secondary level, namely production and processing stages respectively. This is in line with the strategic intervention areas of the Growth at Home Strategy, namely: supporting value addition, upgrading and diversification for sustained growth, securing market access at home and abroad; and improving the investment climate and conditions, (MTI, 2014).

However, some retailers and importers complained that they are still importing value added products since little value addition is taking place. The opposite is also true for some retailers whom specialize in adding value to their products. For example Hartlief produces value added products for the domestic market as well as for the export market.

This finding is in line with Brewin *et al*. (2009) whom examined the adoption of product and process innovations in the Canadian food processing industry. Their findings suggest that firms that conduct both process and product innovations in-house are better able to enjoy complementarities that arise in the discovery process.

5.2.2 The performance of the PMSPS

The data analyzed, revealed that the PMSPS performance met the expectations of its beneficiaries. It ensured that since its inception, local suppliers, year round never experienced a low season. All their products were absorbed by the market. This is as a result of the protection offered by the scheme, where importers and retailers are forced to first procure locally, build up a quota and then be allowed to import. The PMSPS programme further resulted in increased production and this is evident in the steady increase of around 23% in local production, from 35,910 units of pigs slaughtered in 2012 to 46,514 units in 2016. Policy-makers were also satisfied with the performance of the scheme as it achieved its aims as prescribed in the Standard Operating Procedures.

In addition, local supply reaped the major portion from the pork market share in terms of national sales. Over a period of five years, since the inception of the PMSPS in 2012, on average it maintained 55% share from 60% in 2012 as compared to the 52% in 2016.

Retailers and importers explained that they experienced a consistent supply of fresh pork all year round, although not in the preferred quantities. However they complained that the shelf life of locally produced pork does not compare to that of imported pork due to

the rigorous quality compliance requirements, foreign produced pork must adhere to before it is exported. In addition, retailers and importers, highlighted the fact that due to the ceiling price, as part of the industry protection local suppliers enjoy, it affected consumer prices. Cheaper imported pork is available and that has a positive bearing on consumer prices.

An additional finding was that Namibian consumers as with the rest of the world prefer the option of cheaper animal proteins over the traditional more expensive options. Poultry out performed pork and beef, while pork and beef demands were more even in terms of consumption trends measured. It is assumed that the unavailability of pork in the rural areas as compared to poultry and beef coupled to consumer perceptions and cultural beliefs also negatively impacts on pork consumption. These findings are in line with that of Meat and Livestock Australia (MLA) (2016). They found that globally more consumers prefer cheaper animal protein options such as pork and poultry due to their perceptions and cultural beliefs.

5.2.3 Strategies to make the PMSPS competitive

According to the analysis of the market share enjoyed by local supply, there exists room to double production and this would help fulfill the demand of local pork for consumption. Various strategies have been recommended to improve the scheme with the main objective of increasing local production to eventually satisfy the local demand for pork.

Producers proposed that the protection they currently enjoy, should be extended beyond its 8 years as prescribed by the Infancy Protection period of the Namibian Industrial Policy, (Roux, 2012), or it should be replaced with another protection mechanism. This is as a result that Namibian pork production is not comparative with that of South Africa due to the high cost of feeding.

Retailers and importers proposed that a mechanism be added to the PMSPS to compensate for locally produced value added products. These will diminish the demand on imported value added products. They further felt that the PMSPS must have an awareness creation role to improve local production by growing the capacity of existing suppliers as well to ensure new entrants into the scheme.

The study also found that Financiers need to re-design their finance products to make them more attractive to prospective pork farmers.

Furthermore, it was found that MAWF will review the Green Scheme policy to include fodder production at all their current and future projects. This would ensure that the extreme high fodder cost is reduced to more manageable levels.

Finally, the study found that not enough awareness had been created to educate Namibian producers on the benefits of pork production, especially the resource poor

communal farmers. A higher number of small scale producers with a common objective will go a long way to ensure a viable Namibian pork industry.

5.4 Recommendations from the study

- The study recommends that producers expand their operations up to the processing level (value addition). This will enable them to provide the preferred cuts that are currently not part of the scheme, which will reduce the dependency on imports. This recommendation is supported by Punjabi (2007) whom observed that it has become clear worldwide that the most rapid growth in agriculture has been occurring on the part of post-production activities. This is being driven by growth of middle income consumers even in low income countries and their demands for better quality value added products. Absence of agro-industry and agribusiness resulting in low levels of value addition of agricultural commodities has been one of the main causes of stagnation in rural incomes. A substantial agribusiness sector generating a high outflow of value added commodities is always correlated with high agricultural GDP and high rural incomes.

- Strategies need to be developed to increase cost effective local production as this will result in a reduced ceiling price in particular and lower consumer prices in general. This recommendation is supported by Brewin *et al.* (2009) whom examined the adoption of product and process innovations in the Canadian food processing industry. Their findings suggest that firms that conduct both process and product innovations in-house are better able to enjoy complementarities that arise in the

discovery process. This will ensure that local production will increase that will eventually match the local demand, reducing the dependency on imports.

- That the PMSPS be extended beyond its eight years or be replaced by another protection mechanism. The Infancy Protection period in the Namibian Industrial Policy, prescribes that any commodity that enjoys protection will have an eight year period to establish itself in the main-stream economy. The PMSPS has two years left on its eight year period and due to the current growth, it's estimated that it will not establish itself within this remaining period. It was found in this study that producers requested an extension in the current restrictions or it could be replaced with something similar. It`s therefore recommended that the MITSMED should critically investigate, either the possibility to extend this period with another 8 years and or to implement another form of protection similar to that of the small stock where the Meat Board of Namibia uses a permit condition to regulate that commodity.

- To amend the Green Scheme Policy to incorporate fodder production at all existing and new schemes. This will address one of the major findings in this research where producers complained heavily because of their high input cost, especially high feeding cost. A study conducted by Venter, (2014) where he analyzed the competitiveness of the Namibian pork sector, found that feeding costs make up 72% of the overall overhead costs for a pork producer.

- To have awareness campaigns included in the scheme to increase local production. With economies of scale, the market share of local production will increase and may eventually satisfy the domestic pork demand. This study found that is a poor entry rate from new entrants. This recommendation is supported by Mapiye *et al.* (2007) that analyzed the potential for value addition of Nguni cattle products in the communal areas of South Africa. They concluded that development and research programmes aimed at reintroducing the Nguni breed in the rural areas should take a holistic and participatory approach in agro-processing and value-addition of Nguni cattle products. Increased value addition can be achieved by provision of appropriate incentives for the establishment of agro-processing industries in the rural areas and promotion of partnerships between communal farmers and agribusiness.

- To have financial institutions promoting their products extensively in order to facilitate new entrants into the pork industry. Kibaara & Nyoro (2007) did a comparative analysis of emerging models of agricultural finance that have expanded the agricultural finance frontier to the smallholder farmers. They found that agricultural finance is very important because farming credit takes the highest proportion of rural credit needs. They also revealed that state run model of agricultural finance was the least sustainable while community based models were the most likely drivers of change in rural agricultural finance.

5.5 Areas for future studies

- The policy of value addition, as per cabinet resolutions includes all livestock species, cattle, goats, sheep and pigs, to name a few. As the current study only focused on the pig farmers, it will be recommended to carry out a full-fledged research into the whole livestock sector with specific emphasis on the impact of the implementation of value addition policies.

- A full value chain analysis study of the Namibian pork industry is recommended including cost structures of different role players and other variables.

- Finally it is recommended that the Namibian pork industry could be benchmarked against that of competing and comparative developing countries.

5.6 Limitations

Since there are only two producers that participate in the PMSPS and due to the sensitive nature of pork farming at the moment, the researcher struggled to obtain key confidential information, such as expenses and income. As a result, the researcher amended the study objectives by eliminating those that required income and expenditure data. Retailers and Importers were not so accommodative to complete the questionnaire. They claimed that they do not import a significant quantity of pork to make a meaningful contribution. The researcher then identified the major importers and retailers from Meat Board of Namibia statistics. They were listed and were called individually and the

purpose of the research was explained and how their institutions could make a meaningful contribution to its outcome.

5.7 Summary

This chapter highlighted the key findings as per the study objectives. It further put forward recommendations on how to improve the PMSPS, areas for further study and limitations experienced during the study.

The research found that the noble interventions of the Namibian government in developing policies and strategies to add value with the main objective being that of employment creation and improved foreign exchange earnings was achieved. The PMSPS, was developed in 2012 with the main objective of developing Namibia`s small pork industry by protecting it against its South African counterparts in terms of importation of low priced pork meat and products. The research adopted a mixed research method of quantitative and qualitative research design. Data was collected by means of questionnaires and interviews from the population of pork producers, importers and retailers and policy-makers. The major outcomes were that the PMSPS performed as expected in terms of market access and profitability, however the lack of new entrants into the scheme remains a major challenge. This is mainly due to a lack of startup capital, lack of skills and knowledge and the high feeding costs. The research recommended that, by re-designing finance packages for prospective producers, reviewing of the Green Scheme Policy, to include fodder production and an intensive

campaign to encourage pork farming nationwide, it will address the issue of the slow growth in the pork sector as well as attempting to have local supply satisfying local demand.

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Appendix A: Questionnaires for Pork Producers, Retailers and Importers and Policy-makers

NBS
NAMIBIA BUSINESS SCHOOL
UNIVERSITY OF NAMIBIA

Meat Board of Namibia

Pork Market Share Promotion Scheme

Questionnaire: Pork Producers

Date: ……

1. Have you experienced any economic benefits from the PMSPS project?
   a. Yes
   b. No

2. If yes which of the following
   a. Increased capacity
   b. Improved market access
   c. Profitability

3. If not what is the reason you did not experience any?

……
……
……
……
……

4. Is there a conducive environment for pork production in Namibia?

   a. Yes ☐

   b. No ☐

5. If yes which of the following

   a. Access to markets ☐

   b. Production environment ☐

   c. Startup capital ☐

6. If no what do you propose?

   ……..
   ……..
   ……..
   ……..
   ……
   ……
   ……
   ……
   ……
   ……..

7. What intervention would expect from the government that will enhance your participation in PMSPS.

……
…..……
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8. How do you foresee the future of the PMSPS scheme?

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UNIVERSITY OF NAMIBIA

Meat Board of Namibia

Pork Market Share Promotion Scheme

Questionnaire: Retailers and Importers

Date: ……

1. How has the PMSPS benefitted your operations?

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2. How do you experience the quality of Namibian produced pork versus imported pork?

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3. What measures should be put in place to increase supply of locally produced pork

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4. In what way does the PMSPS affect the consumer prices of pork?

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5. What strategies do you propose to improve PMSPS?

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Pork Market Share Promotion Scheme

Interview Questionnaire: Policymakers

Date: ……

1. In your opinion are you satisfied with the performance of the PMSPS and why?

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2. What are the challenges faced by PMSPS in stimulating a pork production environment?

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3. What measures should be created or undertaken to create an environment that is conducive for the pork production?

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4. How is PMSPS project contributing to the value addition in the pork industry?

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5. What measures do you have in place / or propose to increase the active participation of the pork farmers in the PMSPS project?

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Appendix B: Language and Copy-Editing Certificate

Dr.GM

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

CONTACT

PO Box 40529,
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Windhoek,
Namibia

LANGUAGE & COPY-EDITING CERTIFICATE

22nd November 2017

RE: LANGUAGE, COPYEDITING AND PROOFREADING OF DESMOND JOHN CLOETE's THESIS FOR THE MASTER OF BUSINESS ADMINISTRATION DEGREE OF THE UNIVERSITY OF NAMIBIA

This letter serves to confirm that I copyedited and proofread **DESMOND JOHN CLOETE's** Thesis for the degree of **MASTER OF BUSINESS ADMINISTRATION** entitled: **INVESTIGATING THE IMPACT OF VALUE ADDITION IN THE AGRICULTURAL SECTOR WITH SPECIAL REFERENCE TO THE PORK MARKET-SHARE PROMOTION SCHEME**

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

I am a language editor and have edited many Postgraduate Diploma, Masters' Thesis, Dissertations and Doctoral Dissertations for students studying with universities in Namibia, Zimbabwe, Swaziland and South Africa.

Please feel free to contact me should the need arise.

Yours Sincerely,
The Rev. Dr. Greenfield Mwakipesile

greenfield.mwakipesile @mwakipg +264813901701 Dr. Greenfield Mwakipesile