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**Competition dynamics and regional trade flows
in the poultry sector: the case of South Africa,
Botswana, Namibia and Zambia**

by

African Competition Forum

The views expressed are those of the author and do not necessarily reflect the views of UNCTAD

**Competition dynamics and regional trade flows in the poultry sector: the case of
South Africa, Botswana, Namibia and Zambia**

Draft paper for presentation at pre-ICN conference, 22 April 2014

Ernest Bagopi, Emmanuel Chokwe, Pamela Halse, Josef Hausiku,
Wesley Kalapula, Michael Humavindu, Simon Roberts

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1. Introduction

This report on the commercial poultry meat industry¹ is part of the Research Programme on Competition Dynamics and Regional Trade Flows conducted under the African Competition Forum ("ACF"). It is one of three cross-country studies and looks at poultry across four countries: Botswana, Namibia, South Africa and Zambia. The other two are on cement, by Botswana, Kenya, Namibia, South Africa, Tanzania and Zambia, and sugar, by Kenya, Tanzania, South Africa and Zambia.

In the first phase of the research programme each country produced a country specific report that focused on the state of competition in the identified industry. These reports were work shopped in Namibia in December 2012.² The detailed insights into competitive dynamics across the countries generated results of interest in themselves, given the importance of the products. They also pointed to ways in which more effective enforcement through cross country co-operation may be achieved. This paper forms part of the second phase of the research study. It consolidates the countries detailed research and builds insight into the industry within the region at a very practical level.

The studies point to the links between competition and development. Growth and development through regional integration initiatives depend on the decisions of companies to increase productive capacity and make long-term investment decisions across the region. However, if a few large companies dominate an industry and are able to extract supra-competitive profits, then this will be at the expense of growth. Where consumers are downstream industries, any anti-competitive conduct raises costs and undermines the competitiveness of downstream firms. The existence of supra-competitive profits (or rents) from, for example, collusive conduct, further imply that the incumbent firms will lobby political interests to create barriers to entrants including through regulations (Khan, 2006). The importance of disciplining the power of large firms, ensuring more inclusive growth, and tackling limitations on access to economic activity, have been highlighted in recent contributions on growth and development (North et al., 2009; Acemoglu and Robinson, 2012).

There are thus important linkages between broad-based economic development, regional integration and competition. Small and developing economies are likely to have higher levels of

¹ Throughout the report when we mention poultry we are referring to Gallus Domesticus or chicken meat

² We are grateful for detailed comments and feedback from the participants as well as the two expert resource persons, Professors Frederic Jenny and Eleanor Fox.

concentration and bigger competition problems than those of Europe or North America (Gal, 2003; Fox, 2012; Brusick and Evenett, 2008; Dabbah, 2010). Scale economies are therefore that much more important, as are dynamic issues to do with the process of competitive rivalry in building production capabilities and accessing inputs and markets (Gal 2003, 2009; Sutton, 2012). Optimal or effective competition is thus partly an outcome of investments in local productive capacity – to establish the competitors (Singh, 2004). While large firms are crucial to these investments, it is important that the power of such firms is checked by rivalry (Amsden, 2003). Regional integration provides scope for greater competitive rivalry in a larger market, but this will not be realised if it means smaller economies simply become subsumed by the largest regional economy.

The commercial poultry meat industry is well established within the region. While developing a poultry operation requires significant capital investment, it provides substantial value-add to agricultural production, and employment creation. Critical to the industry in any country is access to the breeds, and competitive feed, as the two key inputs to broiler production. The industry is oligopolistic in nature, and many of the same firms operate at varying levels of the supply chain in the different countries in the study. This suggests that competition in the poultry industry needs to be understood at a regional as well as national level.

Each of the four countries has adopted, or is considering, policies to protect and develop their domestic poultry industries. While the policies may be required to incentivise the investments in large scale and competitive facilities, protection and support should be temporary in nature. There is a danger if the support is not temporary the lack of competition within a country will result in the benefits of these measures to be captured by the large firms and their shareholders.

The bigger question is how can we have a more dynamic and competitive poultry industry at the regional level, which would mean higher levels of investment and job creation, to add value to agricultural production. In this regard, competition between the poultry producers will mean a more competitive industry. The increasing demand arising as countries grow, could be met from regional production rather than from imports from Europe and Brazil.

The rest of the paper is as follows. We describe the different markets and activities at each level of the supply chain. We look briefly at investment requirements and new entrants in the region. We assess the nature and extent of competition at the various levels using available data, particularly on production and pricing. We examine the geographic characteristics of the

markets across the region, taking into account trade restrictions and border controls and review the trade data in this regard. Finally we look at current government policies and competition intervention in each of the countries.

2. Broiler meat production process

2.1. The supply chain

Poultry production is essentially the combination of optimal genetic stock, in the form of breeds, with animal feed. The upstream level of the poultry value chain is the breeding stock level. Poultry breeders that are owners of the franchise rights or international licenses import great grandparent and grandparent stock. The grandparent stock produces chicks which are called parent stock. These parent stock in turn produce approximately 150 eggs per hen during an estimated 48 week period. These eggs are sent to a hatchery for incubation for about 21 days for the production of day old broilers. The day old broilers are reared for a period between 32 and 42 days to a specified weight of between 1.6kg up to about 2.2kg at which time they are slaughtered and processed.

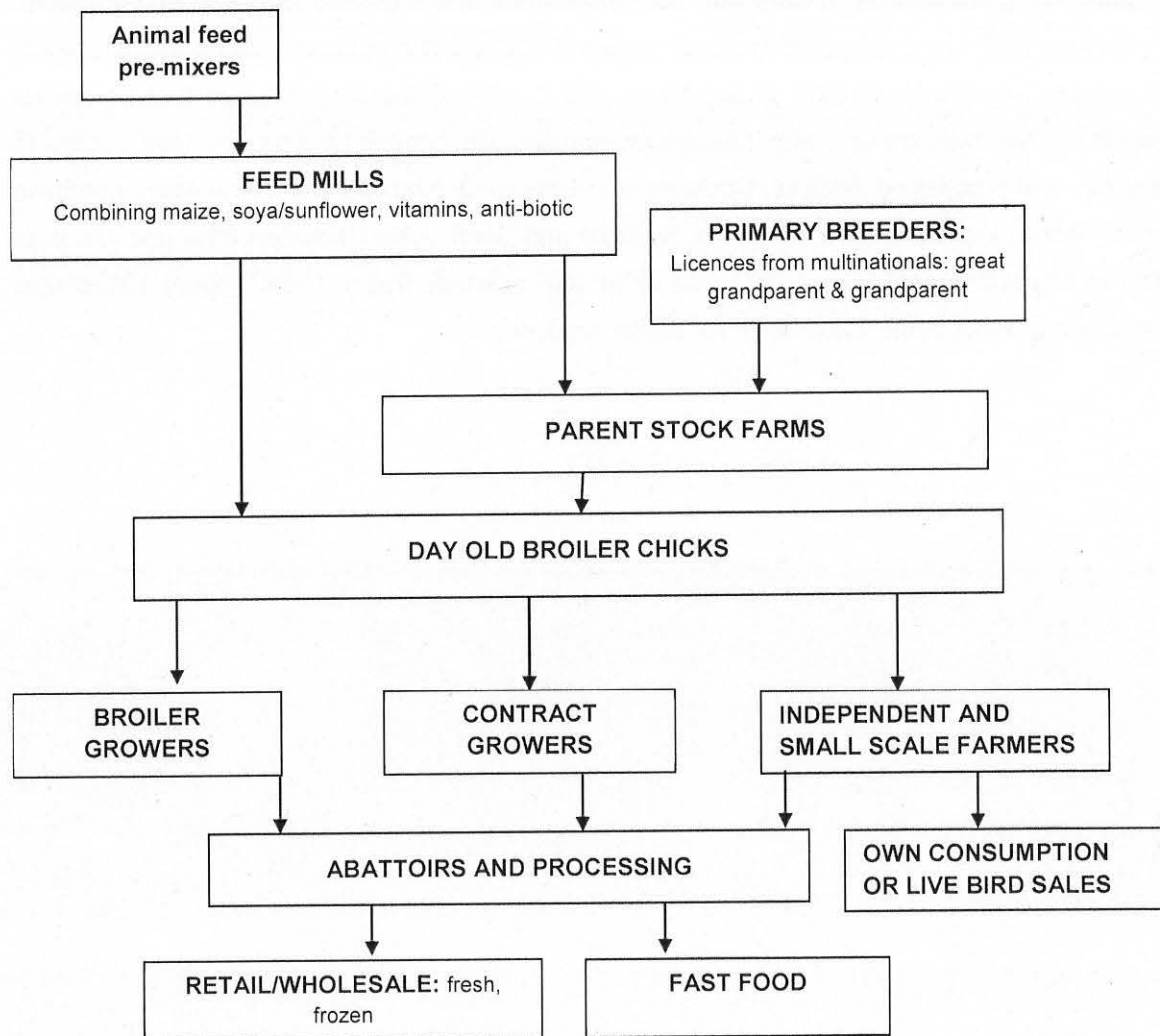
Breeders seek high performing breeds as measured by the number of day old chicks produced per parent bird, the feed conversion ratio and the mortality ratio. The type of breed and its conversion ratio influence the timeframe it takes for a broiler to reach the required size. The type of breed that is most suited for a particular country is influenced by that country's climate. While different breeds have been introduced, only a small number of breeds (two to three in each country except Zambia with four) account for the majority of the region's production. While there is more than one type of Cobb bird, it is the most common breed (found in all four countries) followed by Ross which is present in three of the countries except Namibia.

Large integrated poultry producers have their own farms and some of them also use contract growers to rear the broiler to the desired weight. Feed is a major input into the production process. It accounts for between 50% and 70% of the total input costs, depending on the breed and conversion ratio. Feed is comprised of a combination of maize and soya along with small quantities of additional ingredients including vitamins. A broiler requires different types of feed at the various stages of its lifecycle such as pre-starter, starter, grower and finisher and post-finisher.

Once slaughtered, the poultry is processed and is sold either fresh or frozen. Some countries' consumers such as those in Zambia have a preference for purchasing live birds. The preference for purchasing live birds is typically the case in countries where urbanisation is limited or recent. Only about 38% of the total production of broilers in Zambia is processed into Individually Quick Frozen portions (IQF) or whole frozen birds. This can be attributed to the fact that the broiler market is characterised by many independent small-scale farmers who do not have access to abattoirs and processing facilities. Consumers in Botswana, Namibia and South Africa purchase mostly frozen poultry meat products. In Namibia and South Africa between 80% and just over 90% of all poultry meat is sold frozen as either IQF or whole frozen birds.³ Figure 1 illustrates the different levels in the value chain for broiler production.

³ South African Poultry Association Quarterly Broiler Price Report 2Q2013 "During 2012 frozen meat contributed 94.78% of total sales". Namibia Figure from Namibia Poultry Industry

Figure 1: The broiler meat production process



Source: South African Competition Commission's own diagram

2.2. Input requirements, investment costs and scale

In order to achieve long term productivity growth and, with that, an increase in real wages, a country requires high rates of investment. Private enterprises require a “reasonable as well as a stable rate of profit so that businessmen’s propensity to invest is not adversely affected” (Singh 2004).

The large poultry producers operate on each level of the value chain. A firm wishing to enter and develop poultry operations on multiple levels of the value chain requires significant investment capital outlay and access to critical inputs being feed and breed. The Namibia Poultry Industries (“NPI”) required an initial capital outlay of approximately N\$600m (\$73.17m).⁴ NPI is integrated at the parent, feed, broiler and abattoir level and produces 250 000 broilers a week. Zambeef, through its partnership with Rainbow, recently announced a \$95m project to start an integrated poultry operation. The project, once fully operational, will have the capacity to produce a million day old chicks per week.

However, a firm wishing to enter on only one level of the value chain (e.g. broiler producer) will be dependent on the large poultry producers for access to inputs (breed and feed) and slaughtering facilities. An entrant at the breeding (grandparent) level could battle to access a suitable breed. There are few breeds available globally that are competitive and economically viable. The large breeders own the franchising rights to the high performing breeds. These operations also require significant skill. In addition the new entrant requires sufficient capital for fixed investment and for working capital as it will take a minimum of a year from delivery of grandparent day old chicks to the first commercial level day old chick. Astral recently invested R10m (\$1.22m)⁵ on a hatchery in Mozambique that has the capacity to produce 160 000 day old chicks a week.⁶ In Botswana, a hatchery with the capacity of 240 000 broiler day old chicks a week is estimated to cost around BP40m (\$5.26m).⁷

The grandparent level is driven by high volumes to achieve economies of scale. A new entrant’s success will be dependent on access to sufficient customers and ideally an anchor customer. The most notable new breed in South Africa is Arbor Acres, which was introduced by the

⁴ Namibia Poultry Industry

⁵ Average exchange rate for 2012 at R8.20/\$

⁶ Astral press: “Astral Foods opens Mozpintos hatchery in Mozambique”

http://www.astralfoods.co.za/MediaArticles_ArticlesView.aspx?FileNumber=454 and Finweek: “Astral scrambles for bigger African nest egg” <http://finweek.com/2012/03/09/astral-scrambles-for-bigger-african-nest-egg/> both accessed on 6 June 2013.

⁷ Average exchange rate for 2012 at BWP7.61/\$

vertically integrated firm Country Bird Holdings ("CBH") in 2007. Astral foods, through its vertically integrated subsidiary, Tiger Animal Feeds, introduced the Lohmann (Indian River) breed into Zambia in 2009.

A new entrant at the feed level requires access to the critical inputs being maize and soya. A country's ability to produce these key inputs influences the likelihood of new entrants. Alternatively a country's ability to import maize and soya cheaply could also influence new entrants. Namibia and Botswana's climates are not ideal for expansive maize and soya operations. South Africa does not currently produce large quantities of soya however production is growing and processing is being supported by the Industrial Development Corporation ("IDC") and the Department of Trade and Industry ("the dti"). This means that new entrants at the feed level in these countries have to acquire these inputs from scarce domestic sources or seek to import from the region, or in the case of soya, from further afield such as Argentina.

Competitive feed operations can be established at a relatively small scale but will be driven by the firm's ability to source feed inputs. This is evident by the number of feed mills that are located close to broiler operations. A South African poultry producer estimated that a feed mill with the capacity to cater for 100 000 broilers a week will cost around R40m (\$4.88m). Astral is constructing a large feed mill that will produce around 40 000 tonnes of feed a month at an estimated capital cost is around R200m (\$24.39m).⁸

Poultry producers expanding operations into other countries tend to set up feed operations first. Astral, for example has expanded into countries such as Mozambique and Zambia by initially establishing feed operations. It has subsequently established breeding operations.

The barriers to entry at the broiler level are relatively low. The scale for a broiler operation is much lower than that required for the breeding level making small scale production possible. It is estimated that a small broiler operation in Botswana with the capacity of 1 500 to 2 000 broilers a week will cost about BWP1.5m (\$197 109). A South African producer estimates that a large broiler farm with a 100 000 broiler capacity a week will cost about R75m (\$9.15m).

⁸ Astral press release "Astral breaks ground in Standerton"
<http://www.astralfoods.co.za/pdfs/Press%20Release%20-%20Ground%20Breaking%20of%20Standerton%20Mill%20Press%20Release%20-%2026%20October%202012.pdf> accessed on 06 June 2013

New entrants often enter the market as out growers or contract growers. While various models exist, it is common for the contract growers to buy day old chicks and feed from a large producer, and then sell the broilers back to the producer once they reach the required weight.

Abattoirs operate on low margins and therefore require large throughput volumes to recoup capital investment. An abattoir producing frozen poultry will require greater scale as it has additional costs such as spiral freezers. A South African producer estimated that unless an abattoir can slaughter at least 500 000 birds a week, it would not be economically viable. Abattoirs that are not linked to large producers often battle to get sufficient volumes to make their operations efficient. This is evident by the DFC Abattoir that recently closed down in the Western Cape (South Africa). Finally, the producer requires sophisticated logistics as freezer capacities can only hold limited days of production.

The newly established Grain Field abattoir built in South Africa with the capacity of 800 000 broilers a week cost around R130m (\$15.85m) to build⁹. Other South African producers have estimated a cost around R85m (\$10.37) for an abattoir with the capacity of slaughtering and processing 100 000 to 120 000 broilers a week.

Each stage of the value chain requires a mix of skills. Upstream, breeders require scientific knowledge of the genetics and breeding operation. Breeders and broiler farmers also require skilled veterinarians to prevent outbreaks of diseases. Finally abattoirs require skilled workers to ensure operations function effectively.

Poultry producers also have to meet various regulations at each level of the value chain. The regulations include food safety, environmental, welfare and packaging regulations. New entrants undergo lengthy environmental impact assessments and need proper bio-security to control potential disease outbreaks. In addition, large retail chains also often have their own standards that producers have to meet.

While not all poultry meat producers are in agreement on brand loyalty, it appears that consumers tend to have a preference for either frozen or fresh poultry, but are not particularly brand loyal. Some poultry meat producers are of the view that consumers of frozen IQF portions are price sensitive and will buy the cheapest product regardless of the brand. Consumers who buy fresh chicken will be less concerned with the brand. They assume that if the poultry is sold

⁹ 'Start-ups take on big players and create rural jobs' Mail and Guardian <http://mg.co.za/article/2012-10-30-start-ups-take-on-big-players-and-create-rural-jobs> accessed on 28 August 2013

in a particular store, it will have the required quality. However some producers have indicated that new entrants often have to sell their products at discount prices to gain market share. Also consumers' preferences differ when it comes to brined chicken.

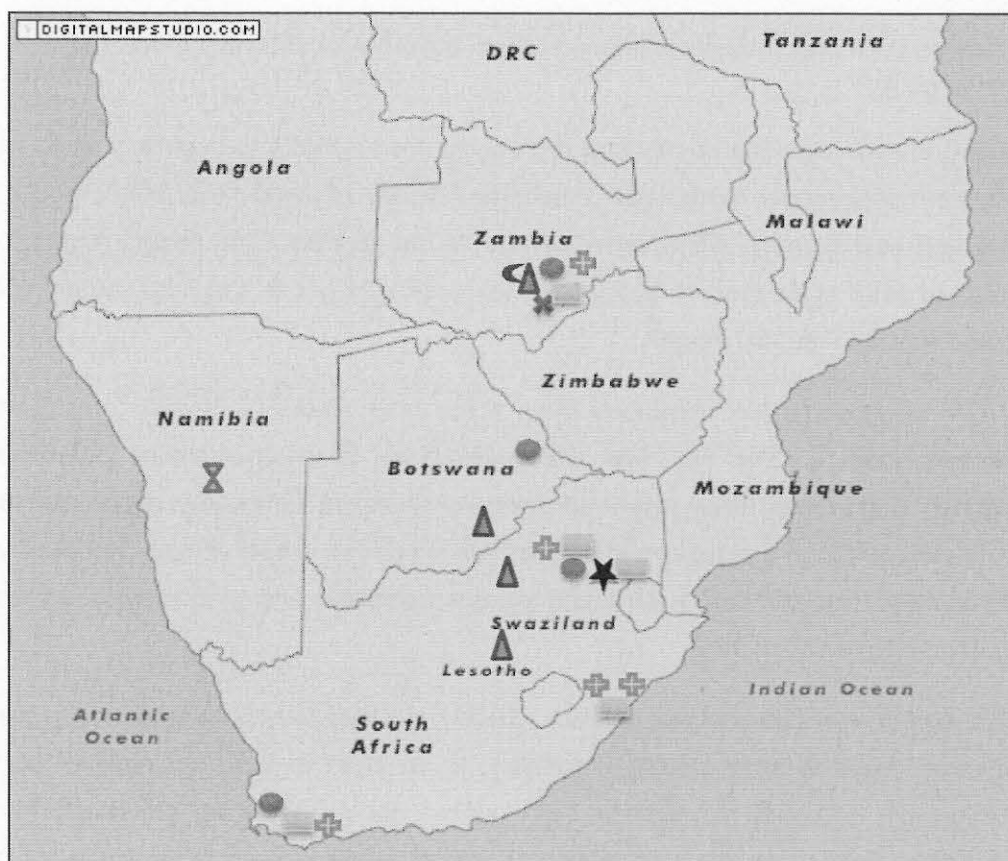
Poultry producers' decisions to expand operations into other countries are influenced by the country's cost of capital as this will dictate the cost to service the debt. For example Zambia's high cost of capital influences producers' investment decisions so firms tend to reinvest profits rather than acquiring new loans.

3. The poultry industry in the four countries

In small economies, industries with high economies of scale will have high levels of concentration (Gal 2003). The economies of scale requirements at the breeder (grandparent) and abattoir level coupled with the significant capital investment requirements mean that there are relatively few producers. The industry is therefore oligopolistic in nature, and the same firms operate across the countries in the study. The South African producers seeking to enter the other countries have either set up new operations or teamed up with local producers. This makes the competition dynamics both national and regional.

Figure 2 below illustrates the major producers' breeding and abattoir operations in Botswana Namibia, South Africa and Zambia. In addition to the breeding and abattoir operations, each country has various broiler grower operations owned by the large producers, contract growers or are independent but who sell their broilers to the large producers.

Figure 2: Regional distribution of major players



Key:

●	Pioneer/ Tydstroom/ Bokomo/ Brink/Irvines	✕	Hybrid
■	Astral/ Tiger/ Ross South Africa(or Africa)	+	Rainbow/ Zamchick
▲	Country Bird/ Dada/ Tswana Pride and Dikokotso	★	Afgri
⌵	Namibia Poultry Industries	☾	Panda Hill

3.1. The Poultry Industry's contribution to Employment Creation and Poverty Reduction and the role of SMEs

Poverty reduction is a major aim of the governments in the region. While the poultry industry is not labour-intensive industry as such, given the capital investments required, it is a labour absorbing industry – with increased production requiring higher levels of employment. Increasing the levels of employment is vital for efforts to tackle poverty. Governments across the

four countries have seen the role that SMEs play in employment creation and poverty reduction. In the poultry industry, SMEs are most likely to be found at the broiler level. However, the processing phase typically is the most labour intensive.

3.1.1. Poultry's contribution to employment creation, poverty reduction and Botswana Government policy¹⁰

The development of the Botswana poultry industry commenced in 1975 through the 'Thuo ya Dikoko' government programme. Under this project the Ministry of Agriculture (MOA) bought day-old pullets and sold them at eight weeks of age to the farmers. This project aimed to introduce poultry to small scale farmers to increase the income of poorer families who did not own cattle. It also aimed to reduce imports.

In the early 80's the government introduced three policy instruments to develop an import substituting poultry industry. The first was the development of a government controlled marketing channel. The second policy was the Financial Assistance Policy. And the third was the use of trade policy through quantitative import restrictions on the import of eggs and poultry meat into the country. The first two government policies collapsed and marketing was then dominated by large private sector firms.

The Citizen Entrepreneurial Development Agency (CEDA) provides financial assistance in the form of low-interest loans to small poultry producers. In an effort to build sustainable local poultry production, the Botswana government has financed about 245 broiler growing farms. These small farmers engage with the large producers at the upstream levels of the value chain and sell their broilers to individual customers, supermarkets, Government entities, and live birds to other large abattoirs. Government's assistance to local poultry producers is currently manifested in the form of banning imports of poultry products. The poultry industry employs about 2 350 people.

3.1.2 Poultry's contribution to employment creation and poverty reduction in Namibia

As a new industry in Namibia, the links between the sector and poverty reduction is not yet fully manifested. The immediate impact is that it has created 650 jobs (of which 70% are Namibians). In addition local traders who import and export poultry are estimated to employ about 912 people. Further job opportunities could stem from NPI's plans to expand its developmental

¹⁰ Paper on the early developments of the industry by Mr. Peter Kirby, the former Chairperson of the Botswana Poultry Association

impact through the introduction of franchising opportunities for SMES. It also plans to engage with the hawkers for hens however it has not yet concretised these plans. Namibia currently has two other small scale poultry operations, Zambezi Poultry and Naukluft Poultry.

3.1.3. Poultry's contribution to employment creation and poverty reduction in South Africa

"More poultry products are consumed annually in South Africa than all other animal-protein sources combined."¹¹ The poultry industry is South Africa's largest agricultural industry and is a major contributor towards agricultural GDP. In 2011, the poultry industry contributed an estimated 24% of agricultural income."¹² It generates around "R30bn in local farm gate revenue and about R1bn in corporate taxes in a normal year (excluding the VAT generated in the value chain."¹³ The poultry industry as a whole consumes approximately 30% of the total maize consumption as the maize is used in poultry feed.¹⁴ It also is vital to the country's food security and job creation.

The total number of direct employees in the broiler industry for 2012 was 48 118.¹⁵ This includes those employed in hatcheries, rearing, processing and distribution. If related industries are taken into account, then the total amounts to 107 857 employees. This makes it the largest source of employment in the agricultural sector.¹⁶

While the large producers dominate the commercial poultry industry, small scale farmers play an instrumental role in development particularly in previously disadvantaged communities. The South African Poultry Association ("SAPA") classifies medium producers as those that slaughter between 120 000 and 250 000 birds per week. SAPA has 32 medium size farmer members. The Department of Agriculture, Forestry and Fisheries estimates that there are about 2 264 developing farmers. SAPA established the Developing Poultry Farmers Organisation ("DPFO") to assist SMME poultry farmers from previously disadvantaged communities to enter the mainstream agricultural economy. However, tough domestic conditions for poultry farmers have caused many developing farmers to exit the market.

Major challenges for SMMEs in the poultry industry are access to finance and access to markets. The government recognises the important role of small scale farmers in rural

¹¹ The South African Industry Profile 2012 p.g.17 South African Poultry Association

¹² SAPA industry profile 2012 p.g.8

¹³ SAPA presentation to the Portfolio Committee on Agriculture, Forestry and Fisheries on 10 September 2013

¹⁴ SAPA industry profile pg 9

¹⁵ South African Poultry Association (SAPA)

¹⁶ South African Poultry Association (SAPA)

development and has set up initiatives to assist developing farmers. However rural farmers are often not successful in accessing these programmes. When rural farmers do access these programmes, they often lack critical skills such as veterinary and husbandry skills. In some instances government projects are not economically viable. For example, some government built abattoirs in rural areas have failed as they are expensive to run and lack the required economies of scale.

There have been Black Economic Empowerment ("BEE") deals in the poultry industry such as the Rocklands broiler meat's joint venture of R20 million (\$2.4m) with Kammandi Trading to produce 265 000 live birds every eight weeks over a 20 year period. And Country Bird has a BEE deal with Vukananthi Broiler project in the North West.

In another initiative, the Industrial Development Corporation (IDC) partnered with VKB to develop the poultry industry in the Free State province. The IDC owns 23.9% stake and VKB the 76.1% shares in Grainfields Chickens. As part of the project Grain Fields Chickens buys day old chicks from Eagles Pride hatcheries and then sells them on to a group of 16 farmers. These farmers buy feed from the VKB mill. VKB has a 40% share in Free State Oils which is a soya oil crusher plant. Grain Field Chickens has created nearly 400 permanent jobs.¹⁷

3.1.4. Poultry's contribution to employment creation and poverty reduction in Zambia

The poultry industry is critical to Zambia's efforts to reduce poverty among the population which currently stands at 60%. Apart from the poultry industry's contribution to the country's GDP and the government's revenue through taxes, the poultry industry is an important source of employment in the agricultural sector.¹⁸ The poultry industry employs an estimated 80 000,¹⁹ of which 50 000 are permanent and 30 000 are seasonal jobs.

The Zambian poultry industry supports other industries such as maize and soya farming, feed milling, transportation, etc. These industries are all labour absorbing and contribute favourably to solving of the problem of youth unemployment as they do not require specialised skills.

The introduction of commercial poultry operations at the breeder level allows many small independent farmers a manor to sustain their livelihoods. These small scale farmers purchase day old chicks and feed from the larger breeders and feed manufacturers. They grow the

¹⁷ "Value-adding in the Eastern Free State" Farmers Weekly article

¹⁸ Poultry Association of Zambia, 2012

¹⁹ Poultry Association of Zambia, 2012

broilers for their own consumption or they sell the broilers live, typically on an informal basis. With the country's favourable climatic conditions for maize and soya growing and poultry breeding, the potential for the development of the poultry industry and its contribution to poverty reduction is huge and remains largely untapped.

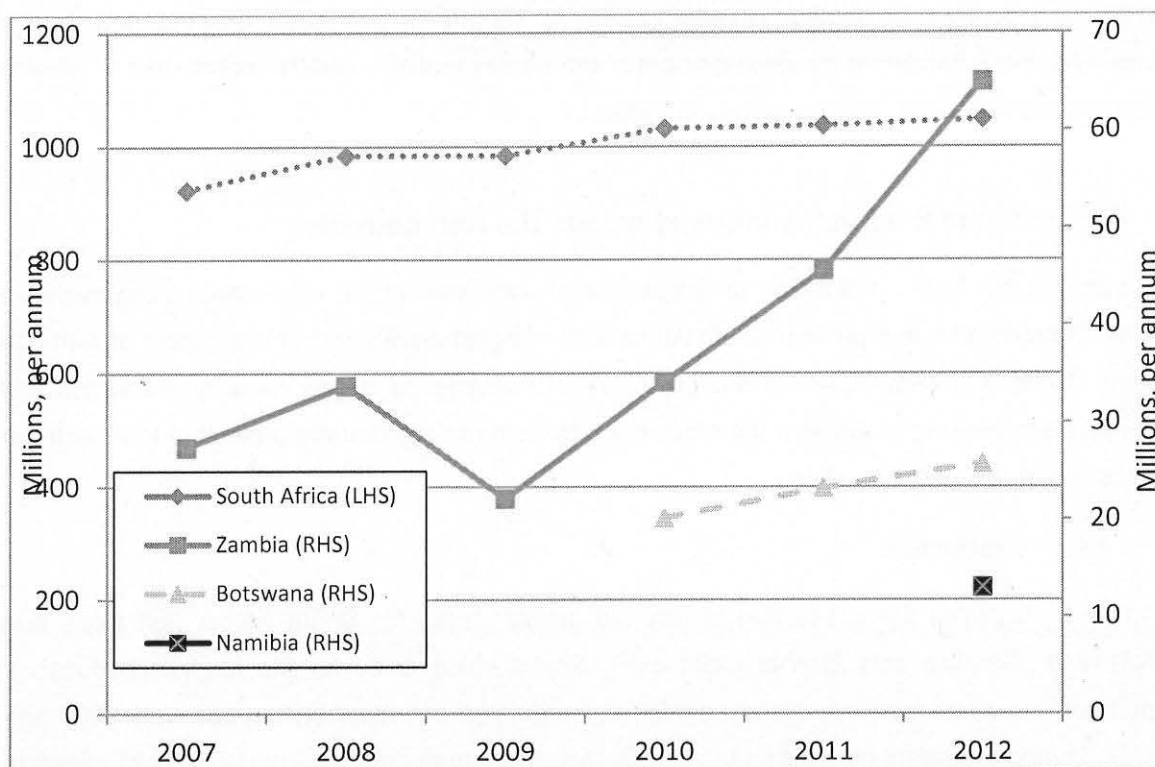
4. Growth of the poultry industry across the four countries

We assess the nature and extent of competition at each level of the value chain using available data on production and pricing. South Africa is the largest producer, but the fastest growth has been recorded in Zambia, which is linked to major investments in new capacity. Botswana and Namibia are seeking to develop their industries by using infant industry protection to incentivise investments in local production.

4.1. Production

Figure 3 illustrates the production of day old broiler chicks for South Africa, (left axis), and Botswana, Namibia and Zambia (right axis). South Africa is by far the largest producer. It recorded slow but relatively steady growth in production of broiler chicks between 2007 and 2012. During the same period Zambian production more than doubled from around 27 million in 2007 to 65 million in 2012. This growth has not been steady with a sharp decline in 2009. It is notable that some of this increased production is aimed at exports to neighbouring countries such as the DRC, Tanzania and Mozambique. While Botswana's production lagged that of Zambia's in 2010, the gap between the two countries widened significantly over three years. Botswana's infant industry protection has supported growth in day old chick production, but when compared to other countries regionally, it is still small and reflects the small size of the local population. Namibia only started significant poultry meat production during the last 12 months so only its 2012 figure is reflected.

Figure 3: Production of day old broiler chicks²⁰

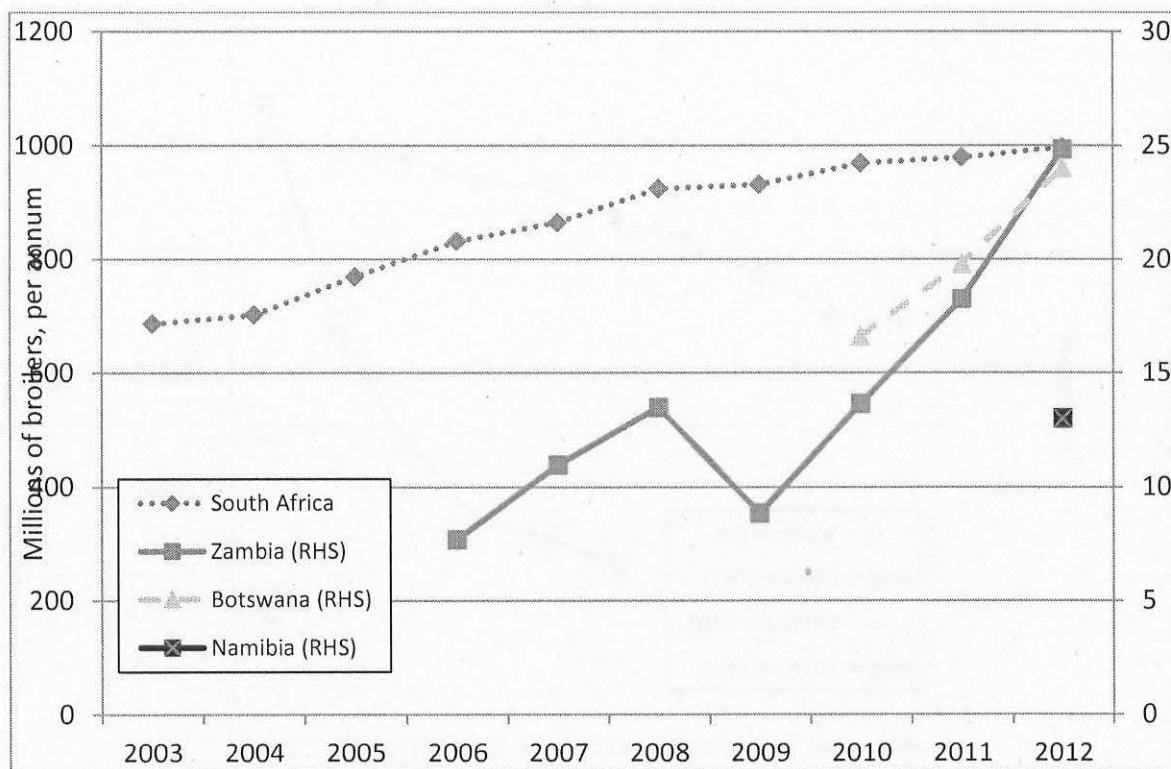


Source: Poultry Associations of South Africa, Zambia, Botswana Ministry of Agriculture and NPI

Figure 4 illustrates the production of broilers for South Africa (left axis) and Botswana, Namibia and Zambia (right axis). The longer time period for which we have data for South Africa reflects that growth rates were high between 2004 and 2008. However, growth in the production of broilers eased off between 2009 and 2012. This trend appears to be consistent with the country's economic growth rate. Similarly to the production of day old chicks, the production of broilers in Zambia has more than doubled, but it is still less than half the total number of day old chicks reflected in Figure 3. This could be attributed to the high number of day old chicks and broilers that are sold live. Some of Zambia's growth in poultry meat production could also be attributed to an increase in the population and disposable income of the population. Botswana has experienced a steady increase in broiler production in the later three years.

²⁰ Namibia's NPI's broiler DoC mortality rate is unknown, thus the 13m per annum excludes the mortality rate

Figure 4: Production of broilers



Source: Poultry Associations of South Africa,²¹ Zambia and Botswana Ministry of Agriculture, Namibia data derived from NPI

The data on feed production illustrated in Figure 5 below reflect similar trends. Notable is the even higher growth of feed production in Zambia. This is associated with strong growth in agricultural production and processing activities leading to feed exports²². Zambia has had substantial growth in soya production and investments in crushing mills to produce vegetable oil, with the oil cake being used in feed. The country has recently become self-sufficient in soya production and will start to export in 2013/14.

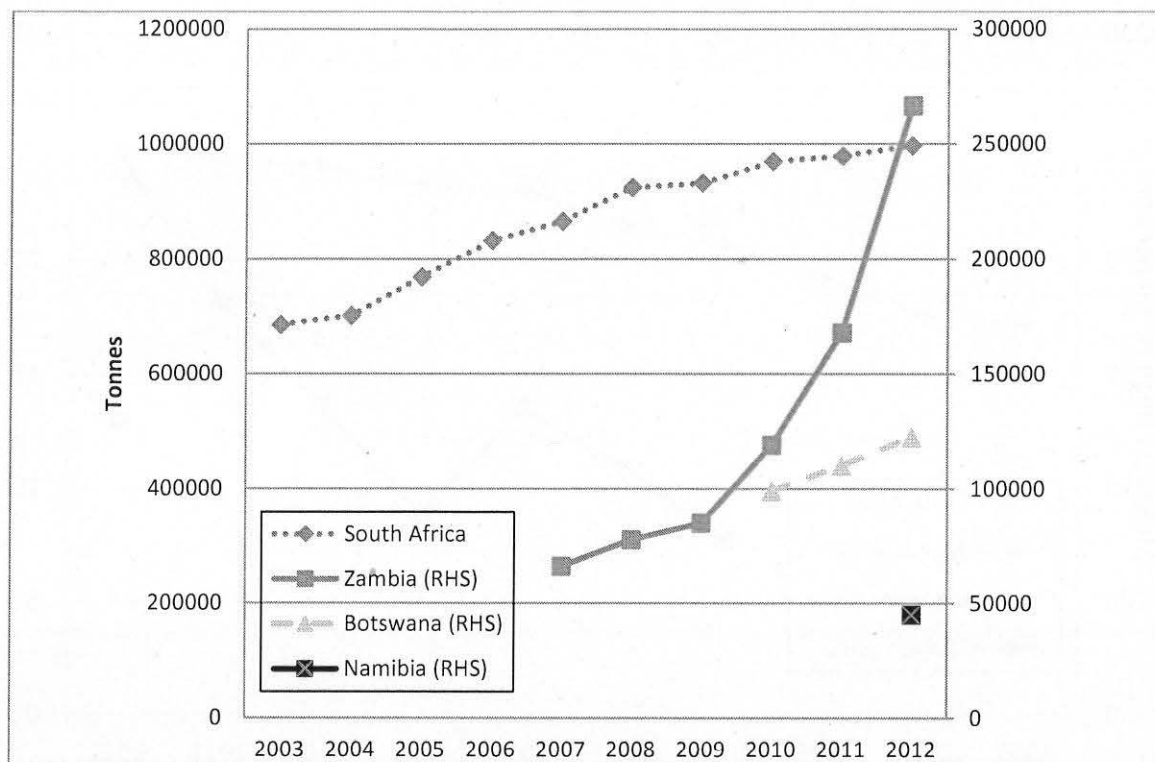
The increase in feed production in South Africa between 2004 and 2008 ties in with the increase in demand for broilers. The rate of growth in feed production eased during 2009 to 2012.

Botswana imports raw materials for its feed manufacturing mostly from South Africa. Its feed production has also increased over the last few years.

²¹ The figures for South Africa are the number of broilers slaughtered

²² A South African producer argued that the growth in Zambian feed has been driven by exports into Zimbabwe and the DRC.

Figure 5: Production of poultry feed



Source: Zambia²³, Botswana Ministry of Agriculture and Namibia data derived from NPI, South Africa Animal Feed Manufacturers Association

4.2. Capacity Utilisation

Most of the large South African poultry producers produced at full capacity during 2011 and into 2012. They increased capacity through acquisitions of smaller producers who were under financial distress. However, South African poultry producers argue that their margins have been under pressure due to cheap imports. This has resulted in large producers seeking ways to cut costs and could result in a decrease in capacity utilisation.

In Namibia, NPI is producing at half its total capacity and is likely to produce at full capacity in the near future as it matures. Botswana's capacity utilisation during 2012 was estimated to be at about 90%.

²³ Zambia figures represent the production by the top five producers of feed

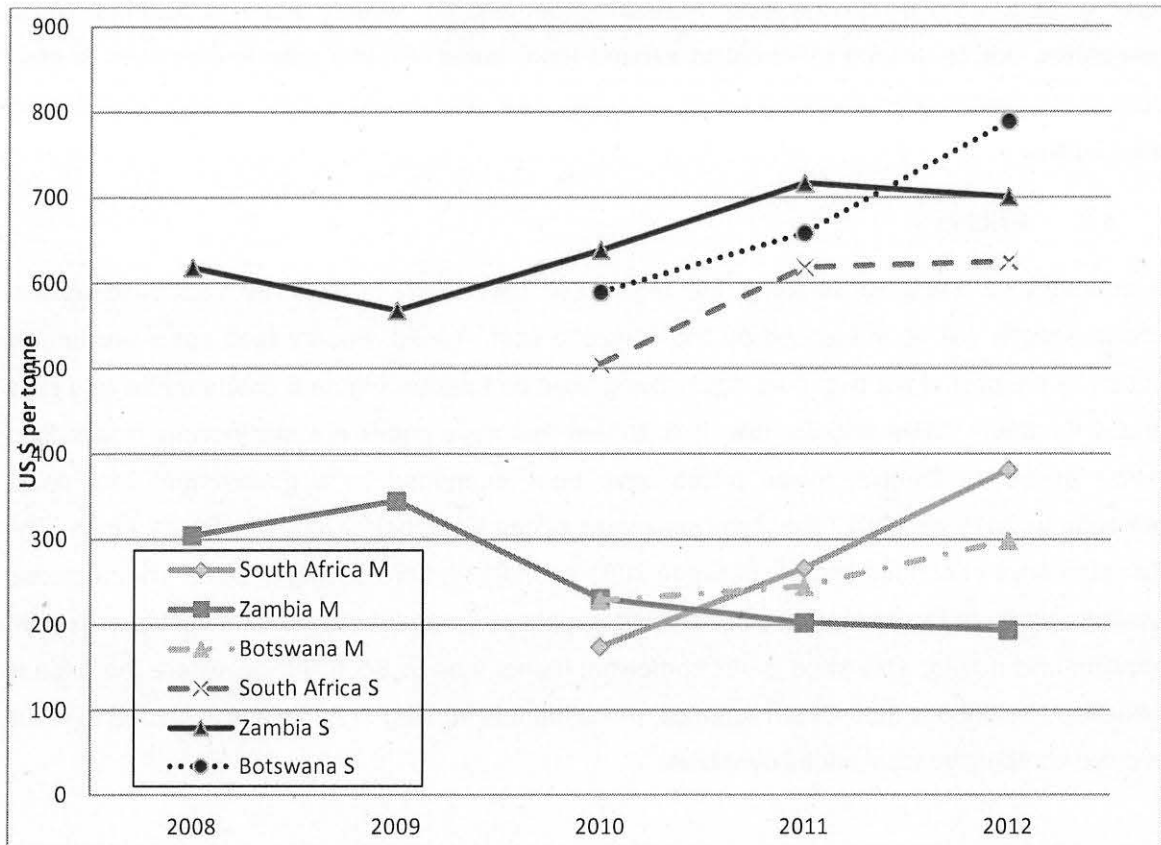
The current average utilised capacity of the top four poultry companies in Zambia at the breeder level is 80.2%.²⁴ Due to the ever increasing demand for poultry meat in Zambia, these companies are continuing to invest to expand their output. Poultry breeders in Zambia have been expanding their capacity by either acquiring new land or investing in more equipment on their farms.

4.3. Pricing

A country's competitiveness within the region and particularly in South Africa's case against cheap imports will be influenced by the domestic cost of feed. Poultry feed costs are largely driven by the cost of the two main inputs being soya and maize. Figure 6 charts maize and soya prices for South Africa and Zambia. It illustrates that soya prices are significantly higher than maize prices. In Zambia, maize prices have been supported by a government floor price; although in 2011 and 2012 the Zambian maize prices were below those in South Africa. The Zambian soya price rose sharply between 2009 and 2011 before easing in 2012. The decrease could be attributed to an increase in domestic supply as a result from earlier investment in soya growing and milling. This price is still somewhat higher than in South Africa, where the price is influenced by imports from South America. Investment in farming in Zambia is expected to result in more competitive local prices over time.

²⁴ Average capacity utilisation data from Hybrid Poultry Farm, Ross Breeders Zambia, Bokomo and Panda Hill Hatchery

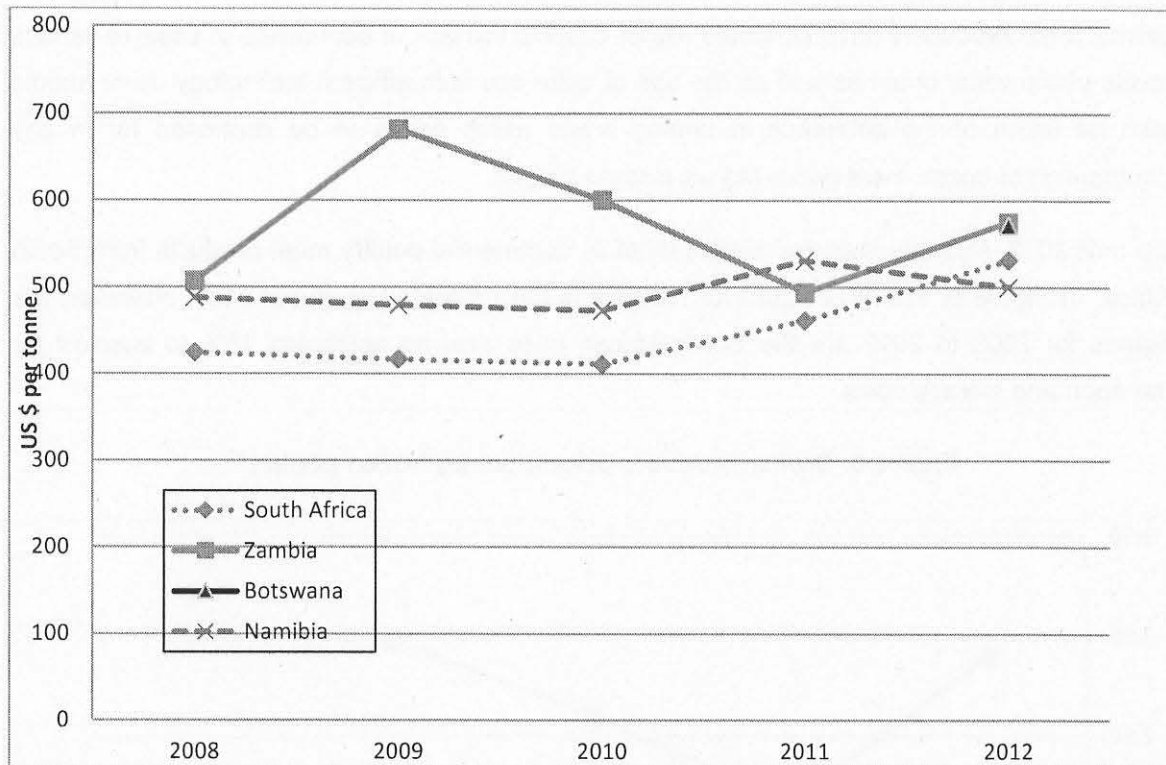
Figure 6: Maize and soya prices



Source: South Africa SAFEX prices, Poultry Association of Zambia, and Botswana

Figure 7 provides the average broiler feed prices for the four countries. As expected, Namibia's broiler feed price largely tracks that of South Africa's. Zambia's feed price has declined from a high in 2009. This could be attributed to greater investment in the feed industry slowly paying dividend as per its long term poultry plan and lower maize prices.²⁵ Zambian feed prices could also be influenced by regional dynamics. Zimbabwe has in the past closed its border to feed and specifically soya. This could result in an oversupply in Zambia which could lead to a decrease in prices.

Figure 7: Broiler feed prices



Source: Poultry Associations of South Africa, Poultry Association of Zambia, Botswana- submissions by growers and abattoirs Namibia data derived from NPI

Figure 8 illustrates the price producers receive for frozen poultry meat. South African producer prices eased in 2012 to below that received in 2009. However as the feed price graph above illustrates the cost of the producers main input has increased gradually.²⁶ This explains the pressure on producer margins (as will be discussed later).

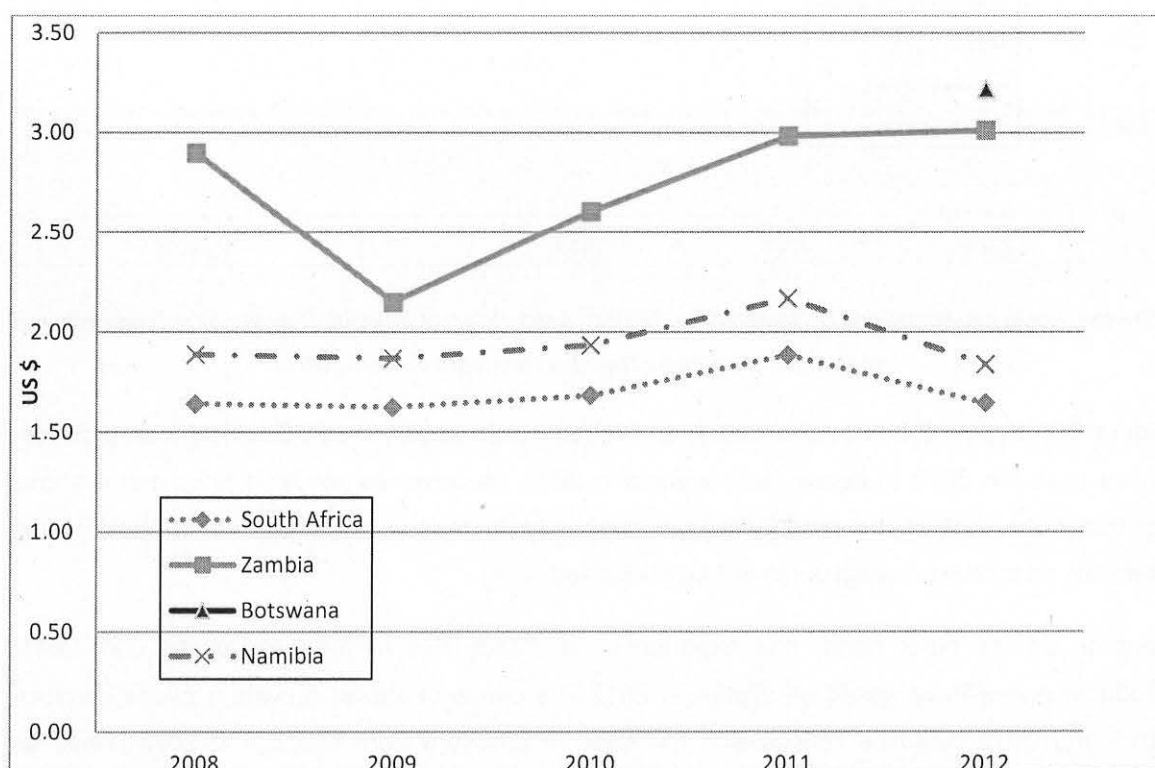
Zambia, on the other hand, has experienced a steady rise in producer prices until 2011. Producer prices have eased off slightly in 2012. The cause of slower growth in prices between 2011 and 2012 could be reflective in the ease in pressure from maize and soya prices as producers become more self-sufficient. Unlike South Africa, Zambian producers are unlikely to face the same level of competition from imports and the local market is quite concentrated. However, competition in the local market particularly at the breeder level has increased.

²⁶ A South African poultry producer argued that there is no direct correlation between feed and producer prices as poultry producers are price takers whereby retailers dictate the price they are willing to pay. Feed, energy and labour costs versus productivity have increased but these increases are not reflected in the producer price

Producers argue that producer prices are likely to be higher in the region compared to South Africa as the production costs in these countries are higher, although this does not apply to animal feed. Producers have attributed higher costs to the lack of economies of scale at various levels of the value chain as well as the use of older and less efficient technology. Note should also be taken of the difference in brining levels which needs to be controlled for in any comparison of frozen meat prices (as we discuss below).

Up until 2012, Namibia imported almost all of its commercial poultry meat products from South Africa. In Figure 8, the 2012 figure for Namibia is the estimated producer price. However, the figures for 2008 to 2011 are the South African price plus an estimated 15% to account for transport and storage costs.

Figure 8: Broiler producer prices, per kg frozen poultry²⁷



Source: Poultry Associations of South Africa, Poultry Association of Zambia, Botswana- submissions by growers and abattoirs Namibia data derived from NPI

²⁷ These figures are not adjusted for brining. The prices would be slightly higher for South Africa, Namibia and Botswana if they are adjusted for brining.

Between 2008 and 2009 feed prices increased sharply in Zambia while at the same time broiler producer prices decreased. Between 2009 and 2011 feed prices and producer prices again moved in opposite directions. This trend is unusual given that feed is a major contributor towards total production costs. During the period of consideration, Zambia's production of both feed and broilers increased. Assuming national demand did not outgrow the growth in supply, this could be indicative of the effect of considerable market power exercised by the largest producers on the market. There is need for the Zambian competition authority to investigate this further.

4.4. Brining in frozen poultry

Brining is the process of injecting salt water into the poultry before it is frozen. Critics of brining argue that it is a cheap way of adding weight to a product that is sold by weight. But poultry producers argue that brining enhances the flavour and texture and reduces costs. They claim that brining reduces the production costs and the cost saving is then passed on to consumers. Without brining, the cost of frozen poultry will move in line with that of fresh poultry

In South Africa, the current legislation allows for whole poultry to pick up 8% water during the production process when the poultry carcass is chilled. In addition, it allows for 4% brine to be injected into whole frozen chickens.²⁸ This legislation does not cover IQF, which makes up about 60%²⁹ of domestic consumption. South African producers currently inject their IQF with an average of 30% brine. The Department of Agriculture Forestry and Fisheries ("DAFF") are in the process of amending the regulations to tighten brining particularly on IQF portions

The Namibian Bio-Safety Bill has not yet been enacted so there are various levels of brine in poultry products. Namibia has, up until recently, relied largely on imported poultry from South Africa which is brined at levels of about 30%. The local producers currently inject about 14% to 20% of brine.

In Botswana, brining is only done on a small scale. Botswana producers argue that their higher poultry production costs compared to South Africa are largely attributed to Botswana's lower quantities of brine. Botswana poultry producers also claim that fast food chains like Nandos, KFC and Chicken Licken require a certain level of brine.

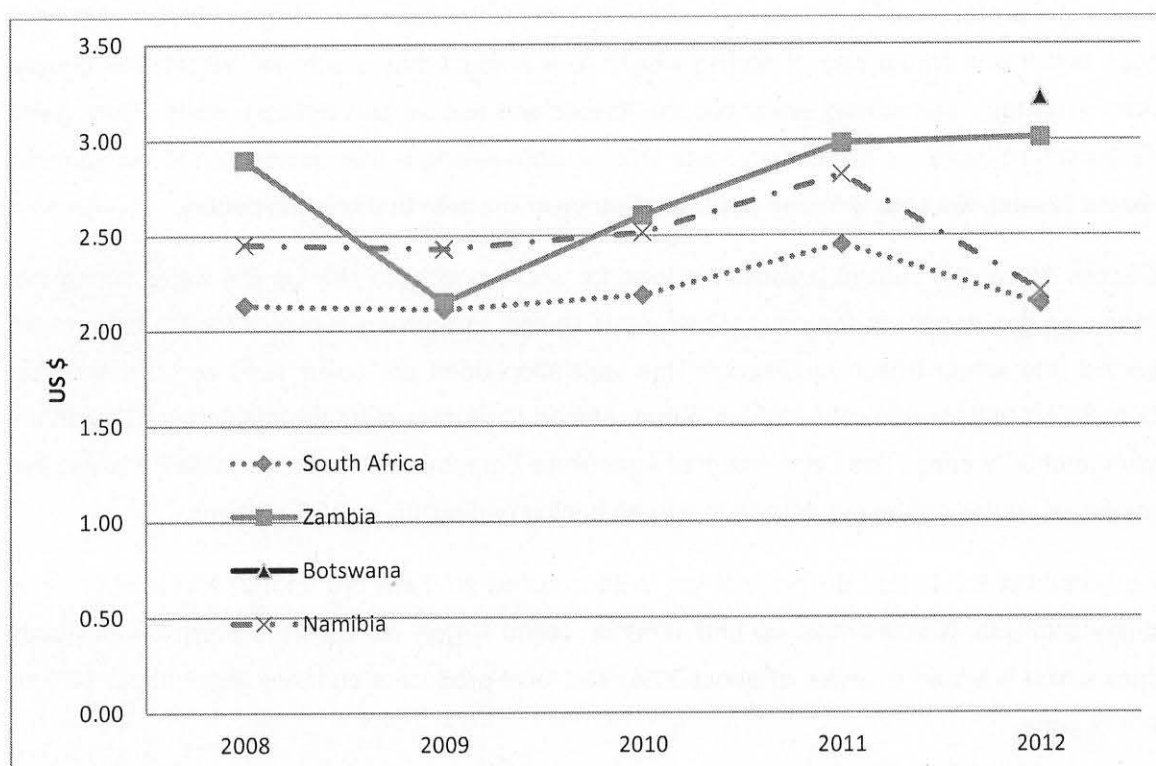
²⁸ SAPA

²⁹ SAPA Annual report 2011 pg. 8

Zambia is at the other end of the brining spectrum as producers do not brine their chicken at all. The Zambians call chicken without brine 'wholesome chicken.' Currently importing of brined chicken is not allowed in Zambia.

Figure 9 below illustrates the effect on poultry producer prices when brining is taken into account. The South African and Namibian figures adjust upwards as the producer price, without brining would be slightly higher. Zambia does not brine so its figures remain the same as in Figure 8. While brining does take place in Botswana, its figure was not adjusted as it only occurs in small quantities.

Figure 9: Broiler producer prices, per kg frozen poultry adjusted for brine³⁰



Source: Figures from Poultry Associations of South Africa, Poultry Association of Zambia, Botswana-submissions by growers and abattoirs Namibia data derived from NPI adjusted for brine

³⁰ The Broiler producer prices from Figure 8 are adjusted in Figure 9 to account for brining. Here South Africa's figures were adjusted for 30% Brine. Namibia's figures for 2008-2011 are adjusted for 30% brine (as the poultry was largely imported from South Africa). The 2012 figure is only adjusted by 20% as NPI started production in 2012 and brines at about 20%. While there is brining in Botswana, its figure was not adjusted. Zambia's figures remain the same as in Figure 8 given that no brining is allowed.

4.5. Cost structure

In Table 1 we attempt to construct a cost build up for each of the four countries that reflects the costs associated with the various levels of the value chain. Ideally this will illustrate at a very basic level the differences in costs across the countries and potential areas of competitive advantages.³¹ The figures were obtained by aggregating the various producers' and industry body figures and then converting them to dollars.

Table 1: Cost build-up, US\$, 2012³²

	Zambia	SA	Botswana	Namibia
Feed cost, kg	0.58	0.54	0.57	0.57
Conversion ratio	1.67	1.67	1.80	1.67
Size of bird	1.80	1.80	1.80*	1.80
Feed cost per broiler	1.74	1.61	1.85	2.00
DoC	0.85	0.37	0.6	0.50
Other costs in broiler prod	0.25	0.24	0.53	0.3
*Live chicken (1.8 kg) cost	2.84	2.22	2.98	2.80
*Live chicken (1.8 kg) price	3.90	2.64	3.39	2.84
Live chicken cost per kg	1.58	1.23	1.66	1.53
Abattoir cost / processing per kg	0.30	0.29	0.34	0.36
Processed chicken, per kg, cost	1.88	1.52	2	1.89
Processed chicken, per kg, producer price	3.01	1.64	3.15	2.23
Brining levels	0%	30%	Less than 5%	30%
Producer price, per kg adjusted for brining	3.01	2.13	3.15 ³³	2.89
Fresh poultry producer price (portions)		2.88		
Processed chicken, per kg, retail price (frozen portions)	3.20	2.93		3.66

*Botswana's poultry average weight is 1.65kg. These figures have been converted to 1.8kg for consistency.

³¹ The figures in the cost build up are estimates based on discussions with domestic poultry producers and publically available data. It is worth noting that these are estimates and are likely to vary based on numerous factors such as seasonality where for example the price of feed could be affected. In addition, average conversion ratios were used. These ratios vary across companies and also for a single company over time as production methods alter.

³² Exchange rates: South African Rand and Namibian Dollar: R(N\$)8.20:\$1, Botswana Pula BWP7.61:\$1 and Zambian Kwacha 5147.30:\$1

³³ While Botswana producers do brine in small quantities, we did not adjust their figure for brining as we do not have clarity at to the exact level of brining. Even without brining, but comparing to those figures adjusted for brine their producer price is still the highest.

It is readily apparent that feed is the main cost in poultry meat production³⁴. It accounts for about 70% of the total production cost of live chicken in South Africa, and just over 50% of the cost of a processed chicken. In Zambia, the feed cost is slightly higher (reflecting the higher price of soya), and accounts for around 60% of the live chicken cost. As expected, Namibia and Botswana's feed costs are higher than South Africa, given that the inputs to feed production are imported. Also feed costs in Botswana could be driven higher by government regulation to buy 70% of feed requirements locally (discussed below). However, even though feed costs are higher in Botswana, they, like in Zambia, contribute 60% to the total cost of live poultry.

The day old chick contributes just 17% of the cost of a live bird in South Africa, with other costs accounting for approximately 11% of the total cost. By comparison, the day old chick cost in the other three countries is substantially higher with Zambia at more than double the South African price. The day old chick cost in Zambia accounts for about 30% of the live poultry cost.

The higher cost for day old chicks in Zambia, Botswana and Namibia could be attributed to the lack of economies of scale at the breeding level. Higher costs could also be attributed to government protection that regulates imports of day old parent chicks in Zambia and broiler chicks in Botswana. However, Zambia is a net exporter of day old chicks, which would appear to reflect low production costs. Given that there are now five breeding operations in Zambia, the cost of Zambian day old chicks should decline with time as the market becomes more competitive. The cost could also decline if breeders are able to increase exports which will help them to achieve greater economies of scale. In Namibia's case, the cost could be attributed to the additional cost to transport the grandparent day old chicks from South Africa.

Abattoir and processing costs are similar for the four countries. In Zambia, the feed and day old chick prices are higher than in South Africa which results in higher final costs. Further, processed prices are quite different, with Zambian producer prices approximately around 84% higher than South Africa. Botswana's costs are higher than the other two countries (40% higher than South Africa). Its producer prices are significantly higher at just over 90% higher than South Africa.

³⁴ The cost of fertilizer will impact the cost of feed. However, we did not consider the differences in fertilizer costs between the countries.

As mentioned above, it is argued by some commentators in the region that brining makes South African frozen poultry artificially cheaper. Poultry meat produced in Namibia is also brined and the same argument could apply.³⁵

We have attempted to adjust the figures for brine by first adjusting the price upwards by the average level of brining for IQF portions which, in South Africa's case, is about 30%. After making such an adjustment, the final cost in South Africa is still cheaper at \$2.13 than that in Zambia (\$3.01). Another approach to account for the brining in South Africa is to look at the producer price for fresh poultry (which is not brined). The average price in 2012 of \$2.88 is again cheaper than Zambia's \$3.01. The table illustrates that Botswana is a high cost producer and its poultry meat price is higher than the other three countries participating in the study even though brining was not taken into account for Botswana. These cost figures have also not taken mortality rates into account. South Africa's estimated mortality rate is around 4.52%³⁶ and Namibia's estimated rate is slightly lower at 4.17%.³⁷ Botswana's mortality rate is estimated to be much higher at between 5% and 7%.

4.6. Margin analysis of large producers in the region

Figure 10 looks at the large poultry producers' margins between 2001 and 2013 for those on which data are available from published financial accounts or annual reports. The first half of 2000s were characterised by rapidly increasing margins peaking above 13% in 2006/07. Margins dipped sharply in 2007 and have remained volatile since. There are various factors that could explain the decline. During this period there was an increase in domestic competitive dynamics. In 2007 Country Bird exited the Elite partnership and introduced a new breed, Arbor Acres, which increased competition throughout the value chain.

The South African poultry producers attributed their poor domestic performance and decreased margins to a steady flow of cheap imports. CBH stated that the poultry industry in South Africa was also beset with surging input costs (maize feed prices) along with increases in electricity and transport prices.³⁸ Astral's January 2013 press release stated that its operating profit for the

³⁵ We adjusted the Namibian figures by 30% for brining as frozen poultry meat was historically injected to the same levels as South Africa. However, the Namibian Poultry Industry has indicated they inject between 14%-20% of brine. At 20% brine, the producer price per kg is \$2.68

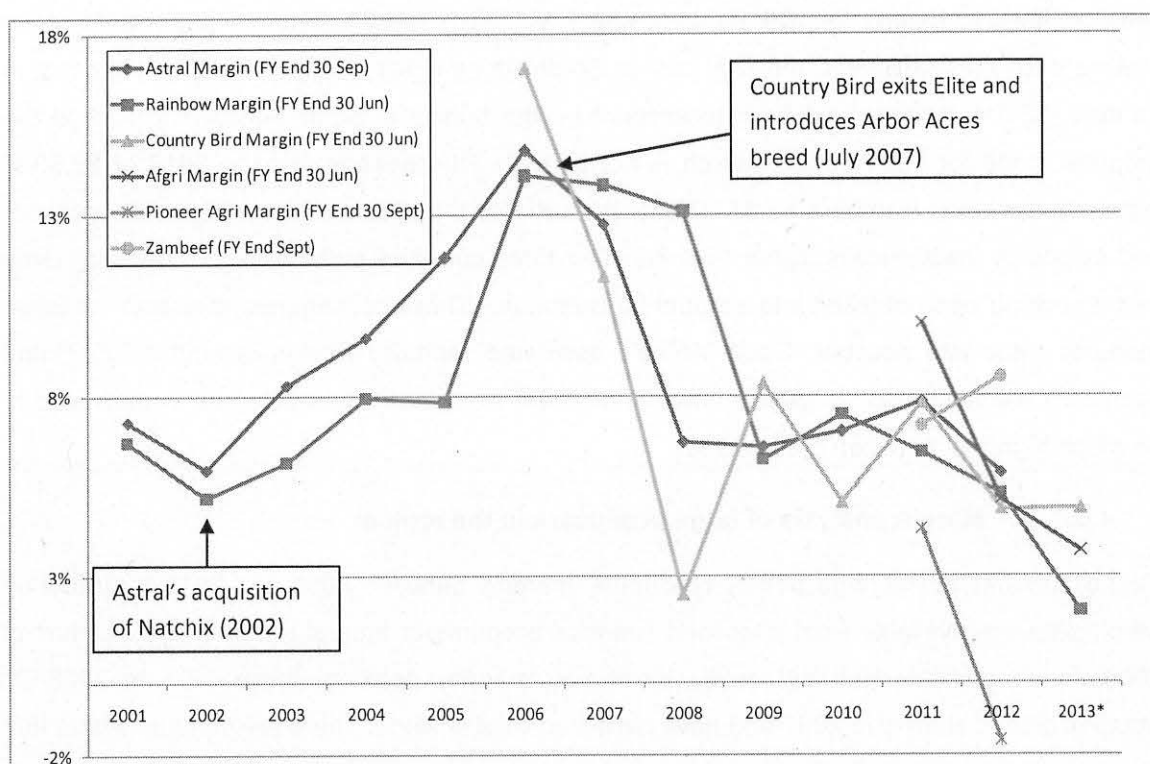
³⁶ SAPA presentation to the Portfolio Committee on Agriculture, Forestry and Fisheries 10 September 2013

³⁷ Namibia Poultry Industries (NPI)

³⁸ CBH Integrated Annual Report 2012

first quarter (ending Dec 2012) was 60% lower than the corresponding period³⁹. While CBH poultry operations came under pressure in South Africa, their Botswana and Zambian operations performed strongly.

Figure 10: Operating margins by company



Source: Annual Reports of listed companies.

Notes: ¹ Margins calculated as operating profit as a percentage of total revenue

² Zambeef is a diversified operation that includes beef and soya farming.

5. Government policies and trade restrictions

The desire to develop poultry industries and with that, food security and job opportunities, has led to all four countries adopting or are considering policies to protect and support their industries. While the policies may be required to incentivise the investments in large scale and competitive facilities, protection and support should be temporary. The protection limits competition which could result in higher costs to the consumer in the short term. However if

³⁹ Astral Press Release "Astral Voluntary Trading Update 30 January 2013" <http://www.astralfoods.co.za/PDFs/Press%20release%20-%20Astral%20Trading%20Update%20-%2030%20Jan%202013.pdf> (accessed on 27 August 2013)

these policies attract the desired investment, this will lead to increased productivity with time. A wider question relates to how each country within the region can stimulate investment more broadly and strengthen the ability for neighbouring countries to trade in products where they have the cost advantage. While South Africa is increasing its crushing capacity, there is still a trade deficit in oil seeds, especially in soya. South Africa could seek opportunities to import animal feed inputs such as soya from within the region such as Zambia rather than from further afield from Argentina and Brazil⁴⁰. Currently industry participants told the South African Commission that it costs more to freight maize from Lusaka (Zambia) to Randfontein (South Africa) than it does to bring it from Buenos Aires (Argentina) to Randfontein.

Realising the potential within the region requires a series of linked investments in agricultural production, storage and processing and transport. Regional infrastructure and border crossings also need to be vastly improved. However, for this approach to be truly beneficial, the region needs a coordinated regional strategy that will seek to break down barriers and harmonise standards (including sanitary/Phytosanitary ("SPS") and brining) that will allow poultry products along the value chain to flow effectively.

We review the current policies adopted in each country before returning to the bigger policy questions at the regional level.

5.1. Government policies and trade restrictions: Botswana

A person entering Botswana is only allowed to bring in 5kg of poultry products. Importing live birds and day old broiler chicks is banned. The importation of fertilised eggs (to produce broiler day old chicks) into Botswana is restricted and is expected to be completely banned during 2013-2014. This ban will affect local producers Cotoesloe (T/A Irvines Botswana) and to a lesser extent Ross Breeders as they currently import about 70% and 50% of their fertilized eggs respectively.

Botswana also has a trade restriction on feed importation as producers have to source at least 70% of their feed locally. If there is a shortage of domestic supply to fulfil the 70% and the producer needs to import, it will need to obtain an import permit.

⁴⁰South African poultry producers have cautioned that currently the quality of soya from Zambia is behind that from Argentina and Brazil

5.2. Government policy and trade restrictions: Namibia

Until recently, there were no restrictions for poultry imports. However, the government has implemented trade restrictions on specific poultry products to protect its infant industry against cheap imports. It used the Import and Export Control Act No. 30 of 1994 to impose trade restrictions through a quota system to control the quantity of poultry meat products to be imported per month. It is also estimated that the local supplier is able to supply 75% of the total demand and the remaining 25% is allowed to be imported after obtaining an import permit from the Import, Export and Trade Measures Office of the Ministry of Trade and Industry.

The quantitative restriction on chicken meat imports came into effect from 1 May 2013. This restriction is a temporary measure. While the length of the protection is unknown, Article 8 of the SACU Agreement on Infant Industry Protection allows for an 8 year period of protection.

The possibility of granting infant industry protection ("IIP") to the poultry meat sector attracted a lot of criticism. Some argued that the protection ultimately protects a single firm and encourages monopoly behaviour.⁴¹ This could lead to abuse of market power if not effectively regulated. The IIP will lead to price increases of poultry products as competition and cheaper imports will be constrained.

Poultry meat products not produced domestically will be subject to import levies. The higher price and levies are unlikely to attract other domestic producers as integrated operations are costly. In addition, the size of the market is not large enough to justify another large producer.

Another concern relates to employment in the industry. The importers currently employ about 912 employees while NPI employs about 600 employees. The protection could result in a reduction of employment by the importers at the expense of fewer local production jobs.

Currently, only the import restrictions are in place and the IIP process is still being finalised. One major consideration in this process is to strengthen the local competition authority to monitor all IIP industries pricing and marketing margins as a resolve of deterring the abuse of protection by incumbents.

⁴¹ Discussion from public consultation workshop held by the Ministry of Trade and Industry in January 2013

5.3. Government policy and trade restrictions: South Africa

The domestic poultry industry has, for some years, called for increases in tariffs to provide protection for the industry that they argue is in decline. In 2012 the International Trade Administration Commission ("ITAC") investigated poultry producers' claims that Brazilian poultry was being dumped in South Africa. It called for provisional anti-dumping measures (additional to the tariffs already in place) of 62.93% ad valorem and 46.59% ad valorem on whole frozen poultry and boneless cuts respectively imported from Brazil.⁴² However this was a temporary measure. Speculation that South Africa would take Brazil to the WTO for dumping has also not materialised.

Since then, the South African Poultry Association ("SAPA"), on behalf of its members, has successfully applied to ITAC to increase import tariffs on frozen poultry. The import tariff on whole birds has increased from the previous 27% to 82% (the maximum bound rate under the WTO rules); carcasses from 27% to 31%; boneless cuts from 5% to 12%; offal from 27% to 30%; and bone-in portions from a specific duty of 220c/kg (roughly 17%) to an ad valorem duty of 37%. However, these tariffs will not apply to poultry being imported from the EU as it can enter South Africa duty free.

The Association of Meat Importers and Exporters ("AMIE") has lodged a complaint at the Competition Commission stating that SAPA's proposed tariffs amounted to restricting domestic competition from imports. This investigation is on-going.

5.4. Government policy and trade restrictions: Zambia

Zambia's 10 year plan for its poultry meat industry started in 2005. The government and industry players projected demand both domestically and regionally for poultry and its input products. It sought ways to grow the domestic industry to meet the anticipated demand by protecting local producers and restricting importation of poultry inputs and final products. The importation of poultry products, including day old chicks, fertile eggs and feed is subject to stringent administrative procedures by the Ministry of Agriculture and Cooperatives. Importers are required to apply for an import permit. Government maintains that it will continue controlling the importation of poultry products due to SPS considerations.

⁴² ITAC press release Provisional Payments on Chicken Meat from Brazil 13 February 2012 accessed from www.itac.org.za on 12 November 2012

On the feed side, the maize farmers are protected as there is a maize floor price. This is likely to maintain the price above the level that would be obtained if there was no floor price. The 10 year plan has increased the capacity for the crushing industry for soya. The size of the soya crop has grown steadily over the years and is currently sufficient for domestic supply and exports to Zimbabwe and the DRC.

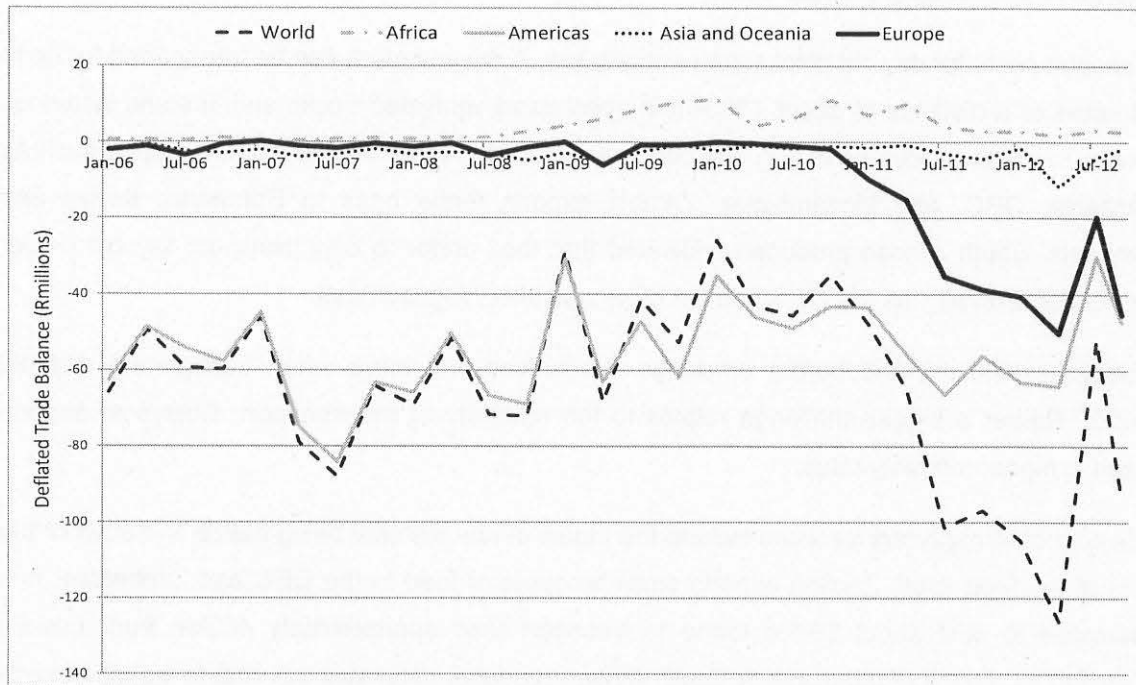
There is no trade restriction applicable to the export of poultry or feed to other jurisdictions.

6. South Africa trade flows

Trade of poultry products within the region is limited largely due to countries protectionist policies. South African producers are prevented from exporting poultry to Botswana and Zambia, and, now more recently, are restricted on quantities to Namibia. South Africa's main export markets in Africa are Mozambique and Zimbabwe.

Figure 11 looks at South Africa's poultry trade balance between 2006 and 2012. We focus specifically on South African trade given the small level of trade in poultry meat by the other countries in the study.

Figure 11: South Africa's poultry trade balance (quarterly data)



Source: Quantec Import and Export Data (H0207)
Note: Rand values deflated by PPI

The graph illustrates that South Africa has maintained a small trade surplus with other African countries. However, it also illustrates an increase in deficit on account of increased imports from Europe. The South African producers blame their lower margins on cheap imports from Brazil and the EU. The trade deficit with South America has remained within a constant band during the timeframe of the graph (2006-2012). The total trade deficit followed the level of imports from South America closely until 2011 when imports from Europe increased sharply.

6.1. Non-tariff barriers

In addition to government trade policies, the flow of agricultural products within the region could be constrained by non-tariff barriers. These barriers include transport and transaction costs, inadequate infrastructure, the lack of diversification in comparative advantages and underdeveloped production structures (Pratt and Diao, 2008).

On a practical level, poultry producers will consider importing agricultural products if transport costs and border controls are not prohibitive. To illustrate the impact of transport costs on

regional trade, it is estimated that the transport costs in Namibia account for about 20% of the total poultry production process costs.

Transport costs for day old chicks are relatively low. A day old chick can be transported for up to 24 hours or a distance of about 1500km in specialised ventilated trucks and in some instances by air. Zambian producers export day old parent chicks to other countries in the region such as Tanzania, DRC, and Mozambique. Zambia exports fertile eggs to Botswana, Kenya and Tanzania. South African producers indicated that they prefer to only transport day old broiler chicks domestically, as the chicks do not grow well after long journeys.

Companies did not find border crossings themselves prohibitive when transporting day old chicks. Rather a bigger challenge relates to the reliability of the transport. Delays at airports result in higher mortality rates.

The cost of transporting feed can include the inputs of raw material being maize and soya or the cost of the feed itself. Zambia exports small amounts of feed to the DRC and Zimbabwe. It is estimated to cost about \$90 a tonne to transport feed approximately 460km from Lusaka (Zambia) to Harare (Zimbabwe). A South African producer estimates the cost to transport soya from the Durban port for about 600km to cost between R450 (\$54.88) to R600 (\$73.17) a tonne (or 75c (\$0.09) to R1 (\$0.12) a km). A similar price of about R400 (\$48.78) was given to transport maize about 600km.⁴³

Some South African producers indicated that they had, in the past, imported feed from Zambia. However doing so had its challenges. Maize transported domestically in South Africa arrives in trains or on tipper trucks that allows for easy transfer into the factory. However maize from Zambia arrives in 50kg bags. This requires additional labour costs to get the maize from the bags into the processing facility. In addition supply of Maize from Zambia has been unreliable in the past.

Once broilers have reached the required weight they are transported in crates on open trucks. The maximum time allowed to transport broilers between the farm and the abattoir is between 2 to 2.5 hours. Longer distances result in weight loss and increased mortalities as the broilers become stressed. This makes transporting live broilers between countries problematic.

⁴³ These are estimated transport costs. Transport figures will vary based on numerous factors such as how the company factors its drivers cost, truck depreciation, insurance etc. into the total cost

Once the broiler is processed, the fresh or frozen poultry product is transported in specialised refrigerated vehicles. The quality of the product relies on the cold chain remaining intact. The shelf life for fresh chicken is short, so producers try to get the product on the shelves as soon as possible and within 24 hours of being slaughtered. This illustrates why trade in chicken meat is, to a large extent, limited to frozen poultry.

Other government legislation such as SPS requirements and brining levels could limit the flow of both feed and the final product.

7. Nature of competition concerns

The poultry industry as described above is oligopolistic in nature (particularly in smaller countries such as Botswana and Namibia) with the large firms operating in a variety of countries in the region. Oligopolistic markets, by nature are characterised by limited competition. In addition to being oligopolistic in nature, the industry is also fairly transparent providing an ideal environment for tacit collusion. However, competitive outcomes in the region are vital to ensure the success of regional integration initiatives provide consumers with competitively priced poultry products. At the same time, countries must make tough decisions to balance competitive prices with security of supply and the development of domestic poultry industries. There is a danger that government policies designed to protect and develop local production could decrease competition within a country and the benefits from these policy interventions could be captured by the large firms and their shareholders.

Research as part of this study suggests that firms in each country have been able to exert a degree of market power in certain levels of the value chain. However, more recently we have observed greater degrees of competitive rivalry coupled with major investments in new capacity and entry.

Successful regional integration from a competition perspective requires close cooperation between the competition bodies of the different countries (Fox, 2012). To do so, each member country also needs to develop its own effective competition law and implementation of the law (Fox, 2012). Within the region competition authorities need a "stringent framework for dealing with mammoth multinational companies and their endless appetite for overseas expansion often through mergers and takeovers" (Singh 2001).⁴⁴ The four countries in the study have developed

⁴⁴ Singh is not referring to poultry producers specifically but rather large multinationals more generally.

competition authorities. The competition authorities' roles in their own domestic industries are discussed below.

7.1. Competition concerns and previous investigations in Botswana

The poultry industry in Botswana is unique with complex ownership structures. The largest producers have ties to South African producers. The large domestic producers face limited competition and could be engaged in unilateral conduct bordering on over-pricing of poultry products at both feed and broiler breeding levels. This concern is heightened by the price of poultry in Botswana, as illustrated above, is amongst the highest in the region.

Tight trade restrictions protect these dominant players from import competition. In addition, the relationships between the abattoir and processing plant with the contract growers place the smaller farmers in a challenging position as they appear to be set up to fail. Abattoirs seeking to integrate backwards develop contract grower relationships with the smaller farmers. The abattoirs buy feed and stock on behalf of the small farmers. When the small farmers do not meet their targets they have to pay the abattoir back. There is a concern that the contract growing agreements with abattoirs will contribute to eliminating the smaller farmers resulting in decreased competition.

The most recent acquisition was between the shareholders (Ross Africa and the Dada family) of the dominant poultry feed manufacturer Master Farmer Feeds ("Nutri-Feeds Botswana"). Before the acquisition, shareholding of Nutri-Feeds Botswana was split between Ross Africa (60%) and the Dada family (40%). Following on from the acquisition, Ross Africa now holds 100% shares in Nutri-Feeds Botswana. The share buy-back acquisition has been approved with a condition that Ross Africa gets a local partner.

A potential competition concern for abattoirs and growers in Botswana is the halaal certification requirement which could act as a barrier to trade in processed poultry products.

7.2. Competition concerns and previous investigations in Namibia

The Namibian poultry industry is still at its early stages of development. The Namibian Competition Commission has not dealt with any poultry cases. Nor has it undertaken a study to uncover any anti-competitive arrangements. However, there have already, in the short life of NPI, been various consumer complaints about the quality and the price of its products.

Further research will be necessary to uncover if there is any anti-competitive arrangements in dealing with the market players along the value chain. This close analysis may become more pertinent once the impact of the increased tariff and trade restrictions are felt. The research question would need to focus on whether the IIP protects a monopolist at the consumers' expense. This dovetails with the evolving idea of empowering the Competition Authority to monitor both the production and retail prices of the protected industries to guard against any abuse of protection which could adversely affect both consumer welfare and the overall country's competitiveness. To this effect, the Namibian Competition Commission was recently tasked to conduct price surveillance in the poultry industry. The NACC's task is to verify actual industry's costs structures and production levels, monitor farm gate or ex-factory prices as well as to monitor regional industry's developments. The ultimate objective is to ensure accurate data and effective price monitoring to assist in mitigating any risks that policy measures such as IIP and quantitative restrictions may cause.

7.3. Competition concerns and previous intervention in South Africa

The structure of the South African poultry meat industry has evolved over the years, especially during the early part of the 2000's. As such, the Commission has investigated various mergers and acquisitions as poultry firms have expanded horizontally and vertically in the value chain. Examples include: Astral's acquisition of National Chicks (Natchix) and Earlybird Farms in the early 2000's. Rainbow also expanded its operations through strategic acquisitions of Vector Logistics in 2004. The Commission has, more recently, been tasked with evaluating several smaller mergers in the poultry meat industry. Some of these mergers are a result of the tough climate for poultry producers with the smaller producers failing to remain viable. These include the Daybreak/Rossgro ⁴⁵ merger, Astral/Corpclo, ⁴⁶ Rainbow/Bushvalley Farms ⁴⁷ and Pioneer/Darling.⁴⁸

One of the most significant mergers in the South African poultry industry occurred in 2002 with Astral's acquisition of Natchix. Figure 10 above illustrates that the merger had far reaching consequences in the South African poultry industry as it entrenched Astral's dominance in the supply of day-old broiler chicks to independent broiler producers. This market power stemmed from the fact that Rainbow, the other large breeder at the time, largely produced day old chicks

⁴⁵ Competition Tribunal case nr 57LMSep10

⁴⁶ Competition Commission case nr 2011Apr0016

⁴⁷ Competition Commission case nr 2011Nov0375

⁴⁸ Competition Commission case nr 2012Jul0370

for its own requirements. Following the merger, poultry meat prices increased and Astral's margins grew.⁴⁹ The local industry was less competitive against imports. However, CBH was able to introduce a new breed, Arbor Acres, in mid-2007. This increased rivalry at the breeding level (including parent stock) filtered through to strengthen competition at the broiler level. The market shares and market powers of the other big firms have also declined and it is therefore unlikely that an abuse of dominance contravention (unilateral conduct) will be found in the near future.

The Commission also investigated both industry bodies: SAPA and the Animal Feed Manufacturers Association (AFMA) for the exchange of commercially sensitive industry information. SAPA made a decision post-initiation to aggregate the data and decrease the frequency with which it distributed information to its members. In addition, Astral now submits its pricing data to SAPA in an aggregated form via a third party statistician⁵⁰. AFMA has also made several undertakings to the Commission with regards to the frequency of data dissemination and distribution to its members and the level of disaggregation of the data it makes available to its members.

The Commission initiated an investigation into possible price fixing against Rainbow, Astral, CBH and Afgri. The Commission subsequently received a leniency application from Pioneer with respect to cartel behaviour in the market for fresh chicken products in the Western and Eastern Cape. This matter formed part of the Commission's landmark R960m (\$117.07m) settlement with Pioneer on all outstanding cases⁵¹ in November 2010. Astral has subsequently also admitted to collusive conduct in that market and has settled with the Commission. The Commission has conducted further extensive investigations into alleged anti-competitive behaviour in the industry, but no evidence of further contraventions was found. However, the oligopolistic nature of the industry still makes it susceptible to potential tacit collusion.

⁴⁹ Astral disputes this view and argues that other factors such as a growing middle class resulted in an increase in poultry consumption and all poultry producers' margins grew. Astral argues that they would be unable to influence other producers' margins. Note that Astral admitted that arrangements in the Elite joint venture, which Astral unilaterally controlled following the merger, constituted an abuse of dominance under 8(c) of the Competition Act in its settlement reached with the Competition Commission.

⁵⁰ Competition Commission Press release 'Competition Commission settles poultry case with Astral Operations'.

⁵¹ The cases relate to Pioneer's activities in poultry, eggs, maize and wheat milling and baking.

7.4. Previous merger investigation and competition concerns in Zambia

The Commission recently approved a merger whereby the South African producer, Rainbow, acquired 49.0% shares in Zamchick (a subsidiary of Zambeef). Zamchick operates at broiler processing and fast food outlet levels in the poultry sector.

The Zambian poultry meat industry is oligopolistic in nature and highly concentrated. There is a general observation that dominant companies could be engaging in unilateral conduct bordering on over-pricing of poultry products at both feed and broiler breeding levels. The top two players in the industry, Hybrid and Ross Breeders collectively have a market share for the production of day old chicks of close to 75% while the three smaller firms (Bokomo, Panda Hill and Progressive Poultry) account for the remainder.

There are concerns this market structure may harbour anti-competitive trade practices that stifle competition. This is manifested especially in the price of DOC which is amongst the highest in the region. Further, as discussed above, broiler meat prices and feed prices have, over the period in consideration, moved in opposite directions. Such conduct could be illustrative of potential abuse of market power and calls for the Zambian Competition Authority to investigate further.

Imports of poultry products into Zambia are regulated and only allowed when there is a domestic shortage. This protection could facilitate coordination among the few incumbent players in the industry which will distort competition. However, the joint venture in Zambia between Rainbow and ZAMBEEF is expected to change competition dynamics and exert downward pressure on poultry products.

8. The Role of Industry Associations

8.1. Industry Associations in Botswana

The Poultry Liaison Committee was established in 2000. This committee comprises of producers and retailers (that is, day old chick suppliers, growers, poultry feed manufacturers, and retailers). The forum's secretariat is the Ministry of Agriculture. Producers report information related to current poultry production volumes and retailers present on the demand for poultry. If there is an anticipated supply shortfall, the committee will decide on the quantity of imports to be licensed. They will inform the ministry when to allow import permits and when the borders should be closed for imports.

The other association is the Botswana Poultry Association (BPA) which comprises of the whole supply chain (excluding poultry meat retailers). This forum's secretariat rotates amongst members and the Ministry of Agriculture attends their meetings. This committee discusses production problems with an intention to lobby government through a single voice.

8.2. Industry Association in Namibia

Namibia has an association for importers which lobbies government against infant industry protection. The monopoly player sits on the committee that determines import restrictions. This raises competition concerns as the company has vested interest in limiting imports.

8.3. Industry Associations in South Africa

SAPA is one of the oldest agricultural organisations in South Africa and was formed in 1904.⁵² It represents small scale, emerging and the large poultry producers and provides a collective voice to lobby government. It collects and compiles a wide range of statistics on the poultry industry. As discussed above, it has altered how it disseminates the statistics to satisfy the Commission concerns over the exchange of information.

AFMA represents the majority of feed manufacturers in South Africa. It also collects a wide range of data and statistics on the feed industry. It has also adjusted how it disseminates its information to prevent the exchange of commercially sensitive industry information.

8.4. Industry Association in Zambia

The Poultry Association of Zambia's (PAZ) primary objective is policy advocacy and lobbying. Members share production and price information with PAZ who then aggregates the information before distributing statistics to the members.

9. Conclusion

Regional integration has a role to play in development. However, Pratt and Diao (2008) warn that regional integration requires careful consideration or it could exacerbate the tendency towards economic polarization. While it is tempting for developing countries to adopt developed countries' laws and regulations, each country should rather adopt policies that are relevant to its own stage of development. The poultry meat industry is a good case of point. It would be short-sighted to argue that the countries in the study (Botswana, Namibia, South Africa and Zambia)

⁵² SAPA Industry Profile 2012

as well as other SADC countries should simply eliminate all trade restrictions. Doing so would be detrimental to the smaller countries' domestic industries. The South African poultry industry is large and well developed. If the borders were opened, South African poultry along with imported Brazilian and EU poultry would flood the smaller domestic markets. Ultimately this would lead to a loss of domestic production, and with that, an element of food security.

However, that does not mean that there is no role for regional integration within the poultry industry. Indeed, in the medium-term the greatest potential for growth lies in countries with agricultural production to under-pin competitive animal feed supply, such as Zambia. In addition, scale economies exist particularly at the breed level. Zambia is a case to point where it has potential unexploited scale economies.

Temporary protectionism could be justifiable to attract the necessary investment to develop the local industry. However, Devarajan and Rodrik (1989) illustrate that imperfect competition and scale economies matter. Long term protectionism could dampen any potential competition as a dominant incumbent has an incentive to keep small players out. For regional integration to be beneficial, the region needs a coordinated regional strategy that will seek to break down barriers and harmonise standards (such as SPS and brining). Competition law and policy at a country level and then ultimately in the region has a major part to play in regional integration. This is because competition concerns are increasingly containing an international dimension that affects more than one jurisdiction (Gal 2009). The large South African producers, seeking higher margins resulting from protectionist measures, have set up operations in other countries in the region. Careful oversight from competition bodies in the region will deter abuse of protectionist measures.

The assessment here suggests a number of implications for steps to improve regional integration and links to competition, including:

- i. National Governments through SADC and COMESA should work towards standardising and harmonising poultry sector standards such as SPS and brining and promote trade in the region subject to full compliance to the set standards.
- ii. National Governments should develop robust monitoring and testing systems at border entry points to effectively enforce compliance to the set standards and prevent disease outbreaks from spreading.
- iii. National Governments should consider relaxing in stages the protectionist policies that are currently being implemented. Some of the benefits that could be realised from

relaxing protectionist policies include cheaper feed costs in countries like Botswana as well as greater price competition for end products which would benefit end consumers. However, there is need to assist small local producers to become more efficient in order to allow them to compete more effectively with increased imports.

- iv. Access to finance coupled with the high cost of capital in the region hamper entry or expansion into the industry. Development agencies of individual countries and the World Bank⁵³ could play a greater role in facilitating access to finance across the countries in the study.
- v. Given the nature of the industry in terms of access to international breeding stock, entry is very difficult and therefore regional competition authorities should devise a mechanism to coordinate their oversight in this market in order to address any competition concerns arising from concentrations of economic power in this sector.
- vi. National competition authorities should continue monitoring developments in this sector and cooperate in their effort to address various competition concerns.

⁵³ The World Bank (through the International Finance Corporation) has recently approved a loan to Country Bird to expand its operations in Zambia and Botswana.

Annexure 1: List of interviews and data sources

Interviews with representatives from each of the countries

Botswana

Bobbsie Chickens
Dikoko tsa Botswana
Feed Centre Botswana
Goodwill Chickens
Irvines Botswana
Ministry of Agriculture
Moleps Poultry
Nutri Feeds
Opti Feeds
Richmark Poultry
Ross Breeders Botswana
Tswana Pride

Namibia

Ministry of Trade and Industry
Namib Mills Investments
Namib Poultry Industry
Shoprite Namibia

South Africa

Afgri Ltd
Animal Feed Manufacturers Association
Association of Meat Importers and Exporters
Astral Foods Ltd
Country Bird Holdings
Pioneer foods
Rainbow Chicken

South African Poultry Association

Supreme Foods

Zambia

Bokomo (Zambia) limited

Company Annual Reports and Financial Statements

Hybrid Poultry farm limited

Ministry of Agriculture and Cooperatives

Panda Hill Hatchery limited

Poultry Association of Zambia

Progressive Poultry (tiger animal feeds) limited

Ross Breeders (Zambia) Limited.

<http://data.worldbank.org/country/zambia>

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"South African Poultry Industry Profile 2012" South African poultry association

Internet resources used:

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"Astral scrambles for bigger African nest egg" <http://finweek.com/2012/03/09/astral-scrambles-for-bigger-african-nest-egg/> both accessed on 6 June 2013

"Astral breaks ground in Standerton" <http://www.astralfoods.co.za/pdfs/Press%20Release%20-%20Ground%20Breaking%20of%20Standerton%20Mill%20Press%20Release%20-%2026%20October%202012.pdf> accessed on 06 June 2013

"Astral Voluntary Trading Update 30 January 2013" <http://www.astralfoods.co.za/PDFs/Press%20release%20->

[%20Astral%20Trading%20Update%20-%2030%20Jan%202013.pdf](#) (accessed on 27 August 2013)

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<http://www.farmersweekly.co.za/article.aspx?id=34977&h=Value-adding-in-the-eastern-Free-State> accessed on 2 February 2013