

UNIVERSITY OF KWAZULU-NATAL

The effects of Government decisions on the South African Poultry Market

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ABSTRACT

The South African poultry industry makes up the largest portion of the nation's agricultural sector and contributes significantly to the population's daily protein consumption. Because of its importance, legislative changes made to the poultry industry require assessment to ensure its continued stability. This dissertation therefore calls attention to the impact of governmental legislation on the South African poultry industry. It also examines governmental involvement in inspections of slaughterhouses, import approval and follow up inspections. Furthermore, it determines that the government department responsible for inspections, the Department of Agriculture, Forestry and Fisheries (DAFF), is understaffed, underfunded and thus unable to perform its necessary duties adequately. In order to demonstrate the South African government's impact on the poultry industry, this study discusses the relevance of new legislation with regard to employees, customers, supply chain, profitability, fair trade, sustainability, national food security, imports and dumping. The results of this study, which were gathered using semi-structured interviews with judgment sampling, highlight critical concerns and loopholes in the South African labelling legislation. For example, the expiration dates of products are often extended after processing. This serious oversight represents a mere fraction of the lack of health and safety regulations within the poultry industry, and leads to the inevitable risk of food contamination. The South African government has been slow to react to these concerns, only recently becoming actively involved in the formal process of safely exporting produced poultry to Europe. This dissertation argues that the South African government must overhaul its legislation on poultry and compile one uniform set of regulations from farm to table. These new regulations would be applicable to all local producers, importers, retailers, wholesalers and manufacturers. Overall, the current state of the South African poultry industry would improve drastically with an improved set of regulations, the guarantee of fair trade, prompt proactive government response to problems and co-operation among involved parties.

KEYWORDS: Poultry Industry, National Food Security, Brining, South Africa, Imports, Sanitary and Phytosanitary Measures, Fair Trade, Dumping, Government

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LIST OF ABBREVIATIONS

AGOA	African Growth and Opportunity Act
AMIE	Association of Meat Importers and Exporters
ARC	Agricultural Research Council
BFAP	Bureau for Food and Agricultural Policy
DAFF	Department of Agriculture, Forestry and Fisheries
DTI	Department for Trade and Industry
DWA	Department of Water Affairs
EIU	Economic Intelligence Unit
EPA	Economic Partnership Agreement
EU	European Union
FAS	Foreign Agricultural Service
FAWU	Food and Allied Workers Union
GAIN	Global Agricultural Information Network
GATT	General Agreement on Tariffs and Trade
IQF	Individual Quick Frozen
JSE	Johannesburg Stock Exchange
OIE	World Organization for Animal Health
NERSA	National Energy Regulator of South Africa
SADC	Southern African Development Community
SAFEX	South African Futures Exchange
SAPA	South African Poultry Association
SPS	Sanitary and Phytosanitary
USDA	United States Department of Agriculture
WTO	World Trade Organization

GLOSSARY

The definitions below are directly sourced from the *Regulations on Labelling and Advertising of Food Stuffs*:

“**Brine**: a solution of sodium chloride in water where the solution is used for curing, flavouring and/or preserving the foodstuff” (Department of Health, 2010).

“ **Brine-based mixture**: a brine solution to which only permitted phosphate salts and permitted food additives may have been added and which is used for, amongst others, tenderizing, flavouring and preserving of poultry meat” (Department of Health, 2010).

“**Poultry meat**: the slaughtered and sometimes deboned carcasses of *Gallus domesticus* (fowls), *Meleagus gallopavo* (turkeys) and *Anas* (ducks and muscovies) as well as any portions or parts of such carcasses which are usually sold for human consumption, whether as such or in cut form and which is still recognizable as a carcass, portion, piece or strip and includes raw processed poultry meat” (Department of Health, 2010).

“**QUID (‘Quantitative Ingredient Declarations’)**: the calculation of the % absorbed moisture or the % treatment with a formulated solution using the formula (declarable weight of ingoing ingredient/weight of finished product) x 100” (Department of Health, 2010).

“**Raw processed poultry meat**: poultry meat which has been treated with a formulated solution, has not undergone any heat treatment and is still recognizable as a poultry carcass, portion, piece or strip” (Department of Health, 2010).

CHAPTER 1: OVERVIEW OF THE STUDY

1.1 Introduction

The South African poultry industry is the largest contributor to the agricultural sector and protein consumption in the nation. Notably, Dirk Esterhuizen argues that “poultry meat. . . has grown to be the most important protein source in the diet of the majority of South Africans” (2015, p. 2). However, new legislation and chicken dumping have jeopardized the poultry industry. The South African government has recently regulated brining levels, which has significantly disrupted poultry production. In addition to this, high input costs of production, such as electricity, feed and water, and avian flu outbreaks have further stunted local production. As poultry industry leaders Brinkuis, Pitman, and Masemola(2017) suggest, “food security . . . becomes an issue when leading food-producing industries are under threat” . In essence, due to the decline of the poultry industry, food security in the nation has been adversely affected. With this in mind, this study was undertaken to reveal the direct and indirect effects of government decisions on the poultry industry.

Informed by a review of related literature and interview responses from poultry industry experts, this study evaluates the impact of government decisions on the long-term survival of the poultry industry and food security. This chapter provides an overview of the motivation and focus behind this study’s research objectives.

1.2 Motivation for the Study

The government’s implementation of legislation and policy changes regarding the poultry industry are relatively new. For this reason, there are a limited number of studies on their consequences.

The South African Poultry Association’s (SAPA) Industry Profile Report of 2015 states that “the poultry industry remains the largest single contributor to the agricultural sector in South Africa . . . [with] 20.9 % of the total agricultural gross value in 2015 stemm[ing] from poultry production” (2016, p. 5). This ultimately suggests that the poultry industry not only plays an important role in ensuring food security, but also makes up a significant part of the South African economy. For

instance, it is estimated that the poultry industry employs 48,118 people directly and an additional 63,072 people indirectly (South African Poultry Association [SAPA], 2016). This means that over 100,000 people are affected by disruptions in the poultry market, without taking into account whether or not they are sole providers within their households.

Furthermore, “research on meat production worldwide indicates that poultry is the fastest growing livestock sector, especially in the developing countries” (Delgado et. al, cited in Chang 2007, pg. 1). One could therefore presume that investing in the poultry sector in South Africa, a developing country, should guarantee rapid returns and an increase in blue-chip companies. In reality, however, the South African poultry market is shrinking in size with one of its large contributors Rainbow Chicken Ltd. (RCL) disinvesting from the market, which is deeply concerning.

Because of this, it is imperative that any government interference in the market be given careful consideration. Furthermore, the South African government should occupy all spheres of government, acting cumulatively instead of unilaterally. When it comes to the poultry industry, it is important to consider both cumulative and individual decisions within the government, as the effects directly and indirectly play a vital role in the lives of South Africans.

1.3 Focus of the Study

The study focuses on government decisions within the poultry industry to highlight the adverse effects of individual versus cumulative decision-making. These effects relate mainly to the recent changes in brining legislation and the increased volume of poultry imports into South Africa. In addition, this study reveals how food security is jeopardised by current governmental practices in South Africa. It also proposes recommendations to safeguard the fairness and sustainability of competitive markets within the poultry sector.

1.4 Problem Statement

Ideally, the South African poultry industry should be trading in a free and fair market both locally and internationally. The sector should be governed by regulations that are informed by best global practices, and which prioritise national food and job security. Furthermore, the sector should be capitalistic in nature and respond to demand for poultry products. Unfortunately, this is not the case.

Recent legislation regarding brining and trade regulations has negatively affected the South African poultry industry. This will in turn adversely affect the economy. These changes have caused job losses, industry uncertainty and threatened domestic poultry production. It is essential to review the consequences of these governmental decisions in order to reverse these effects. This research considered the impact of recent legislation on the poultry industry.

1.5 Objectives of the Study

The objectives of this study were to:

1. Identify the recent government decisions that directly affect the South African poultry industry;
2. Identify the recent government decisions that indirectly affect the South African poultry industry;
3. Describe and gain an understanding of the advantages and disadvantages of the decisions identified in objective 1 and 2;
4. Research industry opinions of the long term effects of government decision on the South African economy; and
5. Identify the role that the local poultry sector plays in South Africa's national food security.

The purpose of this research was to gain an understanding beyond the media's portrayal of the poultry industry as a whole. It is important to understand the impact of legislation on final consumer goods, the workforce, the economy and national food security.

1.6 Limitations of the Research

The study was constrained to a 6-month period, which limited the amount of research undertaken and data collected. There were also marginal financial resources available. As a result, this study was self-funded. At the time of the study, the avian flu was reported in South Africa. The data collected does not encompass the total effects of the avian flu outbreak, but only the current (to date) data. Communication with foreign dignitaries and government employees, specifically DAFF, was unfortunately not possible.

1.7 Delimitations of the Research

The interviews conducted represent a broad spectrum of the formal poultry market, but exclude the informal sector. Farmers, consumers and labourers were not interviewed. Because of time constraints, in-depth analyses of certain aspects of the study were not possible. Conducting statistically and quantitative research was also not possible in this setting.

1.8 Chapter Outline

This research study is divided into five chapters.

Chapter One contains key information and objectives for the study, as well as the motivation behind it.

Chapter Two focuses on the literature reviewed with regard to global and local industry data, South African legislation, and other secondary data necessary to evaluate the condition of the current South African poultry industry.

Chapter Three details the research methodology undertaken in the study. It contains the theoretical rationale behind the decisions that have been made to justify the approach chosen and its findings. This chapter also highlights possible gaps in the research.

Chapter Four presents the detailed findings of the research undertaken as well as an analysis of each finding relative to the study's objectives.

Chapter Five summarises the findings from both the literature review in chapter two and the research findings in chapter four on an objective-by-objective basis. It also proposes recommendations with regard to government decisions on the poultry industry.

1.9 Summary

The South African poultry industry plays a critical role in upholding the economy and ensuring food security. It is also instrumental to the agricultural sector, providing a significant portion of its employment. Nevertheless, recent legislation alongside a struggling economy has resulted in the disruption of the domestic poultry industry.

This study examines this legislation, its effects, and ultimately provides recommendations to improve the current state of the South African poultry industry.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter surveys the South African poultry industry on a local and global scale. It also discusses literature regarding the direct and indirect effects of government decisions on the poultry industry, which are in line with the objectives of this study.

2.2 Overview of Global Poultry Market

The United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) estimates that in 2018, total global poultry production will amount to 91.3 million tons for the year (2017a, p.19). They also estimate an increase of 3% for global exports in 2018, averaging 11.4 million tons. Brazil and USA are expected to increase their export tonnage by 4% and 3% respectively in 2018. In 2017, Brazil, the United States, the European Union and China produced more broilers (chickens raised for consumption) than the rest of the world combined. South Africa produced a mere 1.4% of global production (Foreign Agricultural Service/USDA, 2017; Mugido, 2017a).

Figure 2.1 below displays a comparison between the three biggest producer countries and South Africa. It also shows the production, consumption, excess production from 2017 and expected production of 2018. These figures clearly illustrate how trivial South production is compared to the top global producers. It further illustrates the potential risks that South Africa faces should the top-producing countries start dumping their product into South Africa, as their excess is also greater than South African production and consumption.

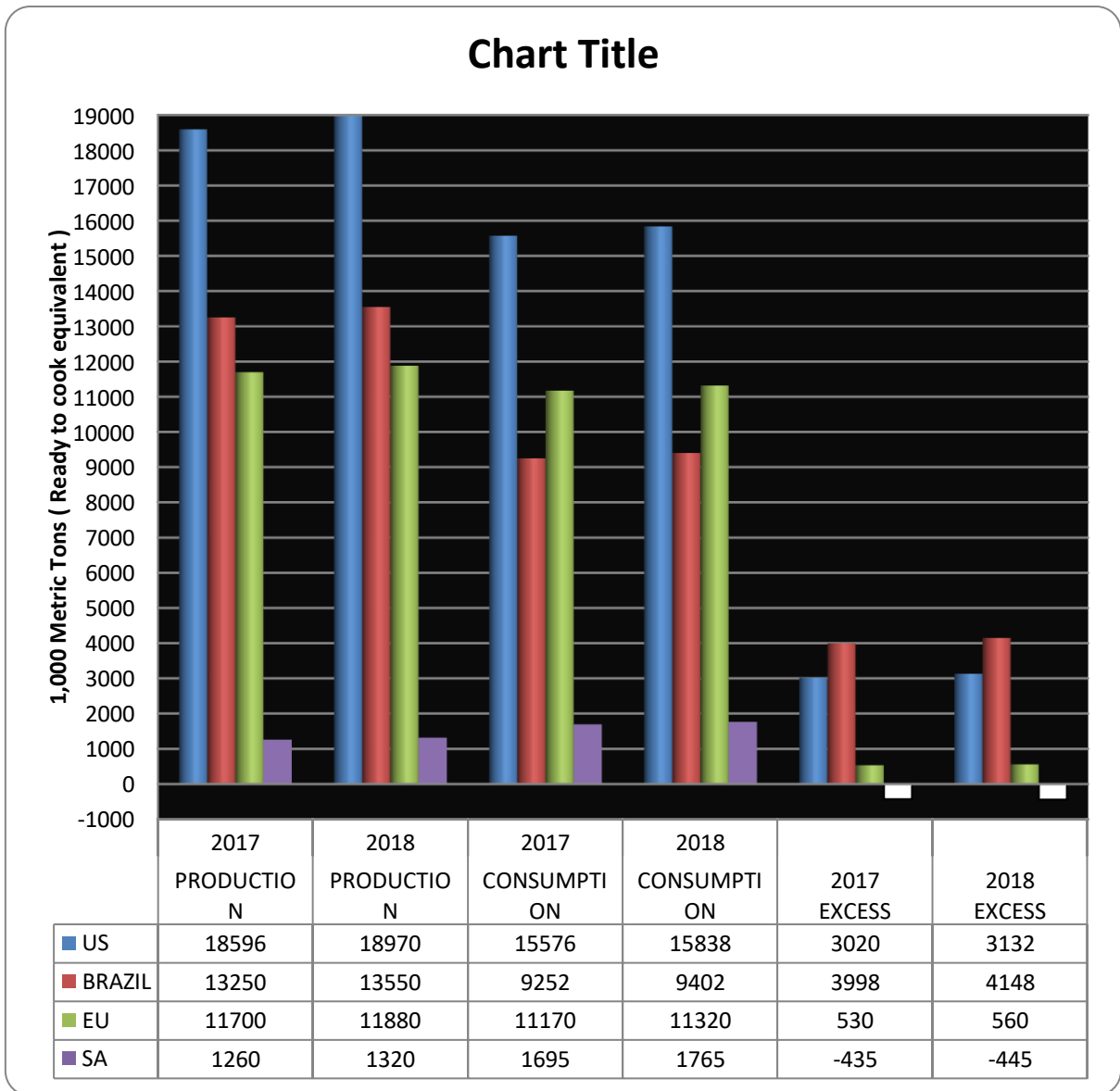


Figure 2.1: Main Global Producers vs. South African Production vs. Consumption vs. Excess

Source: Adapted from Foreign Agricultural Service/USDA (2017a).

Globally, poultry production rates have also been plagued by several occurrences of the highly pathogenic avian influenza (HPAI), also known as the bird flu. For health and safety reasons, countries have been forced to cull and ban the import of a large number of birds, resulting in shortages in local markets (Foreign Agricultural Service/USDA, 2017b).

2.3 Overview of the South African Poultry Industry

The South African poultry market is expected to produce 1.32 million tons of broiler meat in 2018. This represents approximately 5% growth on 2017 production. In 2017 after a severe drought, the poultry industry benefited from reduced feed prices – the result of a record high maize yield. However, these gains proved insignificant once several countries banned the import of South African poultry. In June 2017, World Organization for Animal Health (OIE) discovered avian influenza in breeder stock. Following this discovery, several African countries including Botswana, Malawi, Mozambique, Namibia, Zambia, Zimbabwe, etc. banned poultry imports from South Africa. In September 2017, 79 cases of confirmed avian influenza were confirmed by the Department of Agriculture, Forestry and Fisheries (DAFF) resulting in the culling of over 3.2 million birds. This drastically reduced supply in the local market (Mugido, 2017a). The South African broiler poultry market is made up of five major companies. These include the following:

1. Astral Foods (branded as Early bird and Mountain Valley)
2. Rainbow Chicken Ltd. (RCL Foods)
3. Country bird (branded as Supreme)
4. Sovereign Foods (branded as Rockland's)
5. And Daybreak (previously known as AFGRI).

The below figure is a representation of the fraction of local broilers produced by these companies in South Africa. As indicated in Figure 2.2, these five companies contribute to 67% of the South African poultry industry. It is estimated that these companies produced 18.1 million birds weekly for 2016 and 2017, whereas 18.5 million birds were produced in the previous year (Astral Foods 2016; 2017a). This indicates a significant decline in poultry production after only one year.

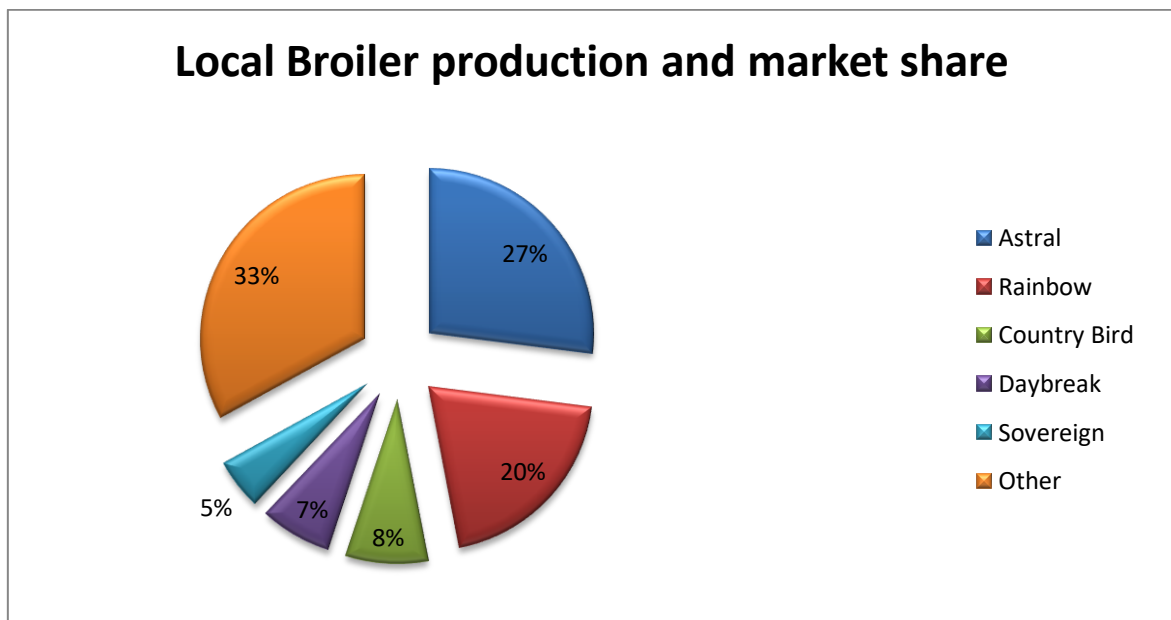


Figure 2.2: Local Broiler Production and Market Share

Source: Adapted from Astral Foods (2017a).

The below figure is an illustration of chicken flock distributions nationwide. The majority of chicken flocks are concentrated in three of the South Africa's nine provinces: The Western Cape, the North West and Mpumalanga. Of the total flock, SAPA estimates that 76% are used in broiler production and 24% in egg production (2016, p. 13).

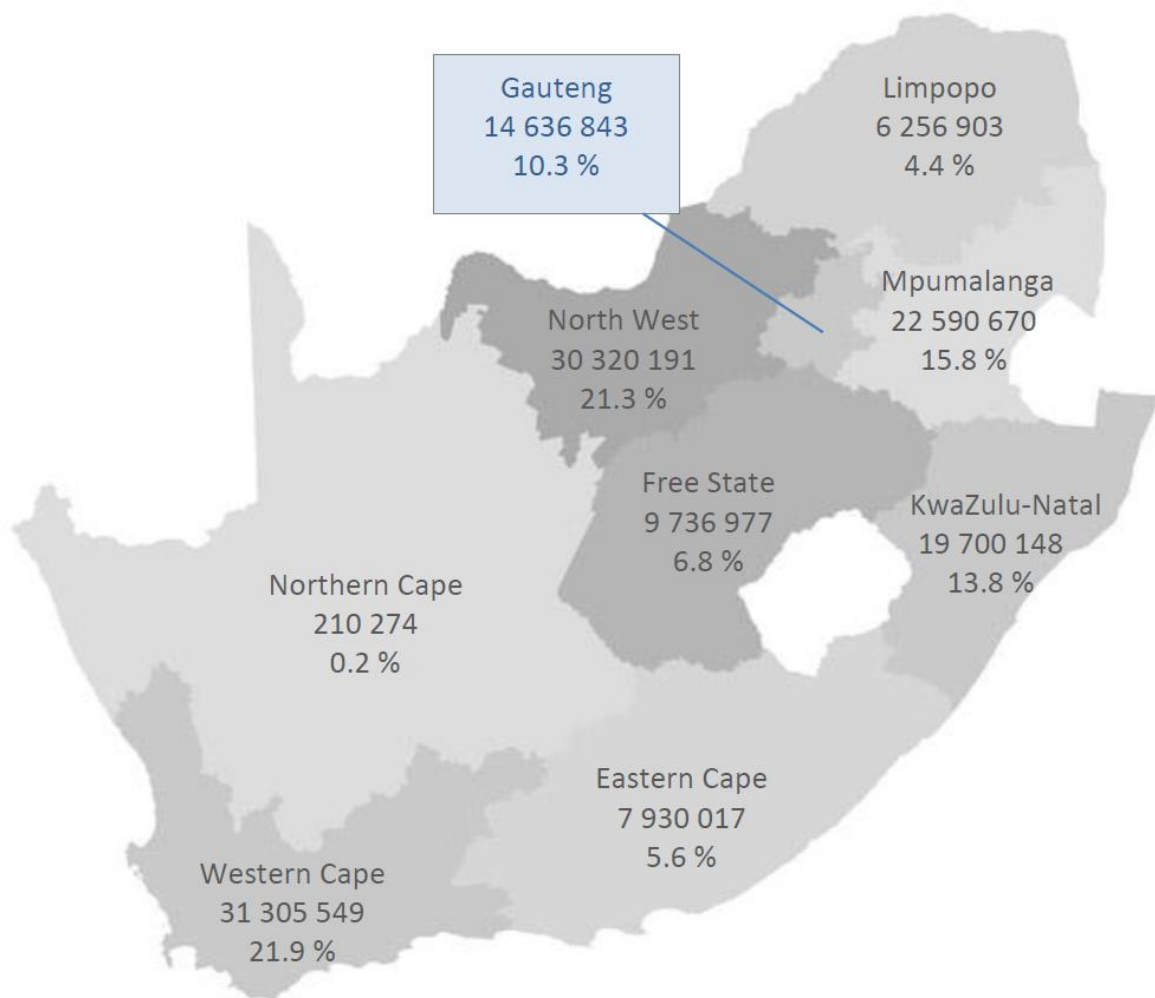


Figure 2.3: Provincial Distribution of the National Chicken Flocks in South Africa in December 2014; Numbers Per Province and Percentage of the Total Flock

Source: The South African Poultry Association (2015a).

Figure 2.4 highlights three aspects of the poultry industry's importance in South Africa:

- The poultry industry is the largest protein industry in South Africa.
- Chicken consumption amounts to more than double the consumption of beef.
- Poultry imports have increased year after year, but local production has declined.

These findings also suggest that consumers rely on the poultry industry as a source of protein, which in turn supports the significance of its success in order to ensure food security in the nation.

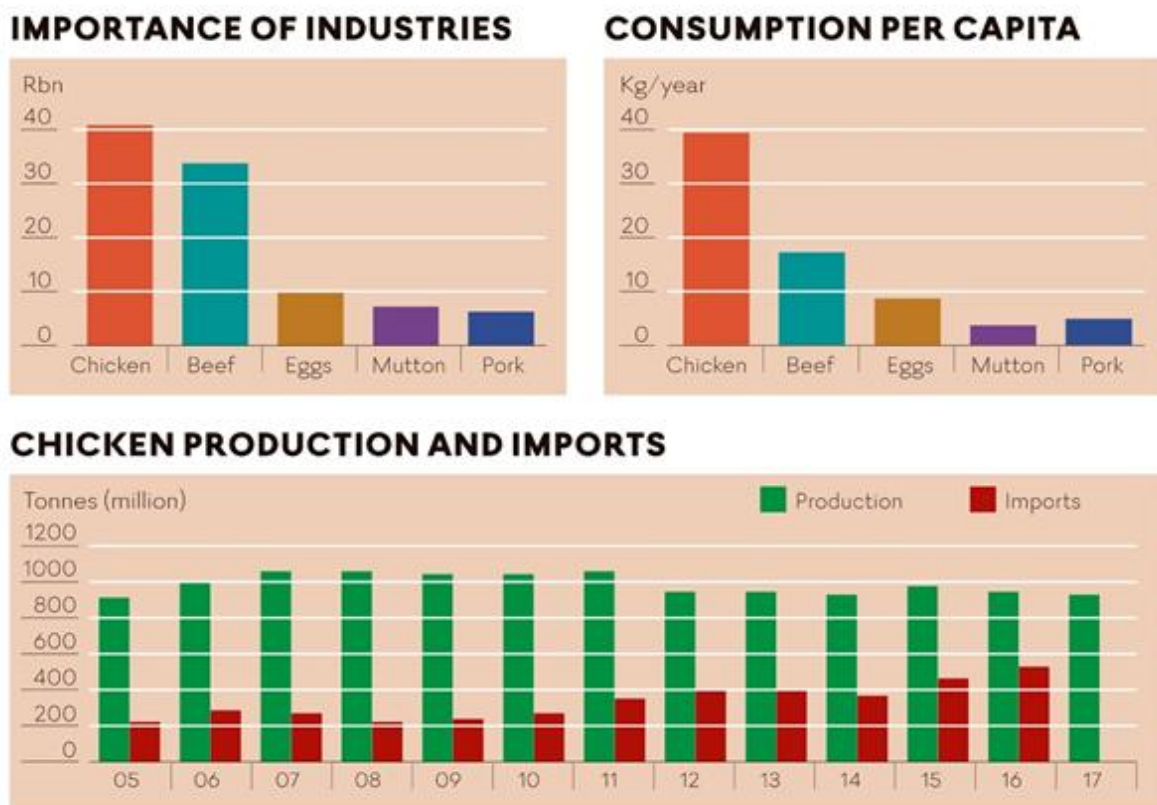


Figure 2.4: Importance of Industries and Chicken Production
Source: Willemse (2017).

2.4 Literature Review in Relation to Objectives

2.4.1 Objective 1

This section identifies the recent government decisions that directly affect the South African poultry industry.

2.4.1.1 Brining

After reports that Supreme Poultry had sold expired stock to consumers, the Department of Agriculture, Forestry and Fisheries (DAFF) conducted an onsite inspection of their Botshabelo Abattoir facility in the Free State. This inspection revealed that the brine injection percentages being used contradicted regulations. DAFF realized that the industry was abusing this brining technique and commissioned the Agricultural Research Council (ARC) to conduct a study on brining. ARC tested individual quick frozen (IQF) chicken portions, and found that the brine quantities amounted to about 30 to 60 percent, which therefore required regulation (Department of Agriculture, Forestry and Fisheries [DAFF], 2011).

In October 2016, amendments to Section 15 of the Agricultural Product Standards Act of 1990 (ACT No. 119 OF 1990) regarding control over the sale of poultry meat came into effect (DAFF, 2016). Before the amendments to ACT No. 119 OF 1990, the prescribed limit of brining injection percentages on whole carcasses was 8%. Under the amended act, the prescribed brining limit was increased to 10% per whole carcass (DAFF, 2016). However, before these amendments, there was no prescribed limit to the percentage of brine for individual poultry portions. The amended legislation ACT No.119 Section 15 has allowed for a maximum percentage of 15% per portion, since portion pieces can retain more water than the whole carcass (DAFF, 2016).

In a presentation given by Ntshabele (2010), he suggested an action plan whereby the poultry industry legislation and international best practices were reviewed. DAFF and The Department of Trade and Industry (DTI) shared their preliminary results of the investigation, which included high moisture, loss in thawing and cooking, nutrient dilutions, potential health risks, adulteration and elevated salt levels (Department for Trade and Industry [DTI], 2015). They

concluded that investigation into effective methods for inspection required more research.

2.4.1.2 The African Growth and Opportunity Act (AGOA)

The African Growth and Opportunity Act (AGOA) is a preferential trade scheme between several African countries and the United States of America. In the third quarter of 2015, this trade scheme was due to be renewed. USA Senators Chris Coons and Johnny Isakson called to have these duties removed as a condition for the renewal of South Africa participation in AGOA, enabling the United States poultry industry to have the same terms on duty free tariff terms as the European Union.

For over a decade, South Africa has enforced anti-dumping tariffs on bone-in-leg poultry portions in order to prevent large scale dumping of poultry in South Africa. The South African Poultry Association (SAPA) argued that dumping would inevitably lead to reduced local production, job losses and other negative knock-on effects in the maize and other support industries (SAPA, 2015a.). As a result, the government implemented new legislation:

On 18 December 2015, the Deputy Minister of Finance published a notice in the Government Gazette amending Schedule 4 of the Customs and Excise Act by inserting rebate item 460.03 that provide[s] for a rebate of the anti-dumping duty imposed on bone-in chicken pieces originating or imported from the United States for 65,000 MT per annum (DTI, 2015).

For the greater good of its people and continued participation in AGOA, South Africa and the United States negotiated to allow an import quota of 65 000 metric tonnes of bone-in leg portion per annum into South Africa from the United States. After this concession by South Africa, the United States Senate renewed the AGOA Act for ten years. The United States poultry market gained access to the South African poultry market without formally challenging the anti-dumping tariffs imposed on them.

2.4.1.3 South African Poultry Task Team

In January 2017, in response to the problems experienced by the South African poultry industry, the government established a Poultry Sector Task Team. The task team is responsible for developing short and long-term responses to challenges in poultry production and the prevention of downscaling. In order to ensure that the task team is effective in identifying the challenges and responding to them, it includes representatives from SAPA, poultry producer representatives, the Food and Allied Workers Union (FAWU) and the Industry Development Corporation. The task team is controlled by representatives from the Department of Trade and Industry (DTI) and the Department of Agriculture, Forestry and Fisheries (DAFF, 2017; DTI, 2017).

2.4.1.4 Import Bans

The world organization for animal health (OIE) has 181 member countries. These countries include South Africa, European Union members, Brazil and the United States of America. These countries have committed to following the guidelines set out by the organization in order to achieve its objectives. These objectives include transparency, scientific information, international solidarity and sanitary safety, promotion of veterinary services, food safety and animal welfare. Transparency means that should any of the countries detect any animal diseases, they must report them immediately and the OIE will then inform the member countries. Scientific information collected and analysed by the OIE is then shared and available to all members. International solidarity provides support to its members when requested and members decide and control sanitary safety. The OIE standards resulting from this cooperation are considered by the World Trade Organization (WTO) to be the internationally required standards. These standards assist countries with providing sufficient protection against disease and pathogens to prevent trade barriers for sanitary reasons. Promotion of veterinary service is considered an opportunity to aid developing countries, so that they can benefit more from the WTO Sanitary and Phytosanitary (SPS) Agreement. Food safety and animal welfare is aimed at setting standards that eliminate health hazards prior to slaughter and initial product processing. The OIE standards are intended as a guide, which countries should refer to when compiling their SPS regulations (World Organization for Animal Health [OIE], 2018).

In an effort to aid those parties interest in importing meat (including poultry meat) into the South African market, DAFF compiled a brief overview of the requirements and process:

The Directorate Animal Health administers the Animal Diseases Act, 1984 (Act No 35 of 1984). (Animal Diseases Act, No 35 of 1984).The import Export Policy Unit of the Directorate Animal Health also administers the sections of the Meat Safety Act, 2000 (Act No 40 of 2000) (Meat Safety Act, No 40 of 2000) and regulations that apply to the importation of meat. The importation of animals and animal products from individual countries is evaluated in accordance with these Acts, international standards and other requirements (2012, p. 1).

Here, DAFF explains the general procedure for importing meat from countries that already export to South Africa. In order to import into South Africa, the establishment that the meat originates from must be approved by its national executive officer per the Meat Safety Act, 2000. In order to obtain approval, the management of the establishment must contact the veterinary authority in the country where the establishment is based. The local veterinary authority then inspects the producers' establishments on behalf of South Africa. If they are compliant with South African regulations, the veterinary authorities who performed the inspections notify the Directorate for Animal Health of South Africa to authorize them. The directorate of animal health then schedules an inspection by themselves. If the directorate is satisfied with its initial inspection, they will then (in writing) confirm the approval of the establishment to produce meat for South African imports. This is then added to a list of approved establishments. However, if an establishment is approved for lamb imports, it does not mean that it is approved for poultry or beef imports. The individual/company wanting to import meat into South Africa is required to have a veterinary import permit in order to be granted an import permit. Regulations are applied on a case-by-case basis. When a country is not already exporting to South Africa, a separate lengthy process is involved, whereby risk is analysed, draft conditions of trade are compiled, and then negotiations in the draft are undertaken to ensure the directorate's minimum allowable standard of animal health requirements are met.

2.4.1.5 Anti-dumping

The World Trade Organization (WTO) has 164 members with 22 observers. Observers (excluding the Holy See) have five years to initiate the access negotiations. The WTO oversees global trade, disputes settlement procedures and promotes trade with developing countries and outreach between non-member governments and organizations (World Trade Organization [WTO], 2018a).

Furthermore, the WTO's anti-dumping agreement and Article 6 of the General Agreement on Tariffs and Trade (GATT) allows countries to respond to dumping in a way that would otherwise be considered in violation of binding GATT principles. They consider three aspects when assessing the level of dumping:

- The cost of the product sold in the domestic market versus the export markets;
- The cost charged to other countries; and
- Total production cost, plus other related expenses, and a normal profit mark-up.

If the margin of the exported price is 2% or less, it is considered insignificant and further investigation is not necessary (WTO, 2018b).

It is also important to note that even if a company is dumping product into a country, it does not necessarily allow anti-dumping measures to be instituted. The dumped products are required to cause or threaten to cause material damage to the local market. This is discovered through investigation. There are also additional conditions that take into account aspects such as volume of the imports, volume percentages of the dumped product, total imported product, etc. (WTO, 2018b). The WTO encourages countries to negotiate between themselves to resolve and identify conflicts however, should this not be possible, they can file disputes with the WTO (2018b).

According to the South African Poultry Association (SAPA), one of the leading causes of poultry dumping into the South Africa market stems from the US and EU local markets' preference for white meat (mostly consisting of breast meat) (2015b). This results in the oversupply of dark meat. SAPA estimates that the US consumes five times more white meat than dark meat, which in turn devalues the

cost of dark meat. South Africans prefer the dark meat, making South Africa and similar markets an ideal place to sell the internationally devalued, unwanted dark meat at rates against which local producers cannot compete. This is due to their inability to sell the white meat at a premium in the US and EU markets (South African Poultry Association, 2015b). While there are no tariff barriers into the EU and US markets, they use other methods to block South African imports like Newcastle disease and avian influenza in ostriches. Newcastle disease is an exceptionally contagious disease that several bird species including chickens are susceptible to; the disease is not curable, has a high mortality rate but is preventable with vaccines (Oliver, 2004). South Africa is considered a first world country by the WTO and, unlike its developing African neighbours, is not allowed to protect its local producers; instead, as SAPA indicates, it is required to have open borders (2016, p. 57).

Anti-dumping laws are supposed to protect local industries against the practice of unfair trade. Without anti-dumping duties, the cost of imported products increases. At the same time, these duties aid the creation of a stabilized local market price, which prevents fly-by-nighters who import products when the Rand is strong and stop when the Rand is weak.

On the other hand, anti-dumping measures can be used as trade barriers in an attempt to protect inefficient local markets (Tao, 2006). It is possible to face reprisal and other obstacles from countries that are affected by the anti-dumping laws as displayed in the negotiations (i.e. the AGOA agreements).

2.4.2 Objective 2

This section identifies the recent government decisions that indirectly affect the South African poultry market.

2.4.2.1 The SADC-EU Economic Partnership Agreement (EPA)

On 16 October 2016, the SADC-EU Economic Partnership Agreement (EPA) was established. This agreement banned agricultural export subsidies (EU Delegation to South Africa, 2017).

Under article 26-2 of this agreement, certain Southern African Development Community (SADC) countries including Botswana, Lesotho, Namibia, Mozambique and Swaziland (South Africa is excluded for this allowance) are permitted to implement temporary tariffs and custom duties to ensure their national food safety and protect infant industries.

2.4.2.2 Feed

The largest production cost involved in the production of broiler chicks is feed (Mchunu, 2016). Prior to 1996, the sale of maize was regulated by the South African government. In 1996, the Marketing of Agricultural Products Act was established, which resulted in the deregulated and free trade of maize. This resulted in the maize price being traded at market value (The Grain and Oilseed Industry of South Africa, 2017).

In 2001, South African Futures Exchange (SAFEX) was bought out by the Johannesburg Stock Exchange (JSE), which caused grains to be traded as derivatives. SAFEX aids in price discovery and risk hedging, resulting in the sale of maize being linked to market value that is traded in US dollar globally (Johannesburg Stock Exchange, 2018). Thus, the rand dollar exchange rate has a significant effect on the cost of feed and input costs.

As represented in Figure 2.5 below, a direct correlation can be seen between rand dollar rate and the increase in the price of maize. Figure 2.6 displays a correlation between the increase in the price of poultry and the price of feed. SAPA estimates that feed contributes to 75% or more of the input production cost of broiler poultry; 50% of the feed consists of maize (Mchunu, 2016).

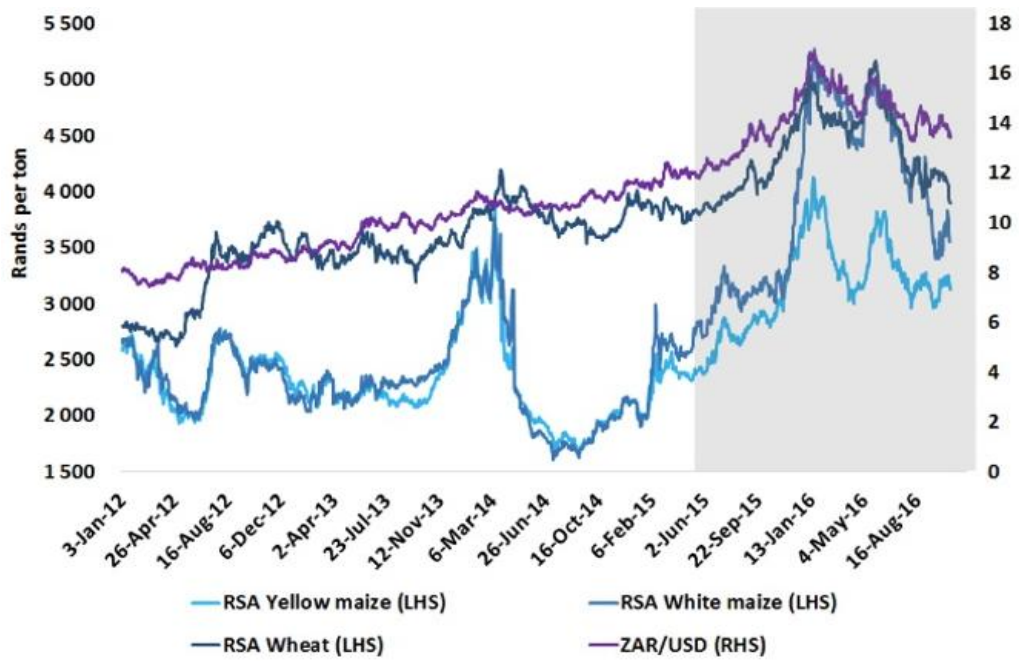


Figure 2.5: RSA Grain Prices and ZAR/USD.
 Source: Agbiz Research (2017).

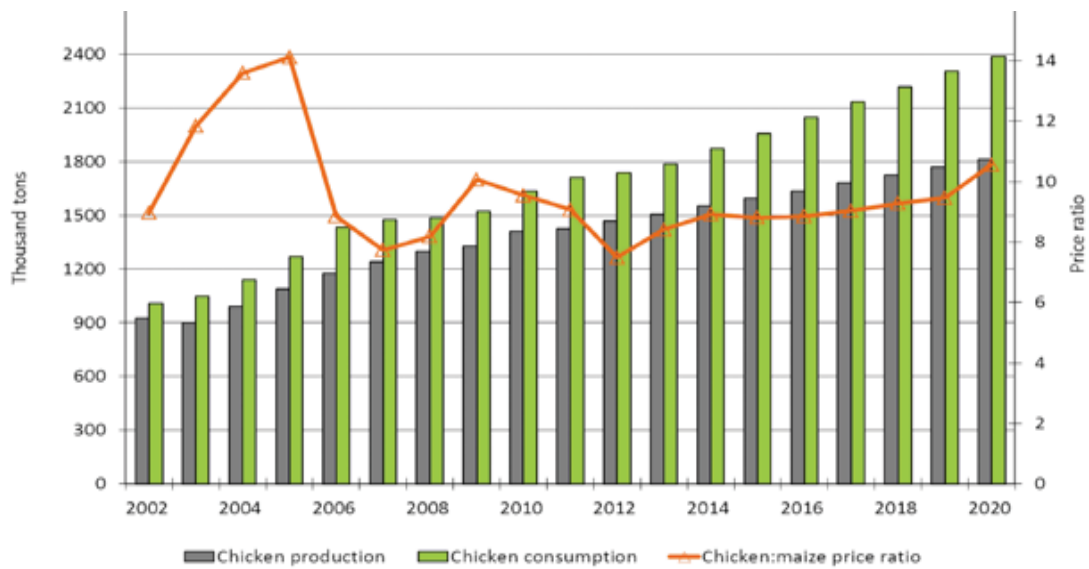


Figure 2.6: SA Chicken Production, Consumption & Chicken-Maize Price Ratio
 Source: Bureau for Food and Agricultural Policy (2013).

2.4.2.3 Electricity

In terms of the National Energy Regulator Act, 2004 (Act No. 40 of 2004), the National Energy Regulator (NERSA) was created. NERSA is charged with regulating electricity, piped-gas and petroleum pipelines industries. In terms of Act No. 4 of 2006, NERSA's mandate with regard to electricity includes pricing and tariff supervision (National Energy Regulator of South Africa, 2017). Since the revelation of the dire situation at the parastatal Eskom (2017), South Africa has faced continuous year on year electricity tariff increases as indicated in Figure 2.7 below.

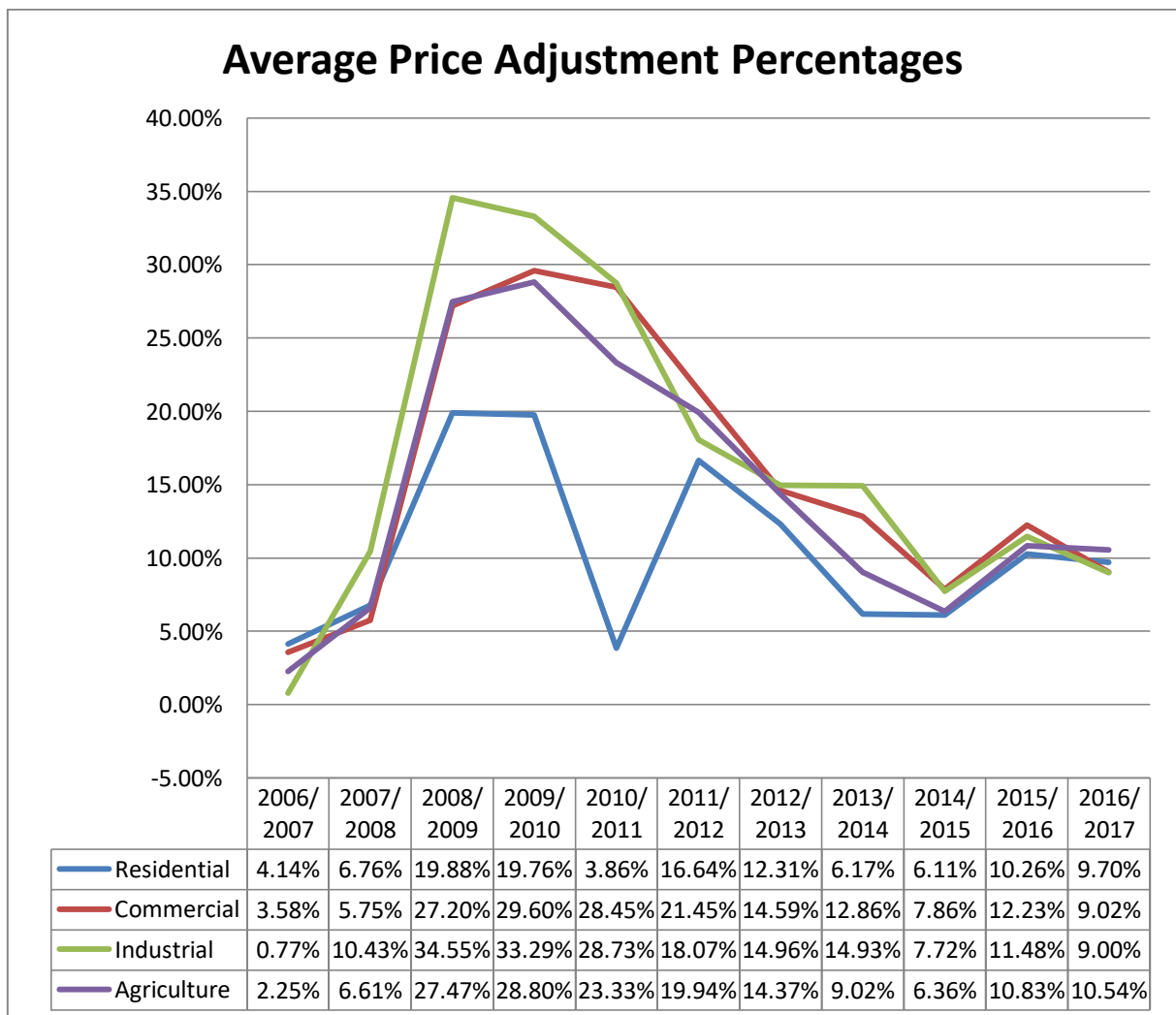


Figure 2.7: Average Price adjustment Percentages

Source: Adapted from Eskom(2017).

Conningarth Economists conducted a study to measure the maximum possible increase in electricity that certain sectors of the economy could absorb, before becoming unprofitable (cited in Deloitte, n.d.). The poultry sector can absorb a

maximum of 250% in electricity cost increases for the poultry agricultural sector before it become unprofitable.

Because the data used by Conningarth Economists to calculate the elasticity of the electricity price on the poultry market was based on 2006, Eskom’s figures were used for a comparison (Deloitte, n.d). The average price per c/kwh for the 2006/2007 year for the agricultural sector was 33.69 cents, while their average for the 2016/2017 year was 141.70 cents. This amounts to a 321% increase in the cost of electricity being absorbed by the agricultural poultry sector in a ten-year period.

2.4.2.4 Water

In recent years, South Africa has suffered from severe drought in most provinces with the Northern, Western, and Eastern Cape currently being severely impacted as indicated in Figure 2.8 below. Water is not only used for consumption for the chickens, but also in meat broiler production for cleaning, freezing and brining etc. While the government cannot control rainfall, it is tasked with water management per the National Water Act of 1998.

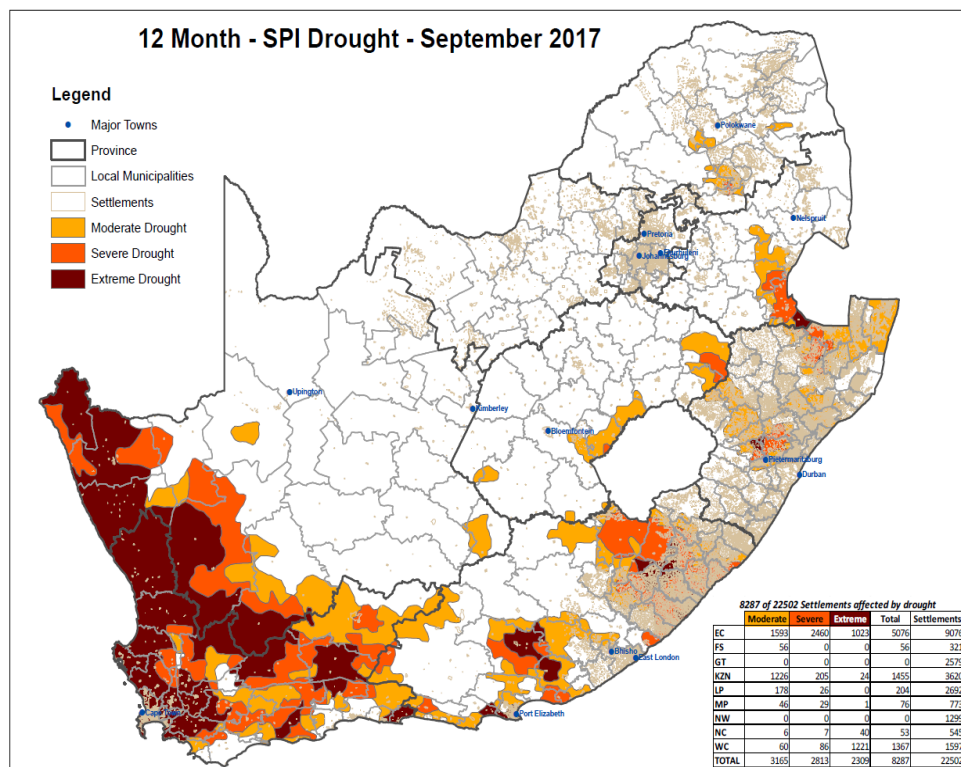


Figure 2.8 Drought-Affected areas in South Africa September 2017.

Source: Adapted from Department of Water Affairs. (2017).

Water is essential to the production of broiler poultry. Table 2.1, 2.2, 2.3 below indicate the consumption of water from hatcheries to processing at abattoirs. The sheer volume of the overall consumption shown in these tables substantiates the importance of water consumption throughout the production of poultry broiler meat.

Table 2.1: Survey summary of Hatcheries

		No. Of Producers	Range	Overall Average
Hatcheries	Production (hatchling/year)	3	187 000- 274 000	237 000
	Water use (kl/year)	3	28 200 – 151 585	93 192
	SWI (L/bird)	3	< 1 L	< 1 L
	Wastewater (kl/year)	0		

Source: Adapted from Water Research Commission (2017).

Table 2.2: Survey summary of Broilers

		No. Of Producers	Range	Overall Average
Broilers	Production (birds housed)	14	80 - 276 800	95 199
	Water use (kl/year)	6	5001 – 40 000	11 250
	SWI (L/bird)	7	< 5 - 10	6
	Wastewater (kl/year)	0		

Source: Adapted from Water Research Commission (2017).

Table 2.3: Survey Summary of Abattoirs

		No. Of Producers	Range	Overall Average
Abattoirs	Production (birds /year)	15	78 000- 105 534 000	37 368 933
	Water use (kl/year)	15	520 – 1 383 200	571 705
	SWI (L/bird)	15	9 - > 16	12.8
	Wastewater (kl/year)	4	336 000 – 10 944 000	4 883 751

Source: Adapted from Water Research Commission (2017).

2.4.3 Objective 3

The purpose of this section is to gain an understanding of the advantages and disadvantages of the decisions identified in the above objectives (1 and 2).

2.4.3.1 Brining

The brining process involves using a salt solution to prevent the loss of moisture during cooking. Cat (2009) explains that this 'diffusion' "results in more water and flavour within the cells of the meat." Blonder (2013) further explains three different methods used to brine, namely dry brining, wet brining and injection brining. Injecting is done by commercial meat producers. They use hundreds of hypodermic needles to directly inject the brine into the centre of the meat. In order to aid the retention of the brine to the meat, food gum and functionalized proteins are added to the injected solution (Blonder, 2014). Brine injection is the chosen method used by manufacturers.

2.4.3.2 Brining Advantages

McKee and Alvarado (2004, p114) describe the advantages of the salt brining process as:

- 1) enhance[ing] product flavor;
- 2) increase[ing] moisture retention;
- 3) act[ing] as a synergist with STP to extract salt soluble proteins;
- 4) inhibit[ing] the outgrowth of *Clostridium botulinum* via salt's synergistic role with sodium nitrite (cure); [and]
- 5) at high concentrations, salt applied to the surface of meat dehydrates the meat and serves as a preservative.

They also identify other additives that can be found in the brining solutions namely carrageenan, starches, and soy protein flours and isolates. The soy protein concentrate injected in poultry is approximately 90% protein (McKee and Alvarado, 2004).

When chicken is brined, the question of true weight versus perceived weight enters the equation. Scott Pitman states, for instance, that before the new brining legislation, customers were purchasing a bag of frozen chicken that contained approximately 10 pieces of chicken and weighed 2kg (Sishuba, 2016a). However, that bag contained up to 30% brining. Now, that same bag weighs 1.65kg with a

maximum brining level of 15% for the same price (Sishuba, 2016a). Consumers will now pay for the actual weight of chicken and not for excessive brining.

2.4.3.3 Disadvantages of New Brining Legislation

New brining legislation requires that poultry producers be self-regulating, testing brine percentages themselves at the start of a work shift and every hour thereafter. They are responsible for keeping a record of these percentages for the period of one year. The new legislation does not mention who will be monitoring these tests, how they will be monitored, or how the government ensures that the producers' results are true tested.

Considering best global practice, it appears that there is no brining standard and that the regulations in place rely more on correct labelling than the percentage of permissible brining. Since the legislation was implemented, no formal protocol has been established for testing, which laboratories are certified to do the testing, or how often testing should be conducted by government. There is also no guideline available to define disciplinary action against those found selling poultry with more than 15% water content or their rights to contest the findings.

In a recent study, Kutu (2014) concluded that brining has an effect on the nutritional substance of injected poultry and that sodium needs to be clearly labelled. Poultry products with brining cannot be considered low sodium food items. Additionally, Kutu stated that brining reduces the shelf life of frozen poultry from one year to six months. He recommended that brining levels be set at a max of 10% to protect consumers from what he considers "gross economic adulteration" (Kutu, 2014).

According to Lovell, the new brining regulations have led to a 20% increase in production costs (May, 2016). Because there is less brining in each piece of chicken and "15% less product leaving the plant," the production cost increase must be passed on to the customer in order to sustain the industry (Sishuba, 2016b). This cost is attributed to the fact that "there is the same amount of live chickens coming in . . . [and] 100 000 and 200 000 tons less meat produced per year" (Sishuba, 2016b). Previously, excessive brining increased production

volume, so this decline is a direct result of the new regulation (Sishuba, 2016b). The end price to the customer will therefore increase. In a country where poverty is already an obstacle to food security, this could lead to even greater hardship among the poor.

2.4.3.4 The African Growth and Opportunity Act (AGOA)

The African Growth and Opportunity Act (AGOA) is a preferential trade scheme between several African countries and the United States of America. On 29 June 2015, the American legislation was extended, which maintains the AGOA until 2025.

As discussed in objective one, South Africa's renewed participation in the AGOA ACT was dependent on a rebate of anti-dumping duties on 65 000 metric tonnes of American poultry into South Africa. According to Chinembiri (2015), the United States of America is the biggest export country for South African products as well as the biggest under AGOA, generating 8.2 Billion USD in 2011 from exports to America.

From this figure, it seems that the South African economy benefits immensely from its participation in AGOA. However, as of the 31 August 2017, 55,000 metric tonnes of the 65,000 metric tonnes per annum has already been exported to South Africa from the USA (Mugido, 2017a). Should this cap be removed, there will be nothing stopping this tonnage from rising unchecked, especially when taking into account the estimated increase in United States poultry production.

2.4.3.5 South African Poultry Task Team

The South African government created the South African poultry task to address the current crisis experienced by the South African poultry industry. The team is mandated to address a number of different aspects that are contributing to the crisis and to make recommendations for short and long-term remedies (DTI, 2017).

The poultry task team can be considered a cross-function matrix team. Matrix structures have two desired outcomes: to encompass multiple perspectives and to share resources.

The poultry task team is responsible for finding ways to aid the poultry market from but not limited to trade measures, competitiveness, lowering the cost of inputs (i.e. maize grants), consumer behaviour, export support and finance and growth (DTI, 2017). However, while the diverse configuration of the poultry task team is an advantage, it could also be a disadvantage. As a group, they work toward a singular goal, but individually they will have certain biases. For example, FAWU's main priority is the protection of the labour force. Should the need for greater automation be identified, it can be presumed FAWU would object.

When analysing the known outcomes of the poultry task team to date, only two actions have been taken to aid the local poultry industry with the Sanitary and Phytosanitary (SPS) measures against incoming poultry from Europe as a result of avian flu, and the extension of rates on the US poultry imports. The task team is required to quickly address the problems experienced by the sector as indicated in Table 2.4 (DTI, 2017). However, there is little evidence to suggest they are taking any action or fulfilling their mandate.

Table 2.4: Update on Work Stream

WORK STREAM	INTERVENTION	DURATION	RESPONSIBILITY	STATUS
Trade measures	Review of tariffs and safeguards	Medium term	ITAC and EDD	Review of tariffs and safeguards currently underway. Update is expected in April 2017.
	Health, quality and packaging	Short term	DAFF	DAFF to urgently implement existing measures which do not require legislative amendments based on equivalence.
	Sanitary and Phyto-sanitary	Short term	DAFF	As above based on equivalence.
Competitiveness	Lowering inputs costs	Medium term	the dti, EDD and SAPA	Measures to lower input costs – especially feedstocks.
	Technology upgrading	Long term	the dti, IDC, EDD and SAPA	Viability of investment in MDM plants to raise capabilities in key sub-sector.
Consumer demand	Public sector procurement	Medium term	the dti, EDD and NT	Localisation of public procurement under the new regulations of the PPPFA
Export support	Market access	Medium term	the dti	Export promotion effort in traditional and new markets
Finance	Industrial finance and incentives	Medium Term	the dti, EDD and IDC	Ring-fenced agro-processing incentive and industrial finance for green and brownfield investment especially in MDM

Source: Department of Trade and Industry (2015).

2.4.3.6 Import Bans

South Africa has taken steps to meet the World Organization for Animal Health's (OIE) protocols, one being the ban of certain Brazilian producers due to non-compliance with sanitation regulations. As a result of questionable practices in the Brazilian poultry industry, the Brazilian police undertook operation 'Carne Fraca' in March 2017. This investigation was based on suspicions of bribery between certain chicken producer executives and inspectors. This has resulted in the Brazilian government removing thirty-three staff members and closing three meat-packing plants, along with increased industry audits (Secretariat for Social Communication, 2017).

Because of this, DAFF suspended Brazilian meat and poultry imports into South Africa. This has also resulted in all meat/poultry imports from Brazil being stopped

at South African entry ports and tested for food and health safety reasons (South African Government News Agency, 2017).

The South African ban on EU imported chicken occurred because many EU countries suffered from avian influenza outbreaks. South Africa, in line with OIE requirements, placed bans on poultry imports from countries affected by the avian flu outbreak. Of the ten EU countries authorized to import into South Africa, the United Kingdom, Spain, France, Germany, Hungary, the Netherlands and Poland are presently banned (DTI , 2017).

2.4.3.7 Advantages and Disadvantages of OIE Participation

By implementing Sanitary and Phytosanitary (SPS) measures, the importing countries are able to ensure the quality, safety and standards of the imported items.

SPS are legitimate trade policies. However, they give governments a way to encourage domestic protectionism policies, which will ultimately hurt consumers and inhibit free-flow trade. SPS tends to impair less developed countries' access to international markets (Kang and Ramizo, 2017).

2.4.4 Objective 4

This section discusses research industry opinions on the long-term effects of government decision on the South African economy.

2.4.4.1 Local Poultry Producers/SAPA

In their overview of the poultry industry, SAPA stated their vision:

To create a viable and sustainable industry contributing to economic growth and development, employment and food security, based on successful producers adhering to environmental and ethical production norms and generating sustainable profits (2015b, p.7).

In a recent statement for Rainbow Chicken Ltd., Scott Pitman (2018) argued that “the industry will not be able to survive in its current state for more than another

eight to 12 months.” Pitman(2018) also expressed the importance of an urgent solution, noting that “the crisis now . . . is at the worst it has ever been” . This crisis is directly related to the international dumping of surplus poultry cuts into the South African poultry industry. Because chicken pieces such as leg quarters are not in high demand in the West, surplus chicken pieces are dumped “at whatever price the exporters can get” (Pitman, 2018). As a result, the South African poultry industry faces irreparable losses, and will continue to decline until the dumping ceases.

The dumping of bone-in portions is also affecting other agricultural sectors, namely maize, since poultry producers buy from these crops (Bizcommunity, 2016). As such, the decline of the poultry industry directly correlates to a decline in the maize industry. However, SAPA remains positive that government intervention will turn these losses around. In a recent study, South Africa was rated one of the “top 10 importers of chicken in the world” (Bizcommunity, 2016). SAPA believes that if government assists maize producers as other countries have, South Africa could reach the top three. SAPA CEO Kevin Lovell suggests that current trade policies, especially regarding dumping, inhibit the ability of the local market and need government mandated change (Bizcommunity, 2016). Should the government implement necessary changes, local poultry producers would be able to assist in providing food security, increase production, and promote increased job creation and economic stability.

2.4.4.2 Importers /AMIE

In 2014 during renewal process of the AGOA agreement, the Association of Meat Importers and Exporters (AMIE) released a media statement whereby it categorically protested the “protectionist policies of South Africa” (AMIE, 2014). AMIE still believe that restrictive barriers for trade leads to increased inflation and fundamentally hurts the most vulnerable South African, as a result of the increases in food prices. AMIE has also voiced their concerns over possible retaliatory action from key trade partners (AMIE, 2014). Since this press release, AMIE has continued to challenge what it considers unfair trade barriers, as well as advocating for a barrier-free poultry trade industry.

AMIE is currently involved in legal proceedings against Minister Rob Davies, DTI, and SAPA regarding the safety measures of EU poultry (Fin24, 2017).

AMIE requests a mandate to set aside the investigation by the International Trade Administration Commission (ITAC), which took place under the Old Trade development and Co-operation Agreement (TDCA) concerning safeguarding duties. The TDCA agreement has been replaced by the SADC-EPA. Under the SADC-EPA, AMIE believes that there is no provision for the safeguarding of duties. Therefore, they believe that it would be illegal to implement the investigation and that a new investigation needs to be undertaken in accordance with SADC-EPA (AMIE, 2017).

AMIE also vehemently voiced their dissatisfaction against the way that import values were calculated when anti-dumping duties were initially implemented on US bone-in chicken, citing that the WTO recently discredited the weighted average cost of production (AMIE, 2014).

In a statement by David Wolpert, the Chief Executive of AMIE, he argued that despite recent industry challenges faced by the local poultry industry, there is an opportunity for growth. However, he believes that growth will not be catalysed by restricting imports, but by actively developing a poultry export program. Wolpert further suggests that if the SAPA and its members worked together with AMIE, exports would grow within the South African industry and create much-needed jobs (Wolpert, 2017).

These concerns are echoed by economists Van Lill, McCarthy and Fourie (2017), who believe that the strategy of application for anti-dumping duties and Phytosanitary bans are a result of SAPA being used as a lobby group for trade protection. Their predicted outlook is that government intervention will not produce long-term sustainability and will distress the market. The industry needs to focus on its global competitiveness and supply input cost if it wishes to survive. They also believe that the damage done due to the protectionism policy will outweigh any possible gain.

2.4.4.3 FAWU

The FAWU National Executive Committee (NEC) 2017 vehemently opposed the importation of cheap chicken into South Africa. They have organized protest marches to both the EU embassy and the DTI. In light of RCL Foods' 1350 retrenchments and reduced working hours, FAWU's main concern for the poultry industry is the potential job losses that it could face should the industry continue to experience problems (Food and Allied Workers Union [FAWU], 2017a).

The Union believes that preventing the industry from collapse is of the utmost importance and that failure to do so will result in devastating socio-economic difficulties. They believe the government should implement "protectionist measures" to counterbalance feed and other subsidies that benefit European producers (FAWU, 2017b).

2.4.4.4 Government

In a presentation to the Portfolio Committee on Trade and Industry, the DTI suggested that the inflation of food products has increased at twice the rate of poultry prices (2017). Should local production capacity decrease it would present a dilemma in South African food security.

2.4.5 Objective 5

This section identifies the role that the local poultry sector plays in South Africa's national food security.

2.4.5.1 The South African Economy

The South African economy was expected to grow by 1.3% in 2017. Further growth to 2% in 2018 and 2.2% in 2019 is anticipated, resulting from increased global growth, improved weather conditions, and stabilizing commodity prices. These projections are not significant enough to decrease unemployment, poverty and inequality. Increased investment is required. This can be achieved with government action and working towards classification as 'investment grade' by rating agencies, making South Africa an attractive investment prospect. Increased focus on educational levels, skills development, etc. is required to ensure broad-based transformation (National Treasury, 2017).

	Domestic output multiplier	Employment multiplier effect	
		Secondary schooling or less	Post-school qualification
Agriculture, forestry and fishing	1.7	3.9	1.0
Wholesale, retail and motor trade, catering and accommodation	1.6	3.5	1.8
Construction	1.9	3.4	1.5
Community, social and personal services	1.5	2.3	1.8
Finance, real estate and business services	1.7	1.8	1.4
Transport, storage and communication	1.6	1.7	1.1
Manufacturing	1.4	1.7	0.9
Mining and quarrying	1.3	1.0	0.6
Electricity, gas and water	1.6	0.8	0.6

1. This does not include the effects of higher employment on consumption, and it assumes there are no supply constraints in the economy. Based on 2012 Social Accounting Matrix

Figure 2.9 Macroeconomic performance and projections

Source: National Treasury (2017).

Figure 2.9 from National Treasury (2017) depicts the number of jobs created by every million rand output created. This shows that the agricultural, forest and fishing sector is the single biggest creator of employment for people with secondary schooling or less; it ties for second with construction in total overall employment for every million rand of output created.

The estimated total gross value of agricultural production increased by 13.2% to R263,201 million. The single biggest contributor was the poultry industry, which accounted for 15.2% of total gross value of agricultural production (Directorate: Statistics and Economic Analysis, 2016).

2.4.5.2 South African Food Security Ranking

South Africa is ranked 44th out of 113 countries with an overall score of 64.00 on the global food security index (Economist Intelligence Unit [EIU], 2017). The overall score is made up of three separate scores: affordability 62.7, availability 66.8, and quality and safety 59.7 (EIU, 2017). These scores take into account the country's gross domestic product (GDP), ability to import food, and access to ports and road. Should a local producer fail, the GDP will decrease, unemployment and poverty will increase and the Rand/Dollar exchange would weaken in an already struggling economy. This would also result in the loss of a large portion of the local production market and increase food cost, which would negatively affect our ability to ensure food security.

In 2002, government approval was given to the South African National Integrated Food Security Strategy (IFSS) as a means of integrating numerous isolated policies. However due to globalization, international trade regimes and other factors, household food security was threatened. This threat, in addition to other factors like price volatility and global economic slowdown, resulted in the National Food and Nutrition Security Policy (Department of Social Development [DSD] 2014, p. 8). This policy defines food security as:

Access to and control over the physical, social and economic means to ensure sufficient, safe and nutritious food at all times, for all South Africans, in order to meet the dietary requirements for a healthy life (DSD 2014, p. 8).

Their policy also states that should one of the four dimensions used to structure the policy are not met, the population is considered food insecure.

In accordance with this definition, it is possible to argue that should the South African poultry market fail, South Africa as a whole would be food insecure. This would, in part, result from the fact that control and access to South Africa's most eaten and affordable meat would be reliant on other countries.

2.5 Conclusion

Brining is legislated in other countries. Perhaps the brining legislation most similar to the new South African legislation is that of the European Union. However, when comparing the two, South African legislation has gaps that demand evaluation. While the measurements and regulations are clearly laid out, the South African government has failed to legislate how the regulations should be monitored. There are also no protocols in place for disciplinary procedures or guidelines to dispute test findings. The South African brining content of 15% is also significantly higher than what is permissible in Europe.

Poultry imports and dumping are blamed for the downscaling of local producers. There is concern that should anti-dumping measures not be implemented, the local production market will suffer and result in South Africa becoming a net importer of poultry. This would be catastrophic to South Africa, as it would be indebted to outside forces to meet its poultry consumption needs. In addition, this would adversely affect already high unemployment levels.

The rising cost of production factors needs urgently to be addressed as they represent a significant risk to the future of the local poultry industry. It is also necessary to develop a strategic export plan with an emphasis on gaining access to markets where white meat is in demand at premium prices. The following chapter outlines the research methodology of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design, instrumentation, sample selections and ethical considerations undertaken as part of the research phase of the study. Research methodology is a systematic approach used to solve an identified problem. It requires the understanding that each problem has different considerations to identify when choosing a method, but also that it is possible to use the same method to address two different problems (Rajasekar, Philominathan and Chinnathambi, 2013). In this case, the negative effects of recent legislation on the poultry industry were identified as a problem in desperate need of a solution. This study employed a qualitative lens in order to develop a higher understanding of recent government legislation in the poultry sector, against the backdrop of national food security, import regulations and a struggling economy.

3.2 Aim of the Study

The aim of this study is to assess the effects of the South African government's recent legislation on the South African poultry industry.

3.3 Study Setting

The South African poultry industry has made news headlines on several occasions over the last few years. The media has drawn attention to the recent downscaling of production, massive retrenchments and legislation changes, further highlighting the plight of the industry. Poultry is an affordable source of protein that plays an integral role in the nutritional requirements of South Africans. It also contributes to the nation's food security and economy. Any changes within the market could potentially have detrimental effects on this stability, and in turn, jeopardize its critical role.

3.4 Research Design

According to Sekaran and Bougie (2016, p. 95), “a research design is a blueprint or plan for the collection, measurement, and analysis of data, created to answer your research questions.” For this study, a qualitative research approach was chosen. After identifying the research problem, namely the effect of government decisions on the poultry industry, the qualitative research approach assisted in the analyses of interviews and opinions by way of numerical data.

3.5 Qualitative Research Approach

The research approach consists of several steps (that need not be taken in order) to achieve the best possible outcome for the chosen topic. The three predominant research methods are qualitative, quantitative and mixed methods (Creswell 2014, p. 3).

The qualitative research approach was chosen to enable industry participants to voice their opinions, solutions and concerns in an open forum. These opinions provided a greater understanding of the significance of government decisions within the South African poultry industry.

Qualitative research places emphasis on people and their response to a problem. Creswell suggests that qualitative research is deliberate (2014, p. 3). It requires audiences with certain perceptions in order to construct hypotheses for further investigation. The results are generally expected to be meaningful rather than analytical (Qualitative Research Consultants Association, 2018).

3.6 Pilot Study

In order to test the reliability of the research methodology, a pilot study, based on the rationale of face validity was undertaken. Two people, acknowledged as experts in the poultry industry, were interviewed. The same procedure and the same base questions, as posed in the structured questionnaire, were used. As a result of the pilot study, one question was altered slightly.

3.7 Primary Research

There are numerous principal primary data methods including Interviews, observation, questionnaires, physical measurement, and other unobtrusive methods. A suitable data collection method significantly increases the value of a study (Sekaran and Bougie 2016, pp. 111-112). Due to costs involved, primary data such as respondents' perceptions, views, beliefs, behaviour and opinions were gathered from interviews.

3.8 Sampling Methods

Non-probability sampling cannot be used to generalize the findings of a population. However, researchers do not always require generalized findings, but rather preliminary information, which this study required. Non-probability sampling is often classified as purpose sampling, which involves selecting participants that can provide desired insight (Sekaran and Bougie 2016, pp. 240-249).

Purpose sampling can be further classified into two types, judgment or quota sampling. Judgment sampling, which was chosen for this study, involves selecting a participant based on the expectation that they will provide the most valuable information on a subject matter (Sekaran and Bougie 2016, pp. 240-249).

The intended subjects for this research were based on subjective judgement, and comprised of interviewees including, but not limited to industry experts.

3.9 Data Collection

Initial requests for interviews were made telephonically or via email. This was followed up with an interview appointment. The participants were informed about the research topic and surveyed regarding imports, brining and food security in the South African poultry sector. A copy of the ethical clearance and consent form was given to all participants to sign.

Where face to face interviews were not possible, they were conducted telephonically. The informed consent letter was read aloud to each telephonic

interviewee before the start of the interview. The informed consent documents were emailed to participants and returned with their signatures.

All interviews were audio recorded. The participants who were quoted in this study were sent transcripts of their quotation for authorisation of use. In two cases, the interviewees amended the quotes to ensure grammatical flow and a clearer understanding of their statement.

Requests were made to DAFF telephonically as well as by email. All requests were ignored or forwarded. DAFF government employees were particularly unhelpful and evasive. Their lack of obligation to plight of the industry was evident given their unwillingness to be interviewed.

Contact numbers for two EU representatives were supplied; however, despite several attempts at making contact, they were unresponsive.

The representative from the American Embassy acknowledged contact requests, but declined to be interviewed. They required Washington's permission to conduct an interview and offered to participate once permission was obtained. To date, no communication has been received.

The lack of responsiveness of certain organizations was probably due to the sensitive nature of the topic. The negative press surrounding the poultry industry in South Africa also likely influenced their decision.

3.10 Population

Sekaran and Bougie (2016, p. 394) define the population as “the entire group of people, events, or the things that the researcher desires to investigate.”

In this study, the poultry industry was examined. Therefore, the population sampled in the research was required to be involved in or have the ability to influence the poultry industry. The leading organizations, government and private sectors, importers/exporters and producers in the poultry industry were identified and the most senior persons responsible for decision-making in each respective

category were chosen. The participants in the study were all considered experts within their particular fields. Fifteen representatives were selected as experts and contacted for interviews. Eleven out of fifteen people agreed to be interviewed, amounting to a total of 73% of the identified population.

3.11 Participants and Location of the Research

The participants of this study were located in Durban, Johannesburg and Cape Town. Eleven interviews were undertaken, consisting of representatives from the South African Poultry Association, the Department of Trade and industry, poultry producers, poultry sector unions, AMIE, retail outlets, wholesalers and an opposition shadow minister. Of the eleven interviews, eight were conducted in person and three telephonically.

3.12 Regarding the Interviews

Interviews are considered a valuable method for information collection. There are several different types of interviews, i.e. individual or group interviews, face-to-face or telephonic. The interviews in this study were audio recorded. At the end of each interview, the participants were thanked and ensured they would receive a copy of the completed dissertation.

The use of semi-structured interviews allowed the participant to provide further information on matters that they deemed pertinent to the conversation. Before the interviews started, this interview structure was explained to the participants. A technique called funnelling was also used to aid in conversation. Funnelling is accomplished by asking broad, non-biased, open-ended questions and then narrowing down follow-up questions depending on the interviewee's response (Sekaran and Bougie 2016, p. 113).

3.13 Interview Questions

The interviews were constructed using a list of core questions. All interviews were started using the same question. In line with the funnelling technique, the interview would then flow from the discussion, which would ultimately lead to another core question. If this did not occur, the next core question was asked. The core questions were probative and discovery-based to gain new information. Due to the

variety of each participant's knowledge and background, participants were able to provide in-depth knowledge on particular questions. At the end of the interview, they were given the opportunity to address any topic that they felt needed further discussion.

3.14 Recording of Interviews

To ensure accuracy, all interviews were recorded using an electronic device with prior consent from the interviewees, because memory can be flawed and result in important information being overlooked.

During the interviews, notes were taken as a backup should there be a problem with the audio recording. This made certain that emphasised topics were noted immediately.

3.15 Building Rapport

It is important that interviewees be at ease during an interview, so that responses to the topics are honest. A pleasant, genuine demeanour and interest in the topic contributes to this sense of ease. In addition, an explanation of their probable contribution to the research motivates respondents.

Participants were helpful in contributing to the understanding of the research topic, as well as the sensitivity surrounding the nature of the topic.

3.16 Data Analysis

There are few well-established methods of qualitative data analysis. According to Miles and Huberman (1994), there are three steps:

- Step one, data reduction;
- Step two, data display; and
- Step three, drawing of conclusions (cited in Sekaran and Bougie 2016, pp. 332-333).

Through coding and categorising, researchers are able to reduce and amalgamate information to aid in the drawing of a conclusion (p. 334). The coding was used as

a means of data analyses. The coding involved the identification of key words and themes. The data was organized into a matrix and a conclusion was drawn.

3.17 Data Storage and Disposal

Electronic data is kept on a password-protected file on a flash drive. A back-up will be uploaded to either a secondary flash drive or the cloud. Physical Data will be kept in a file(s) in a locked cabinet in a secure room. After five years, all electronic data that is no longer required will be deleted and physical data will be shredded.

3.18 Validity and Qualitative Reliability

Creswell and Miller use the terms trustworthiness, authenticity and credibility when assessing the validity of data (2014, p. 201). The validity of a study is determined by the researcher, participants and readers of the study. Similarly, qualitative reliability is defined as the researcher's ability to remain consistent in their approach (Creswell 2014, p. 201).

Shenton states that many critics doubt the trustworthiness of qualitative research. As a result, certain frameworks are in place to address critical concerns, including transferability, dependability, credibility, and conformability (Shenton 2004, pp. 63-64).

3.18.1 Transferability

Quantitative research generally relies on a small sample, since it is impossible to state that the findings will wholly apply to a larger population or be reliably used in other research. Practitioners generally believe that if the researcher has acquired significant research from study, then that is sufficient. The inclusion of the limitation and delimitations of the study, sample number, data collection methods, details about the collections methods, length of sessions and the collection period all contribute to the transferability of a study (Shenton 2004, pp. 69-71).

3.18.2 Dependability

The research observations are tied to the conditions encountered in the particular study; it is not possible to take a study's findings and replicate them outside of the study's conditions (Shenton 2004, pp. 71-72). To address the issue of

dependability, the researcher must report their process. More specifically, they need to define their research design, implementation of detailed information, how data was gathered and a summary evaluation regarding the efficiency of the process used (Shenton 2004, pp. 71-72).

3.18.3 Creditability

Creditability is critical to ensure trustworthiness. To make sure qualitative research is creditable, the following must be considered:

- The use of established research methods;
- Understanding and organization;
- The use of approaches that aid in retrieving honest replies;
- Repetitive questioning;
- Frequent debriefing with supervisors;
- Negative case studies;
- Peer scrutiny;
- Reflection of the research;
- The capability of the investigator;
- Member checks
- The use of historical findings;
- An accurately defined topic of investigation; and
- Triangulation and random sampling (Shenton 2004, pg. 64-69).

3.18.4 Confirmability

Investigator bias can affect confirmability. To counteract possible bias, the researcher must clearly identify conclusions and the rationale behind them. They must also provide a logical trail of investigation to assist with the assessment of a study's reliability (Shenton 2004, p.72).

3.18.5 Reliability and Validity

The research was designed and specifically aligned to the objectives, and was conducted impartially. The responses were carefully assessed in line with sound research practices. In light of that there is confidence that should the research be replicated, similar findings would follow. Reliability was checked while interviewing by using repetitive questioning.

3.19 Ethical Consideration

An ethical clearance request was submitted to the University of KwaZulu-Natal in line with research requirements. Once ethical clearance was given, the research commenced. A copy of the ethical clearance was given to all participants. Participants were also given consent forms to sign, indicating their agreement to participate in the interviews. The participants were seniors within their organizations, the researcher did not require 'gatekeeper's permission.'

3.20 Limitations of the Research

Changes in legislation have only been implemented in the last two years, which means there is very little historical statistical data available for a comparative analysis. The information available is fragmented, since the poultry industry does supply up-to-date data to SAPA, which limits SAPA's ability to accurately keep updated record and reports.

South Africa is slowly recovering from an ailing economy. Because of this, there is a possibility that the poultry industry would be struggling even without changes in legislature.

Three interviewees requested not to be quoted, which illustrates the sensitivity surrounding the poultry industry and its crucial impact on South Africa's economy.

3.21 Delimitations of the Research

The interviews in this study represent a broad spectrum of the formal poultry market, but exclude the informal sector.

3.22 Summary

This chapter outlined the research methodology used throughout this study, namely the qualitative method. It also provided a framework for data sampling, and detailed the research procedures, interview style, and the rationale behind subjective judgement. This chapter ascertained that the qualitative method was the most valuable in determining an understanding of the research problem. The following chapter provides a comprehensive look at the results obtained from the research conducted.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the analyses of the data obtained from the interviews, aided by the literature review findings in chapter two. Direct quotes are shown in italics, are verified by the respondents and quoted verbatim. All quotes shown were authorised by the respective interviewees. Alternatively, some respondents requested that their quotes be omitted due to the sensitive nature of the material.

4.2 The South African Poultry Industry

The South African poultry industry makes up a large portion of the agricultural sector. The consensus indicated that government decisions have been detrimental to consumers, employees, importers and producers alike.

4.3 Presentation of Responses in Relation to Objectives

4.3.1 Responses to Objective 1:

Identify the recent government decisions that directly affect the South African poultry market.

The consensus from the interviews was that government decisions directly affected the South African poultry market in all of the below-mentioned areas: brining legislation, AGOA, the bird flu issue, managing Phytosanitary applications, lack of response to alleged dumping of imported poultry and the formation of a poultry task team to address the plight of the local industry.

4.3.2 Responses to Objective 2:

Identify the recent government decisions that indirectly affect the South African poultry market.

The primary concern of most interviewees, regarding indirect effects on the poultry industry, was a loophole in the labelling law, which allows for further processing of imported products, expiry dates being extended as well as possible health and safety concerns. The EPA agreement does not allow the South African poultry industry reciprocal access to the EU market, which has led to lagging transformation in the poultry industry. In addition, participants showed concern with regard to factors such as the Rand/Dollar exchange, resource supply (such as water), and high input cost, since these areas are under government control.

4.3.3 Responses to Objective 3:

Describe and gain an understanding of the advantages and disadvantages of the decisions identified in objective 1 and 2.

The implementation of brining legislation is considered a double-bladed sword. On one side, it is in the customer's best interest for brining to be regulated, but on the other side, it has an effect on the perceived cost of poultry.

4.3.3.1 Assessment of Brining Legislation

Comprehensive modifications of brining legislation were required since former legislation was limited, imperfect and not regulated. This resulted in certain manufacturers using questionable business models with no transparency and unethically high levels of brining. In the long run, this has increased cost for consumers for the sake of profit. Goerg Southey, CEO of Merlog and member of AMIE, stated:

Brining laws – they've been swept under the carpet. Why do you think that is? Because everybody knows that it actually was the right thing do to. You cannot believe that [it is] morally and ethically [correct], you cannot put 40% of water into chicken and believe that you are [ethical].

New brining legislation limited brining levels. This has assisted in levelling the playing field for local producers, the consumer and customers. This legislation also has the possibility to intervene in other industries where brining or comparable

abusive practices are taking place, as per the suggestion of poultry distributor Ashfaq Dawood:

The fact of the matter is that I believe it should be a prestart to full brining regulation. The tuna industry also has to regulate and the bean industry has to regulate how much marinade or sauce they put, versus the amount of beans.

There is also currently a dispute in the testing methods used to determine brining levels. This has disrupted the poultry industry because manufacturers reliant on brining as an important part of their business model need to adjust production measurements to ensure compliance with the new legislation. Furthermore, Dawood believes there is a health risk among the black population because of the high salt content used in brining:

It needed to be regulated – because you find for the first time in the history of SA in the last couple of years – black people now also suffer from high blood pressure – heart disease. Previously, it was less frequent than Western or Indian people [in South Africa].

Although new brining regulations have disrupted production, customers agree that the regulations were necessary.

4.3.3.2 Regarding AGOA and Dumping

The general perception toward the AGOA agreement is that the United States bullied the South African government into allowing a higher poultry import quota. According to CEO Marthinus Stander of Country Bird Ltd:

President Obama apparently wrote a letter to our president basically saying you will allow our chicken into your country, otherwise there will be consequences.

On the other hand, some consider the limitation of the 65,000 metric tonnes tariff-free quota the best possible outcome. SAPA representative Charlotte Nkuna stated:

AGAO, which most people are aware of, [is] the saving grace [in] that it [has] limited [maximum import quota] to a figure of 65000 tonnes.

The tariffs currently imposed on poultry imported into South Africa resulted from the dumping of American chicken. The AGOA agreement now effectively allows for the import of 65,000 metric tonnes into South Africa. According to Nkuna, the product arriving is a product that has no market at home in the US:

When we go into to the detail of it, the reason why those imports are a problem is because the western world produces a whole chicken and they eat parts of it. And then they sell their bits that they don't eat here at prices that are below our production costs.

Poultry dumping contradicts WTO regulations. Participants of this study believe that the West's dumping into the South African market is causing distress within the South African poultry sector. The occurrence of dumping in the local industry has even resulted in a South African incentive organization called Fair Play to highlight the global dumping issue. Fortunately, there are ways to stop dumping. For instance, applications must be made to refuse dumping. In the past, these applications have been granted and anti-dumping duties have been approved. However, agreements have not been challenged:

America would love to send more product here but we've had anti-dumping duties of more than R9/kg in place for 15 years - they've never challenged it with the World Trade Organization because they know they're guilty of dumping (Stander).

There appears to be little or no local government monitoring of current dumping. Due to the profits involved, exporting countries do not seem to consider the implications of dumping their unwanted surplus stock. The effects of dumping are

a danger to food security. However, the application for duties can only be made after dumping has occurred—after the effects are already felt by local producers. Therefore, it is essential for industries to report the dumping:

When someone is dumping in your country and you don't complain – you don't have someone to act on your behalf, no one is actually interested (Nkuna).

AMIE importer Georg Southey discourages the use of government intervention laws as a protection mechanism due to recent issues in the poultry industry:

Putting additional levies or duties on imported chicken – is only going to harm the consumer.

4.3.3.3 Effects of Avian Influenza

Avian flu is a global disease prevalent in all bird species domesticated and wild. The poultry industry has been extremely vulnerable to the avian flu. While most interviewees were aware of the avian flu and its implications in terms of barriers to trade, only a few participants discussed its possible consequences on the local market.

The interviewees who spoke about its effects on the local market considered it a seasonal temporary issue due to the South African climate:

Bird flu, like any other flu, is mostly a winter disease. We're going into summer and the virus does not survive above 24 degrees C (Stander).

Poultry imports from other countries have been banned due to the occurrence of the avian flu. Banning imports is a satisfactory health measure in line with worldwide standards. The South African government's decision not to remove the bans until they have conducted inspections in these countries has also been met with praise. The ban on those countries has resulted in a temporary reprieve for local market, as there is a shortage on imports resulting in increased demand from local producers.

On the other hand, the direct outcome of the avian flu is the immediate culling of birds wherever the disease is diagnosed, which has resulted in severe local production shortages and flock decimations for local producers. The participants of this study raised concerns regarding the fact that countries are required to notify the OIE when they experience bird flu within their country's borders:

Think about something – we've got bird flu in Europe – we've got bird flu in US, but till today, we have never ever heard of any bird flu or any chicken disease out of Brazil. Now is it because Brazil is such a healthy country – or are they just hiding it? Because Brazil needs to export – they are the biggest exporter of protein in the world. I mean take a company like JBS – JBS exports 150,000 ton a month – and that's a private company owned by two brothers. 150,000 tons – now imagine if they have to report bird flu. That company will close its doors in 2 months. So the fact of the matter is questioned – I mean is the government of Brazil and their veterinary authorities deceiving the world - by not declaring sickness – or fooling us [into thinking] they are disease free (Dawood).

Self-notifying the OIE, in this case, could lead to dishonesty within the global poultry industry in an effort to ensure self-preservation.

Some interviewees considered the emphasis on bird flu and other avian diseases, such as Newcastle disease, simply a reason to prevent South African exports. This practice was therefore criticized as anti-competitive. It was suggested that in Europe, there is no official ban on South African exports, but the EU continues to use it as a reason to declare SA's non-compliance with Sanitary and Phytosanitary (SPS) measures due to diseases found in poultry several years prior.

4.3.3.4 Poultry Task Team: Advantages and Disadvantages

The interviewees aware of the poultry task team believed it to be beneficial, as it could have many positive effects on the poultry industry. In fact, some candidates interviewed were active participants of the task team.

The task team has the ability to work together towards an export program, which could benefit both importers and local producers and create jobs. The task team also has the ability to address sanitary concerns and increase health and safety levels on local production and imported product.

Besides the initial creation of the task team, no further action or communication has materialized. The decision not to lift the bans on poultry imports into South Africa from countries with avian flu was never made public; it was quietly slipped into the system. Furthermore, although the task team is headed by DTI and DAFF, their skill level is questioned. Katishi Masemola argues:

The skills-sets and expertise at various government departments is a cause for concern. Even on the pace of work of the Task Team on poultry crisis the process is slow.

4.3.3.5 Production Input Cost (Maize, Electricity and Water)

The interviewees showed concern for production inputs costs and considered these costs contributing factors to South Africa's powerlessness to compete with imported products.

No advantages were identified resulting from higher input cost. Local input costs for maize, electricity and water continue to rise, seemingly without the means to resolve the impact on the cost of the final product. Several interviewees identified the high contribution cost of maize for feed as problematic for the industry. Alternatively, Brazil's ability to produce maize at lower costs than South Africa, for instance, contributes to the success of their poultry industry. The recent drought and access to water is also a concern for the local poultry sector, with some provinces, like the Western Cape and Eastern Cape, affected more than others. Nkuna pinpointed some of these production costs:

In terms of general increases in input costs – things like maize, but maize is not an issue this year – but generally that tends to be one of the key problems we have of feed in general – because of the costs that are

associated with [maize], labour, electricity costs, [and] access to water in certain areas.

4.3.3.6 European Trading Agreement: Advantages and Disadvantages

The idea of free global trade is appreciated by the participants; however, the majority do not believe that Europe is acting ethically within this agreement.

The trade agreement with Europe is beneficial for South Africa because it gives theoretical access to the European market for distributing a wide range of products. The participants believe that access to the market for poultry exports would be exceptionally beneficial for both consumer markets.

Despite this, the participants also believe that Europe unfairly subsidizes their agricultural sector particular with regard to maize production:

There's a lot of debate that's starting in the EU itself, where other industries are challenging the EU government saying the single biggest item on the EU budget is agric-subsidy (Stander).

Additionally, several interviewees believe that the EU unofficially abuses Phytosanitary measures to block poultry imports into the EU. Pitman argues:

We have a free trade agreement – as you know –with the EU. And it's well documented –you might have read in the paper the other day – the abuse that the EU meets out to developing countries like ours when they sign so-called free trade agreements. It [is] always cut just one way- for the lure of a country having free trade with Europe. What happens is as soon as that's in place – they flood your market with their surplus unwanted stuff – in this case chicken leg quarters- and that's why those agreements are never one way – and it's documented by many authors around the world particularly people in Africa – that have physically experienced the EU abuse of free trade agreements.

4.3.3.7 The Effects of Labelling Laws

Increased imports in the market have heightened concerns about local labelling legislation, as well as questionable local labelling practices that put consumers at risk.

Labelling laws are enforced to protect consumers and to ensure compliance with health standards. Therefore, imported products have to be labelled in line with locally produced products. This levels the playing field between local and foreign importers.

Nonetheless, participants were concerned about ambiguities regarding product compliance on arrival. At times, a product is considered compliant, but afterwards that same product is mishandled, or further processing jeopardizes the integrity of the product, leading to health risks and ethical concerns:

Where there is still a gap is where the product leaves the port of entry and goes and gets further processed, and that is where there is room [for] further regulation and monitoring – because some of the practices that go on there [are] hair-raising. I mean for instance, you have to thaw that block [of frozen chicken] to be able to get the pieces out and then process it . . . So at the further processing facility where the imported product gets re-processed ...there needs to be more controls there as well (Nkuna).

For economic stability to increase, an equal playing field between imports and exports with an emphasis on transparency is required:

The real scenario is always the fact that these trade embargos are strategically placed to protect those industries. E.g. Europe exports chicken to SA – they don't allow us to export to Europe using excuses about Newcastle disease (Dawood).

4.3.3.8 BEE Transformation & Government Investment

Black Economic Empowerment (BEE) transformation in the poultry sector to date was mentioned by participants, specifically regarding the Public Investment Corporation's (PIC) funding of Daybreak Farms. Participants believed that transformation was possible in a more stable market and that some of the initiatives implemented could be used to ensure transformation in the sector.

However, the poultry industry is not stable. It is experiencing financial difficulties and downscaling. As a result, this impedes the ability to invest and encourage transformation throughout the supply chain.

The investment of PIC into Daybreak farms, however, is viewed as a step toward transformation as well as a sign that government is willing to get involved in the industry. As Dawood states:

It's the first time that government is not looking at it like an old white Afrikaner- type of industry – but rather a key economic component of the SA economy.

4.3.4 Responses to Objective 4

Research industry opinions on the long-term effects of government decision on the South African economy.

Should the South African government fail to actively get involved in ensuring fair trade, pressure on local poultry production will continue. This will also result in further downscaling, plant closures, job losses and surplus maize and eventually lead to the deterioration of the economy. On the other hand, should poultry producers fail to adapt their business models with increases in automation and

sustainable employment (in line with a global business model), governmental intervention will not be able to revive the ailing market.

4.3.4.1 Effects on the Poultry Industry

Recent decline of the poultry sector after the Rainbow (RCL Foods) retrenchment in 2017 highlighted the challenges that the poultry industry faces. Nkuna summed up the general sentiment regarding imports:

I've never known of a country that has imported itself to greatness!

Pitman emphasised the importance of the poultry sector for employment rates and the success of the agricultural sector:

The chicken industry directly and indirectly employs some 130 000 people – you're aware that in SA one man's income – one woman's income can feed 10 people. You know because of the sizes of homes and the lack of employment – massive unemployment. So there's potentially 1.5 million family members depending on those 130 000 people to stay alive. You know because chicken is the biggest GDP contributor in the agricultural sector – the whole agri. We're much bigger than maize. 7 cents to the Rand – is considered a decent year in chicken – but when we make 7 cents to the Rand as profit – we can pay government R300 million a year in tax – now government is busy scratching around – as you you've read in the papers – Gigaba has a R50 billion shortfall in tax revenue you know.

The prediction is that if the industry incurs further losses, local poultry production will diminish. This will not only damage employment rates, but will also create deficits in the SA economy. In addition to this, Stander suggests that decline in the poultry industry will also lead to decline in other industries:

It is the biggest user of yellow maize –and a 90% user of all the soya oil cake produced in this country.

The consensus is that in the long term, should local producers be aided by government intervention, the stability of the poultry industry could increase. This intervention includes trade tariffs, improved export negotiations, SPS measures to ensure a level playing field and discontinued dumping. These measures would result in increased production, which would then meet growing local demand. Profits from meeting local demand would then aid in reducing the cost of production, creating stability and sustainability of the local market and increasing economic contribution.

After achieving stability in the poultry industry, opportunities to invest locally would arise, thus assisting the transformation process. These measures, which the government is responsible for, are paramount to achieving equitable distribution of income and wealth.

4.3.4.2 AMIE: Importers and Recommendations

Free trade and entrepreneurship in an economy that provides poultry on a demand and supply basis is believed to be in the best interest for the South African economy. This is preferred to interference from the South African government, due to the tariffs that would be required. However, a holistic look at the market suggests that free trade could negatively affect consumers' buying power, resulting in unnecessary inflation and economic hardship due to higher selling prices. Southy argues that:

SA has historically for the last 40 years – been a net importer of chicken products – the chicken that's imported into the country is between 12-15% of consumption – and based on that – if we look at multi-year import statistics – those trends are very similar. So for any party to make a statement that imports are opportunistic – will be misleading.

The Association of Meat Import and Exports (AMIE) acknowledges that the poultry industry is currently experiencing its worst cyclical down trend in recent memory, particularly citing the drought and feed price effects. Southy argues that this down trend is largely affected by drought conditions and feed price increases:

[They were] affected mainly by the drought conditions when feed costs went up by nearly 60% - well actually it was more than 60%. It went from grain prices of approximately R1600-1800/ton for maize up to excess of R3800/ton – so there is a 100% increase in the maize costs, which is 60% – as we understand – of feed costs. Soya prices had a very similar trend in that same period due to the droughts in SA.

Participants also believe that the cyclical down trend is a result of the local producers' use of old business models. The competition created by imports is forcing the local producer to invest in their production in order to meet international benchmarks. This investment and use of benchmarking would have long-term economic benefits. Alongside the potential opportunity to export, AMIE believes that it is possible to cooperate with SA poultry producers to provide long-term benefits:

There are many areas where there is actually an overlap of common interest which we should be jointly working towards – and that would be protecting the sovereignty of the consumer ensuring they always get the best quality product (Southey).

4.3.4.3 FAUW Recommendations

FAWU believes that in order to ensure long-term participation and sustainability of the poultry industry in the SA economy, government needs to respond urgently to the challenges faced by the industry. Among participants, there is a lack of faith in government skill levels and therefore their ability to mediate in time. Masemola, the general secretary of FAWU, insists that their most important purpose is that of long-term job protection:

FAWU's primary pre-occupation is to save existing jobs in this labour intensive, low-skills-requisite and semi-rurally based industry.

The unregulated imports from the EU particularly cause unease regarding positive economic outcomes. FAWU believe that a tariff could be placed on EU products in

order to limit or manage EU imports, similar to the AGOA. Legal and fair WTO measures could be used to save the industry.

Job losses and resulting economic consequences are major concerns to FAWU. Nonetheless, FAWU emphasizes sound judgment when implementing tariffs and barriers as possible retaliation measures:

When the USA insisted on RSA opening its market on poultry we were under pressure because the USA could viciously fight back by stopping our products from their market had we stopped their chicken as a country, from citrus and table grapes up to wine and other value-added products and even assembled motor-vehicles (Masemola).

Masemola further indicated that the best outcome would arise from implementing a vigorous and dynamic export program:

There was some study done by SAPA that said if there was to be fair trade with Europe on chicken – only on poultry – we could potentially create between 20-25000 more jobs locally – just out of export expansion to Europe through chicken breasts.

4.3.4.4 Government

The consensus from government representatives was that the poultry industry is crucial in that it affects employment and contributes to the economy. However, in order to ensure long-term economic viability and contribution to the economy, cooperation between the government and the poultry industry is necessary.

In addition, government mandated improvement of consumer food education would contribute to the success of poultry industry. As Dean MacPherson suggests:

It's very complex – you know one has to look at the value chain from hatchery to freezing.

In order to accomplish long-term economic participation and reduce short-term job losses, numerous initiatives involving technology upgrades, market scale increases and industry BEE transformation must be undertaken with government assistance:

Simply slapping import protection measures is not going to solve the fundamental structural problems that exist in the poultry industry (Dean MacPherson).

Furthermore, participants agreed that certain amounts of imports are healthy for the economy, but a fair playing field is required. MacPherson argues:

I think Government can only be involved to an extent – that – that the playing fields are fair for our sectors so if other countries are subsidizing their farmers – we should be doing the same thing – but we're not.

Van Vuuren believes that protecting the poultry industry could damage the economy, resulting in reciprocal action from other countries:

[I] don't believe in blanket protection irrespective of competitiveness – but yes I do believe there is a role for government to play – because we are operating in a global market where countries like EU and the US have a lot of funds available and support, especially in agriculture support is given to producers which has huge effect on world prices.

The government concedes that once the poultry industry is stabilised, it will contribute significantly to the economy throughout the supply chain.

4.3.5 Responses to Objective 5:

Identify the role that the local poultry sector plays in South Africa's national food security.

The success of the poultry industry is essential to achieving food security in South Africa; its decline therefore threatens national food security. Firstly, the success of the poultry industry affects other agricultural industries such as maize:

We eat half of the maize produced in SA in the chickens. So there's a massive impact if the chicken industry collapses – not only on employment, which is massive but also on . . . You know we don't have the infrastructure in SA to export that maize if the chickens don't eat it. The maize industry will semi-collapse as well – and everything else that goes with it (Pitman).

Secondly, the success and demand of the local poultry industry indirectly encourages the affordability of other proteins and aids in food security:

The poultry industry impact is not simplistic – it is very big – because a lot of time - because it's very competitive with the meat industry – it's kept the meat industry in check. If this industry disappears – and we become subservient to overseas suppliers – you could end up paying for basic beef – R150-R200/kg (Dawood).

The presence of both local poultry products and imports, in the past, aided in keeping prices regulated. However, should the local market fail, poultry prices would increase immensely. South Africa lacks a guaranteed poultry supply, so the failure of the local industry would ultimately result in consumer food insecurity:

And then the biggest one of all is food security. When you don't have your primary source of protein produced by yourself – you have food security – which means if Russia wants to buy a lot more chicken one year -maybe there's nothing left for SA – then what do we do – then we've got to start eating soya or something to try and make up (Dawood).

4.4 Summery

From the analysis of the interview data presented in this chapter, it is evident that the local poultry market is currently in distress. The distress is a result of both internal and external market factors. Several of these identified factors are a result of government decisions and unfair global practices. Notwithstanding these, local producers themselves need to effect change from within their organizations.

Distress in the market is also preventing effective and sustainable transformation. Phytosanitary measures, with regard to the further processing of both local and imported produce, need to be developed as a matter of urgency, for health and safety reasons and to prevent the spread of bacteria and diseases. Overall, local poultry producers, importers/exporters and government must co-operate in order to ensure, not only the success of the South African poultry industry but maximum possible gain from the global market. The following chapter summarizes the findings of this study and makes recommendations for improvement in the industry.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses each objective and draws conclusions. It also presents recommendations and suggestions for future studies.

5.2 Objective 1:

Identify the recent government decisions that directly affect the South African poultry industry.

5.2.1 Literature Review Findings

The literature review identified three recent government decisions, which considerably affected the poultry market:

1. The new regulated prescribed brining allowance legislation;
2. The AGOA quota concession that allows 65,000 metric tonnes of poultry duty free into South Africa from America; and
3. A temporary ban on poultry imports from some European countries that have reported avian flu outbreaks.

5.2.2 Interview Findings

All interviewees identified EU dumping as a major cause of the ailing local poultry industry. Several participants also believe that South Africa has been strong-armed by the United States into allowing the 65,000 metric tonnes quota.

Secondly, brining was considered important for consumer protection and levelling the playing fields between producers.

Lastly, although a poultry task team was formed in early 2017 to aid the local poultry market in increasing its stability, nothing has been accomplished. If, by

chance, the poultry task team has made strides within the poultry industry, nothing has been communicated.

5.2.3 Conclusion for Objective 1:

Reduced brining legislation has been implemented and accepted by the local industry and will not be changed. However, the management and policing of brining techniques and injection levels are highly unlikely. This is due, in part, to DAFF labour shortages and their inability to ensure proper and continuous implementation of the brine changes.

The AGOA concession to the USA will also remain intact, but not without resistance from outside parties.

In addition, the South African ban on EU imports is linked to the outbreak of avian flu in some European countries. As such, DAFF has demanded that South Africa inspect EU facilities in order to clear the abattoirs for exports to SA again. On the EU side, it is possible that Sanitary and Phytosanitary (SPS) measures are being used as a barrier to trade, at least until the International Trade Administration Commission (ITAC) reverts findings of EU dumping in South Africa.

The task team was established to represent the interests of the South African poultry industry and its effects on the SA economy as a whole. It is responsible for the evaluation of practices with the purpose of saving the SA poultry industry at all costs, particularly for job and food security.

5.2.4 Recommendations for Objective 1:

Brining legislation must be embraced and implemented by the local poultry industry, so that when products are handled or reprocessed, the brining legislation remains intact.

The government must use AGOA agreements as a platform to develop and embrace a relationship with USA producers for future reciprocal investment opportunities. This will bring more value to the SA economy. Should USA poultry

product quality pale in comparison to South African products, this agreement must be revisited.

Regarding the task team, the government must intervene and require that they communicate their findings with total transparency to industry players, so that any changes can be urgently implemented. This will ensure that the task team adds value to the poultry industry, rather than becoming a futile government initiative.

5.3 Objective 2:

Identify the recent government decisions that indirectly affect the South African poultry industry.

5.3.1 Literature Review Findings

The government has entered into a number of trade agreements in order to secure trading partners for South Africa, the main one of interest being the EPA. This agreement makes South Africa a preferred trading partner of the European Union.

5.3.2 Interview Findings

The USA is now putting pressure on SA to increase duties on EU imports to SA or to remove the anti-dumping duties (R9.24/kg) imposed on them.

Moreover, chicken feed, particularly maize, is the most significant input cost to the SA poultry producer. Production input costs, including maize, electricity, and water, have all increased.

5.3.3 Conclusion for Objective 2

If the duty is removed from the USA quota, the impact will be significant on final product pricing. Erratic domestic input costs have had a huge impact on costs of production. However, they cannot all be managed due to the restrictive nature of forecasting the Rand to Dollar exchange.

In addition, electricity and water reserves can be better managed by government in order to benefit the poultry sector.

5.3.4 Recommendations for Objective 2:

Government consideration needs to be given to consolidating and managing production input costs. There should be structured development plans for future water reserves, e.g. the creation of more dams. Electricity rates must be reduced by government, or plans must be implanted in order to fund alternative sources of energy, such as solar power. Maize production must be managed appropriately and resourcefully in order to avoid a scenario of buying back maize at higher prices. Fuel subsidy for farms will also reduce input costs.

5.4 Objective 3:

Describe and gain an understanding of the advantages and disadvantages of the decisions identified in objective 1 and 2.

5.4.1 Literature Review Findings

5.4.1.1 Advantages

The advantages of government decisions, namely regulating the level of brining to 15%, have been noted by local producers. As interviews suggest, consumer education on poultry processing has also had positive effects.

Moreover, the government's appointment of a poultry task team has been widely accepted as a positive platform to save the SA poultry industry.

In terms of the indirect impact of government decisions, the EPA agreement, although restrictive, is advantageous in the long term. Once South African abattoirs are cleared for exports to EU and USA, it would benefit from most favoured nation duties.

Lastly, the current outbreak of avian flu in EU has prompted DAFF to become more forceful with SPS regulations. In accordance with SPS measures, DAFF must assess EU facilities in order to clear them for exports to SA, which will prevent bad quality imports from flooding the SA poultry industry. This has forced

local South African producers to focus their time on managing the domestic avian flu problem, without the headache of imports lurking in the background.

5.4.1.2 Disadvantages

Due to the lack of communication between the task team and poultry industry players, participants believe that the task team is failing.

Outside of this, the implementation of the new brining regulation was costly and increased production input costs.

Furthermore, it seems that international regulatory bodies are prohibitive; they are creating barriers for South African entry into the export industry. In other words, practicing free and fair trade is not reciprocated by the USA and EU. The USA's demands for South Africa to remove their tariff or impose EU tariffs could cause dissension between SA, USA and EU and ultimately would be costly to the SA economy.

5.4.2 Interview Findings

5.4.2.1 Advantages

All participants raised similar issues. There was a common belief that government had plans in place to save the SA poultry industry at all costs. Most respondents alluded to the need for duties, tariffs and task team initiative. Participants also believed that the focus on saving the SA poultry industry had common ground with government interests, e.g. maintaining jobs and food security.

Aside from this, it was agreed that protecting private industry is essential and that it is the government's responsibility to do this.

Dumping from EU was considered a major problem, so import tariffs were considered vital to protecting the industry and ensuring SA food security. The brining issue was considered resolved due to regulation implementation by government, despite the initial negative reaction. Remedies were few but relevant; participants generally required duties, anti-dumping and quicker reactions from

government. Poultry industry players acknowledged the importance of transformation in the industry, but pointed out a lack of funding to initiate it.

5.4.2.2 Disadvantages

With regard to industry competition and fairness, the participants distrust DAFF and the task team's ability to monitor food safety regulations, due to a lack of skill and labour. They did not believe that DAFF or the task team would effectively implement transformation due to monetary constraint in the industry. The slowness of the government's response is evident and concerning, especially if one considers the plight of the industry and the high level of unemployment in the country.

Aside from this, South African poultry exports are facing barriers that will take time and resources to resolve.

5.4.3 Conclusion for Objective 3:

The literature review findings and the interviews categorically stated that the South African poultry industry is in crisis and requires urgent government intervention in order to safeguard the local industry and food security. Furthermore, the poultry industry secures employment for thousands of workers and contributes to the GDP of maize and overall revenue to government. Without this industry, the SA economy would face additional challenges.

5.4.4 Recommendations for Objective 3:

It is imperative that the task team be more proactive, efficient and transparent. Government and local producers should have frequent interaction and not only in times of crisis. Local producers should come up with some 'out of the box' rationale to encourage government assistance in protecting the sector. Moreover, playing fields should be levelled when imports are allowed into the country to ensure fair trade. The South African poultry industry should be protected at all

costs, by all parties involved. This should be done in cooperation with importers by encouraging white meat exports.

5.5 Objective 4:

Research industry opinions on the long-term effects of government decisions on the South African economy.

5.5.1 Literature Review Findings

If the current poultry market condition does not change, the market will suffer. This will result in a reduction of local capacity and job losses.

5.5.2 Interview Findings

The consensus is that government has compromised the poultry industry to the brink of collapse. The reason for this is due to the significant number of people employed in this sector that could face job losses if no solution is immediately reached.

Long-term solutions are pertinent to export opportunities being implemented but also to export market access. Government needs to quickly generate export status so that this elementary barrier to growth can be overcome, which would then allow free trade for our poultry industry.

Dumping is not illegal, but it is immoral as it destroys other markets and eventually erodes local industries, such as Ghana's.

The government and producers should be jointly responsible for managing the poultry industry, because its success could improve employment rates.

Clearing exports from South Africa to the EU and USA could be significant to the poultry industry's long-term survival. However, it will take time for government to ready South African exports in a cost-effective way.

If dumping from the EU is not stopped, the local producers will remain at risk and decrease their production, which will devastate the SA economy. The RCL retrenchment highlighted this potential risk, the impact on the sector and the consequence to the job market in the SA economy.

5.5.3 Conclusions for Objective 4

Government intervention is necessary for the sustainability of the industry and the safeguarding of the economy. The poultry sector is the biggest employer in the agricultural sector with over 120,000 workers, which alone indicates the importance of poultry to the SA economy. The job market is therefore reliant on the success of the poultry industry.

5.5.4 Recommendations for Objective 4

The task team initiated by the government should proactively research the impact of the poultry industry's decline on the SA economy.

5.6 Objective 5:

Identify the role the local poultry sector plays in South Africa's national food security.

5.6.1 Literature Reviews Findings

The SA poultry industry creates jobs for thousands of employees. In addition, its production of food is essential for the future of South African food security. It is imperative that poultry imports are managed to reduce the risk of a decreasing, locally produced product. The absolute intrinsic value of the local poultry market lies in the fact that poultry is the preferred protein source of South African consumers. Because consumer demand for poultry is growing, the need for uninterrupted local production is essential to maintain food security in South Africa. Government is completely responsible for ensuring food security in the country.

The economy as a whole is not performing well, with credit rating downgrades and inflation targets failing to achieve a goal. If the current poultry market condition does not change, the market will suffer and further reduction in local capacity can be expected with detrimental effects to not only food security but to the entire SA economy.

5.6.2 Interview Findings

The interviewees believed that ensuring food security requires governmental intervention and protection. It is widely seen as the government's responsibility to maintain food security and protecting private industry would support this.

5.6.3 Conclusion for Objective 5

Food security is essential for any country's economic viability, global trade, and self-sufficiency.

5.6.4 Recommendations for Objective 5

The government should ensure that Phytosanitary measures are monitored and implemented by all players in the sector.

Transformation in the industry needs to happen immediately. This transformation must occur throughout the industry from start to end, including farming, production and supply chain. This transformation is one of the government's single biggest challenges, since it would benefit all of South Africa.

5.7 Suggestions for Future Studies

The following areas could be expanded upon in further studies:

- The transformation of the SA poultry industry relative to farming and ownership;
- The effect of retailer inefficiencies that impact the price of consumables and the high cost of trading term agreements;
- The lack of farming subsidies provided by the South African government;
- The consequences of the lack of government labour in regard to health and safety regulations and inspection;
- The effect of antiquated technology used by government (i.e. computers that are older than 10 years of age);
- The inefficient supply chain of Fast Moving Consumer Goods (FMCG) that affects the end price of consumer goods;

- Customer access to consumer products, and shop to consumer density; and
- The effect of a shortage of poultry on non-human food products, feathers for duvets and pillow, dog food, etc.

5.8 Concluding Comments

It is imperative to consolidate and stabilise the South African poultry industry due to the significant role it plays in the South African economy, particularly with regard to job creation.

All evidence points to a critical risk regarding imports, which could ultimately overtake local production due to a lack of control and unfair practices. Specific levies, tariffs, and quotas must be implemented to safeguard the South African poultry industry.

While the outbreak of avian flu and the reduced cost of maize have allowed the poultry industry a bit of a breather to improve business, the crisis in the industry will continue as long as dumping is not managed.

The effect of protectionism on trade relations could jeopardize the SA economy and employment. However, one can argue that unfair trade practices already highlighted, such as dumping, override any real risk. Protectionism is therefore important to the sustainability and transformation of the South African economy. That being said, the EPA (Economic Partnership Agreement) allows for the safeguarding of domestic industries.

However, one cannot expect governmental intervention to be the only solution to the long-term survival of the poultry industry. It is therefore imperative that South Africa's local producers start implementing proactive initiatives and take opportunities to develop a sustainable market. For instance, the expected growth of the population and consumption of chicken in Africa as a whole is an

opportunity to be explored. Furthermore, the Middle East presents an exporting opportunity, since they demand value-added product (e.g. chicken schnitzel) rather than commodity (e.g. the whole chicken). Exploring these opportunities could allow for increased profits, thus encouraging investment in the South African poultry industry.

It is evident that poor practices have occurred for the sake of profit, such as excessive brining. However, the government cannot solely be blamed for the poultry industry crisis. While it is the government's role to protect and intervene in unfair practices, private companies both locally and globally also have a responsibility to increase stability. Perhaps it is time for some 'out of the box' rationale in order to solve the poultry industry crisis. For instance, by making chicken VAT exempt or zero-rated, which other food sectors (e.g. brown bread, fruit, vegetables, milk, eggs, etc.) already enforce, the need for increasing levies/tariffs would be nullified. This measure would also prevent dumping and hinder opportunistic importers from creating market turmoil and poultry industry instability. Additionally, it might encourage further investment from global players in the South African market, thus ensuring jobs and food security. For the South African poultry markets to thrive, rather than merely survive, there needs to be a joint effort between importers/exporters and local poultry producers to work towards developing South African poultry exports. Overall, there is hope for transformation within the poultry industry, but it will not happen without government assistance and cooperation among industry players.

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APPENDIX 1: INTERVIEW INFORMATION AND SCHEDULE

Purpose:	
Aim:	To engage with key people in the South African poultry market by means of interviews in order to collect primary data.
Sample:	The sample population consisted of 11 people involved in various different aspects of the poultry market.
Equipment:	Audio recording device, pens, notebook, informed consent documents, consent documents.
Participants Selection:	Participants were selected based on their seniority with in government and private sector organizations.
Note:	Interview ranged in time from 25 min to 1 Hour

Interview Schedule:					
	Date	Time	Interview	Job Title	Location/Type
1	18/10/2017	09:00	Marthinus Petrus Stander	CEO of Country Bird Holdings	Johannesburg / Face to Face
2	18/10/2017	11:00	Dr Cynthia Charlotte Nkuna	Acting CEO of SAPA	Johannesburg / Face to Face
3	19/10/2017	13:00	Ashfaq Dawood	CO-Owner of Dawood	Johannesburg / Face to Face
4	25/10/2017	12:00	Katishi Masemola	General Secretary of FAWU	Johannesburg / Face to Face
5	24/10/2017	11:00	Georg Southey	CEO of Merlog Foods and member of AMIE	Johannesburg / Face to Face
6	30/10/2017	12:30	Respondent A	Group butchery manager for Leading Food Retail Chain	Durban / Face to Face
7	26/10/2017	14:00	Respondent B	Commercial senior Executive: Strategic planning and GP management for a National Wholesaler	Durban / Face to Face
8	14/11/2017	10:00	Scott Pitman	Managing director of RCL Foods	Durban / Face to Face

9	27/11/2017	08:30	Carina Janse van Vuuren	Senior Manager: Trade Remedies I for ITAC	Durban / Telephonically
10	28/11/2017	13:30	Dean Macpherson	Shadow Minister: Trade and Industry for Democratic Alliance	Durban / Telephonically
11	30/11/2017	19:45	Respondent C	Chief Director: of a relevant department in the Department of Trade and Industry	Durban / Telephonically

APPENDIX 2: CONSENT FORM



24 May 2017

Ms Nikelle Teresa Larcher de Brito (215080668)
Graduate School of Business & Leadership
Westville Campus

Dear Ms Larcher de Brito,

Protocol reference number: HSS/0341/017M

Project title: The effects of Government decisions on the South African Poultry Market

Full Approval – Expedited Application

In response to your application received on 13 April 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and FULL APPROVAL for the protocol has been granted.

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

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

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

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

Yours faithfully



Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Mr A Bozas
Cc Academic Leader Research: Dr Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee

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APPENDIX 3: ETHICAL CLEARANCE



24 May 2017

Ms Nikelle Teresa Larcher de Brito (215080668)
Graduate School of Business & Leadership
Westville Campus

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Cc Supervisor: Mr A Bozas
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APPENDIX 4: TURNITIN REPORT

THE EFFECTS OF GOVERNMENT DECISIONS ON THE SOUTH AFRICAN POULTRY MARKET

ORIGINALITY REPORT

3%	3%	0%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of KwaZulu-Natal Student Paper	2%
2	gain.fas.usda.gov Internet Source	<1%
3	Submitted to College of Estate Management Student Paper	<1%
4	uir.unisa.ac.za Internet Source	<1%
5	www.sapoultry.co.za Internet Source	<1%
6	africa.newsdeskmedia.com Internet Source	<1%
7	Submitted to Athlone Institute of Technology Student Paper	<1%
8	www.gov.za Internet Source	<1%
9	repository.up.ac.za	