

DEVELOPMENTS AND COMPETITIVENESS OF MOZAMBICAN CHICKEN MEAT INDUSTRY

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ABSTRACT

A thriving Mozambican poultry industry could serve a number of roles, facilitating consumers' access to animal protein, reducing the nation's dependence on poultry imports, and providing jobs and associated income to those employed in the industry. The competitiveness of Mozambique's poultry was characterized and analyzed by applying Porter's Five Forces Model. This analysis, of the five strengths that shape business competition indicated a low level of competition within the industry, a limited supply of raw material and a strong foreign competition with national supplies of this commodity. Domestic demand for chicken meat is increasing, but buyers base their decision mainly on price. Challenges include establishing governance structure and policies for the poultry sector which would promote consumer welfare. Alternatively, Mozambique's poultry industry could be improved through greater technical cooperation with other countries (e.g., Brazil), thereby allowing the local industry to acquire specific regulatory and organizational structures for chicken production, along with improved genetic material and poultry feeds.

Keywords: Poultry industry, African agribusiness, Five Forces Model.

1 INTRODUCTION

Notwithstanding an 80% agrarian population with a significant stake in poultry and livestock production, Mozambique's low income families obtain almost 80% of their dietary energy supply from cereals and starchy roots, thereby subjecting themselves to significant dietary pro-

tein deficits (FAO, 2010b). Mozambique's poultry production industry could contribute to the promotion of nutritional sufficiency, food security and generate jobs within the country (Agostinho, 2010), but this industry faces a number of challenges, particularly in light increasing imports of frozen chicken from Brazil and other countries. This occurs in part because domestic production does not meet domestic demand, and because the

price of imported chicken can undercut that of domestically-produced chicken.

The production of chicken meat has both an economic and social relevance in Mozambique: (i) the activity allows farmers to increase and diversify their income and to promote risk reduction (FAO, 2010a), and poultry production increases food availability and diversity, therefore contributing to food security. However, the Mozambican poultry industry must face the daunting challenge of improving its competitiveness. To do so it must improve its profits and market share in both domestic and foreign markets (Van Duren, Martin, & Westgren, 1991).

To investigate whether producers can effectively compete in a determined market, competitive forces should be considered (Porter, 2008). By identifying the important structural features of a specific industry through Porter's Five Forces Model, the key factors for an industry's competitive success can be determined.

On this basis, the present study addressed the questions: How is Mozambican chicken meat industry structured, and how does this compare and contrast with the equivalent Brazilian industry? Which are the main forces of competitiveness operating in Mozambique's chicken meat industry? Thus, the objectives of this study were to characterize and analyze the competitiveness of the chicken meat industry in both Mozambique and Brazil.

2 COMPETITIVENESS

Productive activities in different countries and industries can show different results according to the site-specific level of competitiveness, i.e., whether or not it can attract workers and other resources (Masters, 1995).

Competitiveness can therefore predict the interest of new firms to engage in a certain activity. If competitiveness has a clear meaning for firms, a nation is unlikely to be competitive in all industries, a fact that makes the term "competitiveness" more difficult to define when applied to nations (Farina, 1999). Porter (1990) considers that since competitiveness is a generic term at the national level, the emphasis placed on the term must not apply to the economy as a whole, but should be directed to specific industries and industry sector. Seen as a corporation, a nation must constantly strive to improve productivity of

the existing industries by raising product quality, adding desirable features, improving product technology, or boosting production efficiency.

The Five Forces Model proposed by Porter (2008) can analyze competitive market forces and provides a structure for examining competition. The model relates a business enterprise to its environment and provides a systematic way of thinking about how competitive forces work at the industry level and how these forces determine the profitability of different industries and industry segments (Cernusca, Gold, & Godsey, 2012). The evaluation of competitive forces can reveal the origin of an industry's current profitability, providing a framework to anticipate and influence competition (and profitability) over time (Porter, 2008).

Porter's five forces are: bargaining power of suppliers; bargaining power of buyers; threat of new entrants; threat of substitutes, and rivalry among competitors. Together, the strength of the five forces determines the potential for profit in an industry by influencing the prices, costs, and required investments of businesses the elements of return on investment.

2.1 BARGAINING POWER OF SUPPLIERS

In order to develop a business, inputs such as labor, machines, raw materials, and services are required. Therefore, input-related costs can have a significant effect on profitability. If the bargaining power of suppliers is great companies are in a weak position and may have to pay a higher price or accept a lower quality or service (Porter, 2008). The key is learning how suppliers can influence the terms and conditions of transactions in their favor.

Several conditions can favor the bargaining power of suppliers. For example, when a small number of suppliers are in operation, a company switching to another supplier may prove difficult, particularly if the company's purchases did not represent a significant share of the supplier's business. Such environments can promote high prices and low input quality.

Partnership actions with supplies can serve to decrease their bargaining power, but back integration and production of one's own inputs can also reduce uncertainties of supply. Nevertheless, the capacities to invest in purchasing supplies or resources, as well as production are necessary to running a successful business. Another option

may be to increase company power by forming a buying group of small producers to buy as one large-volume customer.

2.2 BARGAINING POWER OF BUYERS

Transactions between sellers and buyers create value for both sides. However, when buyers have greater economic power, a seller's ability to capture a high proportion of the value created will decrease, and they will earn lower profits.

Buyers' bargaining power is reflected in the effect that certain industry customers can have on the profitability of this industry (Porter, 2008). Certain industries' buyers can wield greater power when they are large and purchase much of the industry output. Many small customers acting as a group can also create a strong force.

Companies have less room for negotiation if buyers have access to and are able to evaluate market information and are thereby cognizant of market demands, prices, and production costs. When the product is not unique and can be purchased from other suppliers, buyers will base their decision mainly on price. Options to reduce customers' bargaining power include increasing their loyalty to a specific business through partnerships or loyalty programs, selling directly to consumers, or increasing the inherent or perceived value of a product by adding features or branding.

2.3 THREAT OF NEW ENTRANTS

This force is tied to the possibility of new firms entering the industry, forcing prices down and putting pressure on profits (Porter, 2008). Analysis of this factor involves examining the barriers to entry and the expected reactions of existing firms to a new competitor. Entry barriers are unique for each industry and situation, and can change over time.

One type of entry barrier is regulatory - import tariffs or quotas may be protectionist tools adopted by governments to favor domestic industries against foreign industries that operate in the same sector. On the other hand, the entry by new firms is easier when established firms do not have favorable access to raw materials, locations, or government subsidies. Another condition which favors entry is when economies of scale are minimal and there is little improvement in efficiency as scale (or size) increases.

2.4 THREAT OF SUBSTITUTES

Products from one business can be replaced by products from another (e.g., chicken and pork can substitute for beef or lamb in consumer diets). A threat therefore exists if there are alternative products at lower prices or offering better performance, or both. If the products are commodities, they compete mainly on the basis of price, since consumers receive the same value from the products of different firms. However, in some cases, customers may be reluctant to switch to another product even if it offers an advantage.

Customers may consider it inconvenient or even risky to change if they are accustomed to using a certain product. However, when price is the customer's primary motivator of loyalty, the threat of substitutes is greater. Beyond the price, substitutes can fill the gap when supply cannot meet demand for the original (Perdana, Roshetko, & Kurniawan, 2012).

2.5 RIVALRY AMONG COMPETITORS

Frequently this factor is the strongest of the five competitive forces, but its importance can vary widely among industries. When competition is intense, it may be necessary to enhance product offerings to keep customers, and prices may fall below break-even levels. In some industries, rivalries are centered on price competition, especially in the case of companies that sell commodities. In some industries, there are high fixed costs of production.

When a large percentage of the production cost is independent of the number of units produced, companies are pressured to produce larger volumes. This may tempt companies to drastically cut prices when there is excess capacity in the industry in order to sell greater volumes of product. The rivalry among competitors in a growing market is lower, as firms are able to grow revenues simply because of the expanding market. In a stagnant or declining market, companies often fight intensely for a smaller market.

The interaction among all these forces defines an industry's structure and shapes the nature of the competitive interaction within that industry (Cernusca, Gold, & Godsey, 2012). In this context, Government plays a vital role and it can influence each of the above forces either positively or negatively. That is why government as a

determinant of competitiveness must be viewed as distinct from the forces.

Government acts in shaping the context and institutional structure surrounding companies and in creating an environment that stimulates companies to gain competitive advantage (Porter, 1990).

Porter's method not only evaluates the competitiveness of the farmer, but that of all the participants in the supply chain. This method allows us to identify and to analyze the structure of a sector and to point out its strengths and weaknesses. Critical success factors can also be identified to which participants in a chain have to pay special attention in order to develop and sustain a competitive advantage as successfully as possible in the years to come.

3 METHODS

An analysis of secondary products and market information, led to the identification of the factors that influencing the chicken meat industry, including its production system, marketing practices, market access, problems and opportunities.

Information regarding the Mozambican poultry industry was obtained from studies of poultry production in Mozambique and Brazil undertaken by, government agencies and other poultry industry stakeholders. The main data sources were: National Institute of Statistics (INE); Ministry of Industry and Trade (MIC) and Brazilian Association of Animal Protein (ABPA).

A characterization of the Mozambique poultry industry was undertaken to obtain basic information about the industry's structure and markets. Analyses of competitiveness and discussions were based on the Porter's Five Forces Model.

4 RESULTS AND DISCUSSION

4.1 CHARACTERIZATION OF CHICKEN MEAT CHAIN IN MOZAMBIQUE

The Mozambican poultry industry's poor development is tied to five distinct historical periods of economic development (Agostinho, 2010). The first period occurred after the country's independence (1975-1977), when the government began to adopt a central planning system, resulting in the nationalization of production

units across the country. In the second period (1978-1985), while state management was consolidated and expanded, poultry industry privatization increased towards the end of the period (Nicolau, 2008).

The third phase (1986-1994) was a transition period: the country's government started to adopt a market-based economic system, leading to the withdrawal of the state from business management. The fourth period (1995-2005) was characterized by stagnation in the poultry sector, which stimulated the growth of imports. Only in 2006 did the organization and restructuring of the poultry sector begin in Mozambique (Fifth period).

With the advent of regional integration into the Southern Africa Development Community (SADC), the already weakened poultry sector, was further pressured by international competition (Nicolau, 2008). The maintenance and development of the activity therefore began to depend on the sector's capacity to adapt to new competitive forces. Trade liberalization forced domestic producers to achieve productivity levels equivalent to those of the foreign market.

In addition to the sector restructuring, a shift in animal production, particularly with respect to poultry, occurred in Mozambique. At over 23 million units, 2010 chicken production in Mozambique occurred primarily in the provinces of Zambezia (4 million units or 17.5% of production) and Nampula (3 million units or 15.3% of production), (INE, 2010). This production was largely generated by three types of farmers (Table 1).

Table 1. Distribution of poultry farms in Mozambique, 2010

Farmer scale	Production capacity per year (chickens)	Share
Small	up to 5,000	70%
Medium	5,001 to 50,000	20%
Large	Above 50,000	10%
Total		100%

Source: Agostinho (2010).

Responsible for 20% of national chicken production medium scale farmers produce continuously over the year, and show intermediate technical-production skills and aptitudes towards commercialization to small household farmers and large industrial farming groups (Nicolau, 2011).

Representing 70% of the market, small farmers' production is mostly within the familial and informal sectors. The former sector represents

approximately 40% of national production, and is characterized by a seasonal activity, irregular production and low productive performance (Nicolau, 2008). In addition, these producers production is of low quality, suffers from poor sanitary control and irregularity in the numbers produced.

Nicolau (2008) identified three types of production systems in Mozambique: cooperative, independent and partnership. While the independent system is dominant in Mozambique poultry production, high efficiency standards and exposure to sectoral competition, means that, in the short and medium term, this practice, carried out by small and medium farmers (90% of total production) will decline substantially. The less common cooperative farming system, provide inputs (chicks and feed), technical assistance and in some cases, even facilities to build new farms. Under the partnership system an integrating company works in partnership with small and medium poultry farms, without involving intermediaries. The main feature of this system is to have a single operational command, coordinating the operations of creating arrays and incubation of eggs, the production of poultry feed, slaughter and distribution, as well as defining the function of chicken farming (Nicolau, 2011).

The lack of investment in technology and of a productive structure throughout the production chain, along with a manual production process lead to increased production costs, increased market prices, and therefore greater production costs in Mozambique than in Brazil. Raw materials for chicken feed have the greatest impact on the production costs. Given the lack of domestic production of soybeans [*Glycine max* (L.) Merr.], yellow corn [*Zea mays* L.] and vitamins, required ingredients for feed production must be imported from South Africa, Europe and Latin America. The Mozambique Feed lot market consists of 8 companies, only 3 of which are located outside Maputo province (Agostinho, 2010).

With respect to suppliers of chicks, small farmers buy on the open market, and are thus vulnerable to all the uncertainties associated with this form of organization. This, in turn, exerts an influence on the price and health of the animals. The majority of eggs employed in chick production originate from Zimbabwe (70%), some from Zambia, and a few independent producers from northern Mozambique obtain their eggs from Malawi (Nicolau, 2008).

Major poultry slaughterhouses in Mozambique belong to large companies and have varying degrees of automation of intermediate operations. However, most country chickens are slaughtered on farms and in community slaughterhouses, using mainly manual procedures or, less frequently, an automatic. The installed capacity for slaughtering chickens on farms and in formal slaughterhouses in Mozambique in 2007 was roughly 1 million per month (Agostinho, 2010). Chickens are usually sold alive because of the tax for slaughtering.

The main product coming from the slaughter premises in Mozambique continues to be frozen or chilled whole chicken, which is manually packaged for the final consumer. Most of the slaughtering is intended for retail establishments, such as retail outlets of large enterprises, supermarkets, coffee shops, butchers, grocery stores and to a lesser extent, chickens go to wholesalers, who are also responsible for importation of chicken (Nicolau, 2008). Producers, especially small and independent farms, sell chicken alive or slaughtered without any sanitary control at the market place, outdoors or at the farm gate.

Suppliers of slaughter services have a strong bargaining power in terms of setting the rate for slaughtering. Currently, this rate varies between 10-15% of chicken production costs, thus representing a large expense for small farmers. This elevated cost maintains the sales of live chickens, thus providing a higher profit margin. Global programs of production process inspection, such as HACCP (Hazard Analysis Critical Control Points) and GMP (Good manufacturing programs) are not implemented.

Besides the lack of domestic production capacity to supply the domestic market, the structure of the chicken production sector leads to the variation in domestic product supply throughout the year, i.e., times of low and high supply, which occur in the first and last quarter of each year, respectively. This inconstancy in national chicken supply leads to an increase in imports to meet the demand in periods of deficit (Nicolau, 2008).

According to the data from the Mozambican Association of Poultry Farmers (AMA) and the reports from Ministry of Industry and Trade (Nicolau, 2011), Mozambique produces an average of 1.5 million units of chicken per month. The consumption of chicken in Mozambique in 2008, according to Agostinho (2010), was 1.1 kg per capita. According to Apex-Brazil (2011), in

2009, 80.7% of chicken consumed in Brazil was produced in Brazil. However, there was a remarkable overall reduction in imports of chicken

meat from Brazil to Mozambique between 2005 and 2012 (Figure 1).

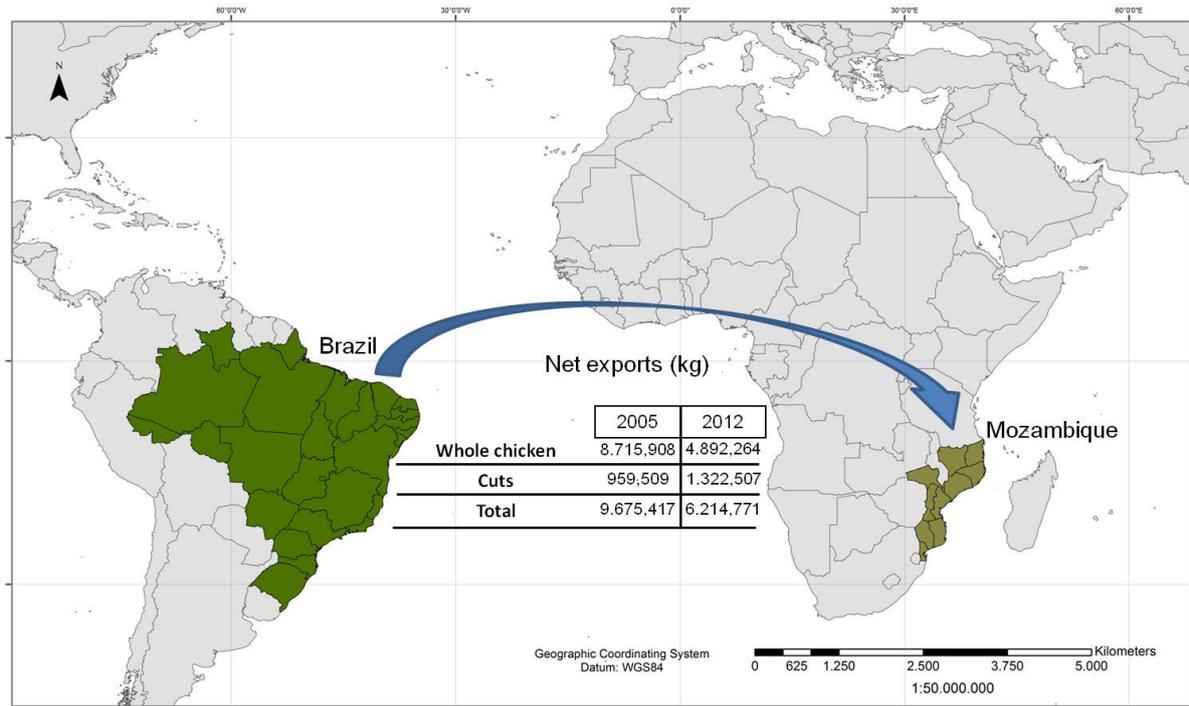


Figure 1. Brazilian chicken meat exports to Mozambique
Source: (ALICE WEB, 2013)

This decrease in imports is related to the 2006 association of producers and their collaboration with the Mozambique government. According to the AMA (2008), national production of chicks recorded a growth of 11% from 2007 to 2008, which also had the effect of reducing imports of hatching eggs. The AMA invested in the training of small and medium scale poultry farmers. From 2007 to 2009, the AMA, in collaboration with TechnoServe (an NGO), provided training programs to 1613 small and medium chicken farmers regarding good practices in production and to 89 inspectors for chicken slaughterhouses in Maputo.

Given consumer’s budget limitations and choice of product based on price, the policy of exemption retailers from the VAT (Value Added Tax) reduces the price of frozen chicken in the market, thereby stimulating the consumption of domestic chicken. Imported chicken meat is subject to a 20% customs duty on the price (CIF / Port of Mozambique) and internally, for sale to the public, to 17% VAT, which currently taken by dealers.

Consumption of domestic products has been encouraged by the Government through the MIC: the introduction of a “Made in Mozam-

bique” label was approved by ministerial decree number 119/2006, published in the Government Gazette number 24, Serie I.

In addition, The production system of the poultry industry in Mozambique has some problems, according to Almeida and Cardoso (2001), for example the climate (high temperatures), poor sanitary management, low productivity of local chickens and lack of inputs for poultry feed.

4.2 CHARACTERIZATION OF THE BRAZILIAN CHICKEN PRODUCTION CHAIN

The modern chicken industry emerged in southern Brazil in the 1970s, when large slaughterhouses were installed in a market characterized by the dominance of few, but large, leading companies (Farina, 1995). A significant number of small and medium enterprises were also created, many of these being clandestine.

It is estimated that 90% of the poultry industry in Brazil isoperates under the integrated system (partnership) between poultry slaughterhouses and farmers (ABPA, 2014). Slaughterhouses provide feed, one-day-old chicks, veterinary products and technical assistance, while for cages and equi-

ment farmers must go to the state capital city. It is the farmers' responsibility to produce chickens within the criteria established by the slaughterhouse.

According to Zilli (2003), the predominance of small farms (<50 ha) and rugged terrain in some regions of Brazil, hamper the development of other agricultural activities, and thereby favored the emergence of poultry farming, often in partnership with swine production.

The social importance of the poultry industry in Brazil is confirmed by its massive presence in the country, particularly in the South and Southeast regions. In many cities, chicken farming is the main economic activity (ABPA, 2014).

In 2013, Brazil's 12.30 Tg of domestic chicken meat production was destined 68.4% for the domestic market, and 31.6% towards exports. Exported products include: cuts (53.14%) that represent different chicken parts, such as thigh, breast and wing; whole chickens (38.14%) and more elaborated types of meat, such as industrial (4.13%) and salted (4.58%). Among the main markets are Asia, Africa, America and Oceania (ABPA, 2014).

Data from Brazilian Institute of Geography and Statistics (IBGE) revealed that in the 3rd quarter of 2013, 1,444 billion chickens were slaughtered in Brazil, the highest level since 1997. This represented an increase of 1.1% compared to the previous quarter period and of 8.4 % compared to 2012 (IBGE, 2013).

Brazil's southern states are responsible for the majority of chickens Slaughtered under Federal Inspection Service (S.I.F) certification, thereby allowing them to be exported. The states of Paraná, Santa Catarina and Rio Grande do Sul are responsible for 31.12%, 16.66% and 14.56%, of slaughtered chickens (UBABEF, 2014). The location of most major slaughterhouses is also in southern Brazil. Nevertheless, chicken production's expansion into the Midwest already occurred. In general, automated large-scale slaughter lines are present and products demonstrate a high level of standardization (Jesus, Paula, Ormond, & Braga, 2007).

The technology applied in the Brazilian poultry industry has led to the establishment of some paradigms related to practices and industrial premises that guide current production systems: i) plants with a slaughter capacity of 120,000 chickens/day, ii) lines of automation for chicken cuts, iii) own feed factory, and other practices related to health and environment control (Jesus et al., 2007).

The chicken meat industry, dominated by companies of national origin, includes both the "slaughtering of chickens" and the related processing industry. Characterized by a range of different business models, these companies can be divided into two groups: i) large companies with global operations and cooperatives that operate in the international market, and ii) medium- and large-scale companies limited to national markets. The first type operates in different sectors such as frozen, prepared and ready meals. Cases of specialization in this market are rare and are usually limited to regional companies (Oliveira, 2011).

Vertical integration is observed in the chicken meat chain. Companies involved in slaughtering have expanded their production base to feed mills and poultry genetics, and developed partnership agreements with poultry farmers, including the delivery of supplies to farmers. Therefore, in order to the reduce risk of price and supply fluctuations, the industry has adopted a substitute mechanism towards market uncertainties. The downstream firms act in the transport, export and distribution centers, incorporating new business (Oliveira, 2011).

The distribution of chicken products occurs mainly through retail establishments (Martins, 1996). The consumption of chicken meat in Brazil has show a remarkable increase: per capita consumption of chicken meat rose from 29.91 kg in 2000 to 41.80 kg in 2013 (UBABEF, 2014). This strong rise in consumption is linked to the adoption of specific economic policies under the "Plano Real," which resulted in the classes with lower purchasing power transferring part of their food intake from carbohydrates to protein (Silva, 2011). Chicken meat was included in the Brazilian government's "green anchor" policy, which uses a control n food prices to control inflation rates. Chicken meat is considered to be one of the products which support the objective of price stability for economic policy in Brazil (Farina, & Nunes, 2002).

Table 2 shows summarizes and contrasts the poultry sectors in Brazil and Mozambique

Table 2. Comparison between poultry sector in Mozambique and in Brazil.

Characteristics	Brazil		Mozambique	
	Item	Source	Item	Source
Population	Over 200 million	IBGE (2013)	Over 20 million	INE (2007)
Per capita consumption	45 Kg (2008)	ABPA (2014)	1,1 Kg (2008)	Agostinho (2010)
Chicken meat production	10966072 tons (2008)	UBA (2009)	7040 tons (2008)	INE (2009)
Production system	90% partnership	Oliveira (2011)	90% independent	Nicolau (2011)
Raw material for feed	100% Corn and soybean national production	ABEF (2004)	60% must be imported	Nicolau (2008)
Eggs for broiler production	100% National production	ABPA (2014)	70% from imports (2008)	Nicolau (2008)
Feed conversion	1,76 kg (2009)	UBABEF (2011)	2,2 to 2,5 kg (main system)	Nicolau (2011)
Number of slaughterhouses	436 (2010)	IBGE (2011)	30 medium and large slaughterhouses (2010)	Agostinho (2010)
Chicken products available	Whole, frozen, industrialized and salted	ABPA (2014)	Whole and frozen chicken	Agostinho (2010)

4.3 THE COMPETITIVENESS OF THE POULTRY INDUSTRY IN MOZAMBIQUE

The forces affecting profitability are often beyond companies' control, so they must choose tactics to respond to the forces rather than try to change the business environment. A five forces model is essentially a process for a manager

to understand how the conduct and performance of firms in an industry might be determined by changes in its structure over time.

Porter's Five Forces Model served as a framework for examining the competitive environment. A descriptive representation of the five forces and their influence on the Mozambique chicken meat industry is presented in Figure 2.

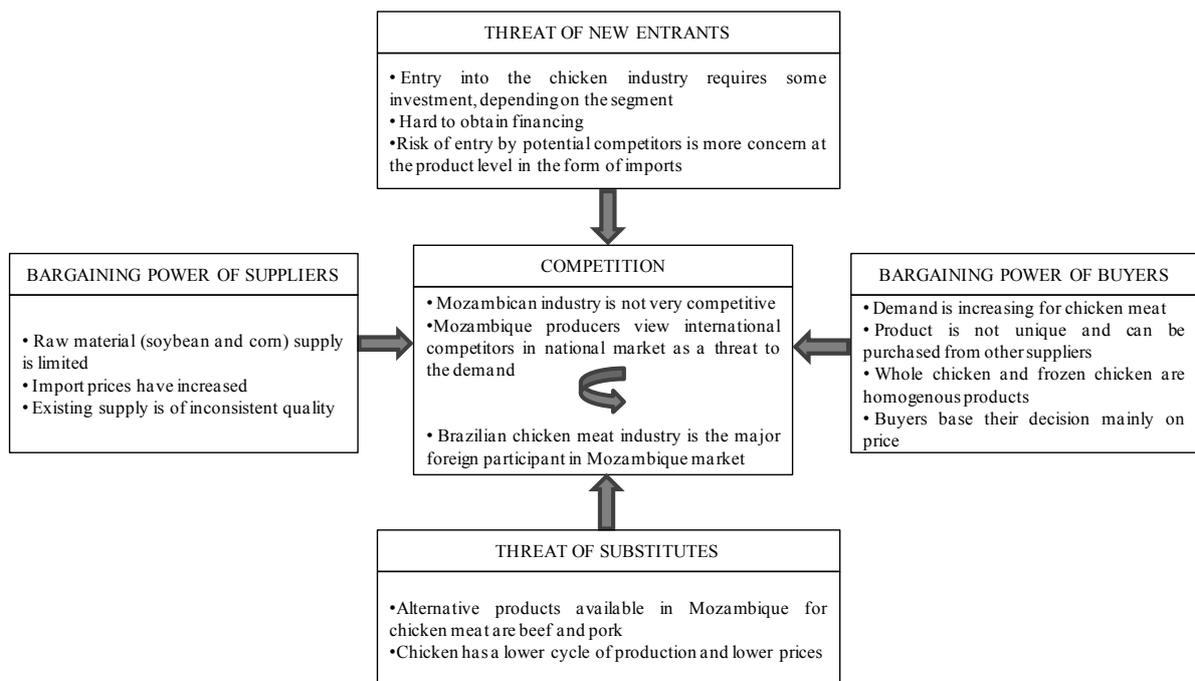


Figure 2. Representation of the influence of Porter's Five Forces on Mozambique chicken meat industry.

Raw materials for chicken meat production are commodities that are generally cyclical in price and availability. These materials have a significant effect on final production cost. Feed cost is the single largest expense for livestock, dairy and poultry production, often representing 60% or more of total production costs. Small producers are particularly challenged because they do not have the leverage associated with volume that the larger producers have. As a result, the force of suppliers on small producers can be relatively strong. However, a small Mozambique producer could decrease this effect by cooperating with other small players to make collective purchases.

The existence of many small scale dependent poultry farmers weakens the sector, leading to difficulties of supply and coordination. An independent system of production is a primary characteristic of Mozambican poultry production. However, due to the increasing efficiency and competition in the sector, it appears that the independent system operating on small and medium farms will decline (Nicolau, 2011).

The Mozambican production system, in which the farmer produces and sells his products in the free market, makes the chicken producer the weakest agent in the chain in Mozambique. They are the most vulnerable to fluctuations in production costs and in price of chicken meat, because they have less bargaining power, which may affect negatively the competitiveness of this production chain. Another determining factor is the difficulty in obtaining loans for investment or funding in the financial market.

Unlike the Mozambican reality, in Brazil the poultry sector has adopted a partnership system (Barczsz, & Son-Lima, 2009) whereby the industrial sector plays a coordinating role in the production chain, allowing Brazil to consolidate its position as the world's second largest producer and largest exporter of chicken. In order to implement this system, certain factors are essential for success: distance from the farm to its partner, the technology level used by the farmer, the number of farmers by integrator, production contracts, installed capacity for slaughter and definition of production rates (Nicolau, 2008).

Since chicken and frozen chicken are homogenous products and similar to those offered by international competitors, current customers can switch at relatively little cost from Mozambique chicken to their competitors' products. Efforts

towards improvement of slaughtering and processing plants could be a driver to differentiation, since derived chicken meat products are not available in Mozambique.

In Mozambique, the national industry has less negotiation power with its customers than in Brazil. However, the competitive pressure may be one driver for the expansion and improvement of the Mozambican production chain. Options to reduce the bargaining power of customers include: increasing customer loyalty towards the national industry through partnerships or loyalty programs, selling directly to consumers, or increasing the inherent or perceived value of a product by adding features or branding. These actions can also reduce the competition afforded by the foreign chicken meat industry.

Alternative products for chicken meat available in Mozambique are beef and pork. Chicken has a lower cycle of production and lower prices, furthermore pork has religions restrictions. Customers may consider it inconvenient to change meat sources due to both economic and cultural reasons. Generally, in the world market chicken is a lower cost substitute for beef and pork and the poultry industry over the years has been more innovative in product development, branding and industry focus.

Mozambican producers view international competitors in the national market as a threat to the demand for their product. Rather than restricting trade, governments should focus on maintaining competitive national markets and investing in public goods such as research and education (Van Rooyen, 1999). Mozambique's chicken meat industry needs to improve its technical and economic efficiency, and then might adopt economic tactics such as setting a product price that prevents or lessens foreign entry.

Market liberalization through the removal of protectionist barriers, has helped to accentuate the fragility of the sector, and to increase competition in the domestic market between domestic and imported products (Nicolau, 2011).

Mozambique's consumer market is growing; therefore a national industry should be able to grow its revenues simply because of the expanding market. The Brazilian chicken meat industry participates in Mozambique market, and the competition can impose improvements within the national industry. Masters (1995) indicated that, in many developing countries, reduced tra-

de barriers and structural adjustment programs have put in place the appropriate direction for future reforms.

The action of differentiating industry product by branding might be interesting and to maximize the effect, collective advertising for an industry may be more effective - the "Made in Mozambique" program, for instance.

Four fundamental aspects can be observed in the increase of poultry production activity in Africa: genetic improvement of chickens; optimization of management, resolution of the sanitary problem and the adoption of unconventional raw materials in poultry feed (Almeida, & Cardoso, 2001).

To strengthening the poultry industry of Mozambique, Brazil should not only supply chicken meat, but become a supplier of technologies for poultry production. An example is the program adopted in Brazil that encourages family farmers to produce chickens with rustic breeds, but with improved production of meat and eggs. In addition, technical cooperation projects in agriculture between The Brazilian Agricultural Research Corporation (Embrapa), industries, universities and producers can promote improvements to the Mozambican chicken industry by strengthening the supply chain.

5 CONCLUSIONS

In a general overview, the five forces concept provides an adequate tool for companies to examine the profit potential in a particular industry. The analysis model can also contribute to the development of strategies for countering the strength of the forces. While there has been a recent increase in production in Mozambique's poultry industry, to become more competitive, a greater integration of supply chain should be targeted.

There is no single variable that explains satisfactorily what influences the national and international competitiveness, but rather a sum of factors related to the condition of activity and the country. International alliances to integrate into competitive chains might be required. It will, therefore, be important to identify the sources of reduced competitiveness and develop appropriate strategies to improve the situation of Mozambique's chicken meat industry. Reaching cost-efficient production levels and increasing support loyalty to the national industry should tend to

decrease the entry of challengers for the Mozambican market.

One of the aspects that reduce the competitiveness of poultry farming in Mozambique is the lack of a coordinator agent. This exists in Brazil, where the industrial sector encourages the adoption of specific structures for chicken production by farmers and provides genetic material and adequate feed.

The chicken meat imported to Mozambique is mainly from Brazil. In addition to trade issues, Brazil can become a partner to generate and transfer technology to the Mozambican context, intensifying the existing technical cooperation between these countries.

Establishing a governance structure to improve the performance of the poultry sector, promoting policies of consumer welfare and improvement of production resources could improve the Mozambican poultry sector. This process can be developed without closing the international market, which would be deleterious to consumers, but establishing partnerships to bring more knowledge and technology from countries that have a strong and competitive poultry industry.

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