Perspectives for the Mexican beef meat industry based on the analysis of the business model of two Latin American companies

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Miguel Ángel Vargas Del Ángel
Institution: Universidad Autónoma Chapingo
Dirección: Centro de Investigaciones Económico, Sociales y Tecnológicas de la Agroindustria y la Agricultura Mundial, carretera México Texcoco Km. 38.5. Chapingo Estado de México, México.
C.P. 56230
E-mail: **miguelvargas70@yahoo.com.mx**

Manrrubio Muñoz Rodríguez
Institution: Universidad Autónoma Chapingo
Dirección: Centro de Investigaciones Económico, Sociales y Tecnológicas de la Agroindustria y la Agricultura Mundial, carretera México Texcoco Km. 38.5. Chapingo Estado de México, México.
C.P. 56230
E-mail: **manrrubio@ciestaam.edu.mx**

Vinicio Horacio Santoyo Cortés
Institution: Universidad Autónoma Chapingo
Dirección: Centro de Investigaciones Económico, Sociales y Tecnológicas de la Agroindustria y la Agricultura Mundial, carretera México Texcoco Km. 38.5. Chapingo Estado de México, México.
C.P. 56230
E-mail: **hsantoyo@ciestaam.edu.mx**

Abstract

The international meat market is led by large corporations that control the most important nodes of the value chain, to transform them into value networks operating in the global context. This study compares two global companies, the Mexican *Su Karne* and the Brazilian business consortium *JBS-Friboi*, which is the leader in the world market, and the possible implications of their business models on the network value of Mexican beef meat. First, as context, a revision is made of the recent behavior of livestock production and beef meat exportations from Brazil and Mexico. The cases are analyzed through documental review and interviews with officials and experts involved in the value network. As a consequence of a more competitive environment in the global market, the Mexican packers will have to find new competition strategies, such as diversifying markets and building strategic alliances to exploit economies of scale and scope and standardize quality. (Econlit classifications: J-43, L-10, L-25).

Keywords: Beef exports. Market diversification. Process integration.

1. Introduction

In the past decade, the international beef meat market experienced important transformations that led to a reconfiguration of the world market and opened new opportunities for the United States and Brazil, the two most important beef meat producers and exporters of the world. Thus, world meat consumption and marketing have increased as a result of factors related to new tendencies in food consumption and distribution, growth of emerging economies (Hocquette and Chatellier, 2011), and more specifically with the incorporation of the agro-food industries to the global value chains (Humphrey and Memedovic, 2006; Langreo, 2009; Reardon et al., 2001). In other terms, it passes from one highly segmented production model to another, where the productive segments are integrated in order to attend the international context (Kheradia and Warriner, 2013): the raw materials are produced in one space, are industrialized in another, and are eventually consumed in a third, but under a highly efficient coordination logic (Bisang et al., 2008; Torrescano et al., 2010). The compliance of quality norms, certification processes, health, traceability and regularity in the volumes offered are necessary concepts for exporting companies (Christensen and Brower, 1995; Voogd, 2012).

On the other hand, the international meat market is led by firms that internally control the most relevant nodes of the value chains (Shafer et al., 2005), to transform them in value networks (Meixell and Gargeya, 2005; Nalebuff and Brandenburguer, 2005) in which the consumer acquires a preponderant role in the definition of the supply of products (Childerhouse et al., 2002). These are more valued when they are delivered through differentiated distribution centers (Amit and Zott, 2008), with brands and other complementary assets, which make the business model disruptive, while they introduce innovations and completely new attributes that are valued by the clients (Amit and Zott, 2012)(Wessel and Christensen, 2012).

Mexico is the eighth world producer of beef meat, and because of the signing of trade agreements with various countries, its beef meat value network is continually more involved in the dynamic of the international market. In particular, Mexico's presence in the Asian markets has been relevant to complement the American exports in Japan and South Korea.

Of the total volume of Mexican exports, 75 % is carried out through the firm *Su Karne*, which has shown great participation and leadership in the modernization of the

economic sector of national beef meat. Despite the dynamism achieved by this firm, its total sales are scarcely equivalent to 6% of those the Brazilian multinational firm *JBS- Friboi*, which leads the global market of beef meat and has acquired production platforms in the principal meat producing countries (Brazil, U.S., Australia, Argentina, Canada, Paraguay, Uruguay and Italy) and market presence in the five continents. The objective of the present study is to analyze the business model of *Su Karne* and of *JBS-Friboi*, in order to identify the possible implications for the structure and dynamic of the Mexican beef meat industry. This work contrasts the possibilities of *Su Karne* against the business consortium *JBS-Friboi* in view of the signing of trade agreements with the principal beef meat producing countries, including U.S., Brazil, Australia and New Zealand (Zanine and Silva, 2006), who will seek to export their products to the Mexican market through the large commercial supermarket chains (Sánchez et al., 1999).

2. Methodology

First, an analysis was made of cattle production and beef meat exports for Brazil and Mexico during the period between 2003 and 2013, as well as the Mexican exports of live cattle and beef meat, to identify relevant tendencies.

Second, a comparative analysis was made of cases based on the approach of Eisenhardt (1999) and Morra & Friedlander (2001) (Farhoomand, 2004) (Yin, 2003). For this purpose, the Mexican firm *Su Karne* was selected, which leads national production and exports, whose slaughter and annual sales are estimated at one million heads of beef and 2,500 million dollars, respectively, and the multi-national *JBS-Friboi,* which leads meat sales in the world with 32,000 billion dollars and slaughters 16 million heads of cattle per year.

The information sources were the statistics contained in web sites of different official organism, both international and national; FAOSTAT, USMEF, and AMEG to document the dynamic of the global market; ABIEC in particular to analyze the production dynamic in Brazil, while for Mexico data was obtained from SIAP-SAGARPA, ANETIF and AMEG. In the case of the information corresponding to the selected business firms, the principal information source was the web sites, as well as different technical and scientific documents which analyze several aspects or moments of these firms. For information relative to profitability and influence of the firms, documents of the qualifying firm Standard &Poor's were consulted. In addition, interviews were made to officials and experts immersed in the

value network, whose analyses and opinions were important for the discussion of the results obtained.

3. **Results**

3.1. Recent context of Brazilian and Mexican production

In 2003, when the United States was still considered the leader in the world beef meat market (Taha and Hahn, 2014), the principal destinations of its exports were Japan, with 31 %, Mexico with 26 %, South Korea with 24 5 and Canada with 10 % (USMEF, 2013). However, in December of 2013 an outbreak of bovine spongiform encephalitis (BSE) was detected, which resulted in a drastic fall of exports, principally those destined for the Asian market (Aragón, 2004). This crisis created a window of opportunity for Latin American exports, which were gaining terrain in countries in which the United States had lost participation due to the restrictions imposed by the Asian nations and Russia. This gave way for the growing irruption of Brazil as world leader in the supply of beef meat (Bisang et al., 2008).

After the fall of U.S. beef meat exports after 2004, a growing tendency of growth of Brazilian exports is observed until 2007, to later show a decline in its tendency, against the recovery of U.S. exports and the sustained growth of Mexican beef meat exports. Thus, by 2011, the United States had recovered leadership in beef meat production, with 18 % of world production, followed by Brazil with 14 %, and Argentina with 3.8 %, while Mexico supplied 3.4 % with 2.1 million tons of carcass meat, all within a context in which exports of meat and byproducts grew at a rate of 53 % per year between 2004 and 2011. Therefore, by 2011 the American continent supplied 30.5 million tons of beef meat to world production, 48 % of the total. This converts the region into the largest global producer of beef, with a very important contribution on the part of countries belonging to Mercosur, to which 20 % of world beef meat production is attributed (FAO, 2013).

In both Brazil and Mexico, firms have become leaders in national production and exports. The case of Brazil refers to the multinational corporation of public capital *JBS-Friboi*, and in Mexico, the national firm of private capital *Su Karne*.

For the emergence and later consolidation of the leadership of these firms, the outbreak in the U.S. of BSE was determinant. With the prohibition of imports of meat from the U.S. in these countries, an opportunity opened for the abovementioned firms to cover the

unsatisfied demand resulting from the absence of U.S. exports. Figure 1 shows the immediate response of Brazilian exports of beef meat, as well as the rise of Mexican exports. The Brazilian supply of beef meat was prepared to respond to this incentive and opportunity, whereas in the case of Mexico, capacities to take advantage of this opportunity had to be developed.

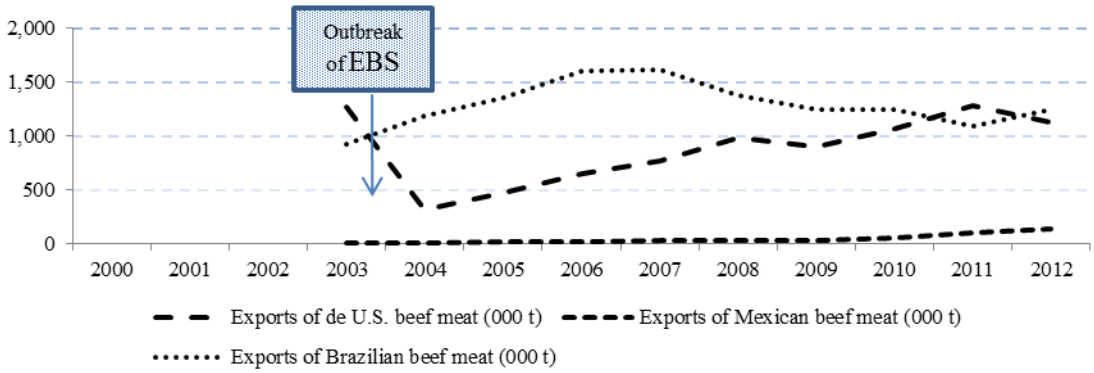

Figure 1: Behavior of beef meat exports from the United States, Brazil and Mexico. Period from 2003 to 2012 (tons) Source: Made by authors with data from US MEF, 2013; ABIEC, 2013; and AMEG

In 2010, Brazil had the largest commercial cattle herd in the world, was the largest exporter, the second largest producer and consumer of beef meat. Its value network of meat cattle alone represented 23 % of the GNP (DeOliveira-Neto et al., 2013). In 2012, the exports of Brazilian beef meat reached a value of 5,766.5 million dollars, while its live cattle exports were calculated at 688.6 million dollars, which means that the cattle exports scarcely reached 11 % of the exports of the processed product. In the same year, the national herd of Brazil consisted of 212 million heads of cattle, which occupied a surface of 171 million hectares of grassland, with a pasture coefficient of 1.2 hectares per head (ABIEC, 2012). In the year of reference, 483,272 head of live cattle were exported. Slaughter reached 40.4 million heads of cattle, with an average carcass yield of 234 kilograms, equivalent to yields that fluctuate between 51 and 55 %.

It is noteworthy that of the total of animals slaughtered, only 4 million heads, , 10 % of the total, were fattened in a stockyard and the other 90 % were pasture fed, which is a relative advantage over countries that produce meat in stockyards.

Total beef meat production in Brazil for 2012 was 9.4 million tons, 82 % of which was destined for the domestic market and the other 18 %, equivalent to 1.69 million tons, was

exported through 20 firms grouped in the Associação Brasileira das Industrias Exportadoras de Carnes (ABIEC). Of the total of exports, 73 % were marketed as natural meat destined to 92 countries, with Russia standing out with 27 %, Egypt with 14 %, and Hong Kong with 11 %. 16 %, that is, 272 million tons, were exported as industrialized meat destined to 106 countries, the European Union with 49 % and the United States with 16 % among the principal destinations. 11 % of the exports corresponded to waste and other products sent to 71 countries, notably 64 % to Hong Kong and 4 % for Angola.

With respect to the Mexican supply, beef meat exports have recently surpassed the value of the traditional exports of live calves (Figure 2). For 2012 the former reached a value of 841.1 million dollars, while the latter were of 609.8 million dollars (AMEG, 2014). This change is very important, as it implies a higher added value in the exports; while the raw material exports represented 42 % of the total exports, the processed products were 58 %. This situation was the result of the emergence of some Mexican firms that managed to innovate the agroindustrial business model of national beef meat, taking advantage of the opportunity which appeared in the international market resulting from the drop in North American exports, as well as the tendency of consumption growth in emerging Asian markets.

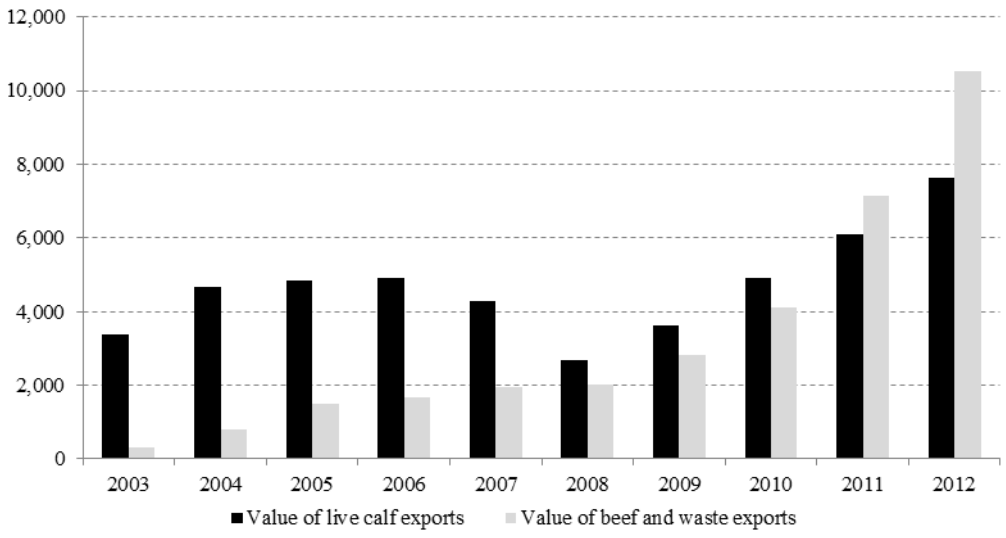

Figure 2: Value of Mexican exports of live calves and of beef meat and waste. Period 2003 to 2012, (millions of pesos). Source: author's work with data of AMEG, 2013.

In Mexico, the beef meat industry supplies 29% of the national livestock production (SIAP_SAGARPA, 2013), which is equivalent to 23 % of the total value of livestock

production, with nearly 61 billion pesos; it generates one million 130 thousand direct paid jobs, three million related jobs and 600 million dollars in currency (COMECARNE, 2013).

Mexican beef meat production occupies 50 % of the national territory, concentrates 32.9 million heads of cattle for breeding, and 2.5 million heads of cattle in 54 thousand stockyards (INEGI, 2013), and exported one million 399 calves, principally to the United States in 2012 (AMEG, 2014) (SIAP_SAGARPA, 2013).

Among the main inputs used for fattening confined animals is yellow corn, a grain which is deficient in Mexico, and of which eight million tons were imported in 2012 (SIAP_SAGARPA, 2014).

Although beef meat loses relative participation in the world meat market, Mexican beef meat production shows a constant increment (Knutson and Westhoff, 2009), but more notorious is the growth rhythm of beef carcass meat, which passed from 4 thousand 766 tons in 2003, to 141 thousand 657 tons in 2012 (SIAP_SAGARPA, 2013). This implies that the sector has developed an important export capacity which was not present in the moment when BSE appeared in the United States. The principal destinations of Mexican beef meat exports are the United States, Japan, China, Hong Kong, Vietnam and Angola, although in 2013 the Mexican exports suffered the blockade by Russia and South Korea, for not having a national traceability system that would make it possible to demonstrate the innocuous origin of the meat (AMEG, 2014).

The dynamism of the Mexican beef meat agroindustry is stimulated by the attractive prices reached by some cuts in the export market and the demand of supermarkets and restaurants, which require safety in the foods they offer. This in turn incentivizes the modernization process of systems of slaughter, boning and packing, by passing from a system characterized by low standards of safety and animal welfare, to one with high standards guaranteed by the certification of the Federal Inspection Type slaughterhouses (FIT). In fact, 2012 is a true watershed for the national meat industry, because this is the first year in modern history that the FIT surpasses the municipal system in the proportion of heads sacrificed in the national context. The proportion of heads of beef cattle sacrificed in municipal slaughters shows a decreasing tendency, while the percentage of heads sacrificed in FIT slaughters has increased from 30 % in 2003 to more than 50 % in 2012 (ANETIF, 2013).

Despite this export dynamism, Mexico still registers a deficit in its commercial balance of beef meat, with a clear tendency to its reduction between 2003 and 2012, until almost disappearing (AMEG, 2014). Another characteristic of Mexico is the coexistence of an

export dynamic with a flow of imports, which is explained because the habits of the consumers vary for different cuts that are obtained from a carcass. For example, in the United States the marbled cuts (with intramuscular fat) are valued more, while in Russia the pulp (meat without fat) is preferred, in Japan the tongue and organ meat, and in Mexico, the ribs (Cano, 2010). In the context of the global market, it is important to find the highest demand for the different cuts of meat. Another necessary condition for participating in the world flows of meat marketing, in addition to quality and safety, is the supply of large volumes that permit economies of scale and reach.

The Mexican beef meat value network is a complex system and loosely integrated: the activities begin with the production of fodder or grains, which are then linked with the livestock production, which in turn supplies (through intermediaries or introducers) calves for export or for fattening (Floriuk, 2010). The supply of calves is also linked to the agroindustrial sector which encompasses the slaughter stage, processing of carcasses, organ meat and by-products, and the packing or sale of meat to commercial chains, retailers or butchers in the domestic market, and cuts for export. The primary producer invests the most time and assumes the greatest risks for generating a marketable product- the weaned calf, but who has the least capacity to capture vale with respect to the total generated throughout the chain (Vidal, 2011). If we add to this situation a context of recurrent droughts, depopulation of wombs, and a rapid expansion of the demand, bringing a situation of scarcity and therefore a drastic elevation in price of weaned calves (which have increased by more than 100 % in real terms between 2010 and 2013), which gives incentive to the export of live calves and makes the activity unattractive for the rest of the links: half finishing and finishing. In this scenario, the firms compete for the raw material with the stockers of calves for export.

On the other hand, of the infrastructure of FIT slaughter tends to gain participation in the national and export market, it is also true that it does not use even half of its installed capacity. In fact, there are 65 Federal Inspection Type slaughterhouses (ANETIF, 2013) which operate an average of 43 % of their installed capacity (SIAP_SAGARPA, 2013), through which the products of 15 export firms are processed and packed. The high slack capacity is explained by the tendency to oversize the dimensions of the FIT slaughterhouses, by not having a national technology that considers the fragmentation of the productive chain, in particular the atomization of the supply of cattle for finishing, and the final points of sale to the consumer, added to the insufficient promotion of the advantages of this system and of tolerance to the municipal system. On the other hand the government has channeled large

subsidies to the development of the FIT infrastructure and has established subsidies to the slaughter in these plants with the hope of increasing their efficiency and improve public health.

3.2. Characterization of the *JBS-Friboi* business model

The Brazilian firm *JBS-Friboi* has 60 years experience and is considered the number one company in the world in beef meat production, with a slaughter capacity of 51,400 heads /day and 16 million heads per year which it markets through 16 brands. It has production platforms and offices in the principal meat producing countries such as Argentina, the United States, Italy, Uruguay, Paraguay, Mexico, Australia and its corporative central in Brazil (Pereira_Peláez, 2012). It is positioned as the number one company in production and exports in Australia. In 2012, the business of *JBS* was distributed as follows: 46 % of its production was beef meat, 21 % chicken meat, 9 % pork meat and 24 % dairy products. It has four business units: *JBS-Friboi* Mercosur, *JBS-Friboi* USA cattle, *JBS-Friboi* USA pork and *JBS-Friboi* USA poultry. Of its total production, it exports 62 %, which is distributed as follows: 23 % to the Asian market, 27 % to Europe, 23 % to Africa, 8 % to Canada, 4 % to Central America and 15 % to the United States. With respect to the profitability of its operations, *JBS* cattle Mercosu reports an EBITDA[1] margin of 11.2 % in June of 2012, and Cattle USA which includes the plants located in Australia and Canada an EBITDA margin of 3.4 % (JBS-Friboi, 2013).

[1]EBITDA Margin: Profit before interests and taxes, depreciations and amortizations.

This firm has brands with international presence and has a diversified business model with respect to the supply of products and markets it attends, as well as a large distribution network that allows it to attend from wholesalers to final clients. This model has consolidated it through mergers or acquisitions of already established firms, for example, the acquisition of several processing plants in Brazil between 1968 and 2002, and the expansion to Argentina between 2004 and 2007. In this period it acquired BF Alimentos, Grupo Friboi, Venado Tuerto and Pontevedra; in 2007 it bought SB Holding, which came to be known as JBS-USA. In 2008 it bought Swift and Company and Smith-Field in the U.S., along with Tasman in Australia. In 2009 it purchased Pilgrims Pride and associates with Bertin S.A. through Swift Australia, and in 2010 signed an agreement with Von Food Group for the purchase of Tatiara Meat Company in Australia. All of the above was carried out to reduce the transaction costs

between countries and improve the products and services offered, which is beneficial from the viewpoint of the consumer, who can find a better supply of products at differentiated prices, also known as added benefits (Méndez_Naya, 2012).

JBS employs 80 thousand people distributed in 50 production plants, of whom 33 work in cattle slaughter (19 in Brazil, six in Argentina, four in the United States and four in Australia; 10 have industrialized meat production units); three plants are oriented to the slaughter of pigs in the United States (capacity of 47,900 heads/day, which places it as third in this market; one sheep slaughtering plant (United States); two producers of Beef Jerky (cooked meat) in Brazil and the United States. Added to this network are cattle distribution and confinement centers in the countries where it operates, with activity in the areas of foods, leather, products for domestic animals, biodiesel, collagen, cans and cleaning products.

In all, it involves 120,000 agricultural and livestock producers as suppliers of the network, with catalogues to determine genetic quality, financing, technical accompaniment and association with producers under several modalities, such as: auto-production of calves; sharecropping in which the producer is provided with cows for breeding and in exchange they receive weaned calves; confinement services are also offered, in which the cattle breeders deposit their calves to the company, which delivers an animal ready for the job, it is weighed and the company buys the kilograms of finished steer, but subtracts the costs of feed, this modality is known as *finished steer or work in the bag.* These methods allow tracking and traceability of the products through the Quality Farms program, with hopes of obtaining the Global Gap certification which would give access to the European market. *JBS-Friboi* also guarantees its suppliers direct and immediate on line payment.

In 2007, *JBS-Friboi* became the first company of the sector to place stock shares in the Brazilian stock exchange. Through Banco JBS, the primary producers have options of financing for diets, and even advanced partial payment. On its WEB site, it has a business simulator which allows the cattle producers to obtain information for making better decisions.

Characterization of the business model of *Su Karne*

The Mexican firm *Su Karne* has 43 years experience and forms part of the business corporation Grupo Viz. In 2012 it processed the equivalent of 1million heads of cattle, achieving a production of 500 thousand tons of beef meat in seven processing plants. It is the principal importer of pork, fish and chicken meat, which are marketed in 16 countries of four continents, as well as the sale of leather, blood flour, meat flour, bait and biofertilizers. This

firm does not offer shares in the stock exchange, and its financing is through credits and the reinvestment of profits.

Su Karne generates nine thousand direct jobs, with an installed slaughter capacity of one million 300 thousand heads of cattle per year. To daily attend their 12 million clients, it has a distribution network comprised of 40 thousand sale points, of which 400 are their own. Given the low degree of genetic specialization and the atomization of the cattle herds in Mexico, *Su Karne* maintains a commercial relationship with 80 thousand agricultural and livestock producers, through 200 stocking centers for the purchase of calves (Gcretailindetail.com, 2011), in which for security reasons, it has opted to pay through electronic transfer which are immediately available. In order to improve their supply of cattle, in 2010 it began operations through a production plant in Nicaragua.

Su Karne has integrated a productive model that begins in the stocking of cattle, elaboration of balanced feed based on grains (it buys national and imported yellow corn), intensive finishing in stockyards with an average of 157 days, laboratories, slaughter, processing, packing, meat distribution and a network of centers for attention to clients. It covers 16% of the domestic market and 75 % of the Mexican beef meat exports, with outstanding destinations including: the United States, Japan, Russia, South Korea, Hong Kong, Vietnam and Angola (Su Karne, 2013). In order to secure the international markets, it has sought the certification of its processes through systems such as Hazard Analysis Critical Control Point System (HACCP) or of the United States Department of Agriculture. With respect to the profitability of the operations, the EBITDA margin for the second trimester of 2012 was 11 % (Standar&poor´s, 2013).

Table 1 shows the comparison between the firms analyzed.

Table 1: Comparison of firms

Variable of analysis	JBS Friboi	*Su Karne*
Years of experience since its founding	60 years*	43 years***
Total sales in 2012	30,000 million dollars*	2,500 million dollars***
Slaughter capacity per year	16 million heads*	1 million heads***
Installed capacity	50 processing plants*	7 processing plants ***
Number of brands in the market	16 brands*	1 brand ***
EBITDA margin (Earnings Before Interests, Taxes, Depreciation and Amortizations) (second trimester 2012)	JBS Bovinos Mercosur=11.2%, JBS USA Bovines (includes Australia and Canada) = 3.4 %**	*Su Karne* = 11 %**
Jobs generated	80,000 jobs*	9,000 jobs***
Number of producers involved in its value network	120,000 primary producers*	80,000 primary producers***
Type of production	Beef, pork, chicken and sheep meat and milk.	Beef meat.***
Supply of products	Beef, pork, chicken and sheep meat and milk.*	Beef, pork, chicken and fish.***
Growth strategy	Acquisitions and mergers of brand in different producing countries, with public Shares in eight countries: Brazil, Argentina, United States, Australia, Italy, Uruguay and Paraguay.*	Self growth in Mexico and Nicaragua, through reinvestment of profits, and financing through investment funds of private capital.***
Market presence	5 continents*	4 continents***
Supply plans	Own production of calves, financing to producers and sharecropping, confinement services or finished steer.*	Purchase of calves for fattening***
Payments to suppliers	Immediate electronic transferences*	Immediate electronic transferences.
Origen of financing for its expansion	Government bank of Brazil, placement of shares in stock exchange, investment funds.*	Institutional financial backing, through the acquisition of private debt: GE Capital, Deutsche Bank, Societé Genérale, Wells Fargo, Inbursa, HSBC, Bancomer, Scotiabank and Rabobank.***
Qualification of its debt as a function of its degree of leverage	BB/stable**	MxA/stable**

*Source: made by authors with data from: *** www.sukarne.com.mx, 2013; ***Standar % Poor's, 2013, in www.standardand poors.com.mx ; and * www.jbs.com.br, 2013. A debt qualified as AAA is considered lower risk, while that off C is considered of higher risk.*

4. Anaylysis of results

4.1. Common aspects in the business models

According to the results found, it can be affirmed that the market tendencies oblige the companies to follow some very similar strategies: integration of processes, diversification of markets and the supply of products, and certification processes.

Integration of processes: to participate in the international meat market, the firms need to concentrate processes that allow them to insure quality and find economies of scale and reach, to offer volumes of products adequate for the infrastructure and logistic which moves in this market, and thus improve their costs of transaction and organization of production. In this sense the firms tend to integrate processes to insure their supply of raw materials, production of balanced feed, finishing of animals, slaughter, packing and distribution of products.

Diversification of markets: the increasingly more competitive environment of the global market of the meat agro-industry obliges firms to diversify markets and the segmentation of products, to place each primary cut or piece of the animal in the market in which it will be most appreciated and therefore, better paid.

Diversification of the supply of products: Beyond the meat market, these firms participate in the animal protein market, thus they have diversified their offer of products to properly take advantage of their logistic and commercial infrastructure, such as pork and chicken meat. However, a difference was found between the two firms compared: *JBS-Friboi* produces pork, sheep and chicken meat, while *Su Karne* imports pork, chicken and fish to Mexico, to later re-export it to other countries.

Certification processes: Another common factor for adequately positioning themselves in the international markets is that they must satisfy the requirements that each country adopts as entrance barriers to their market. Most of them are not tariffs, but related with certification processes that guarantee safety and traceability of the products.

4.2. Different aspects in the business models

The aspects in which the business models differ in the firms studied are no longer the result of the marketing environment, but rather of the strengths and weaknesses, both of the

firms and of their environment of suppliers and complementors in the financing aspect, which in turn determine the growth strategies adapted by each firm.

With respect to suppliers, the multinational *JBS-Friboi* has developed production strategies of calves for its own supply by two means: the breeding of their own herds and the association with producers through sharecropping. It has also implemented the service of confinement, through which the producers deposit their calves for finishing in the stockyards of the company.

This firm has also opted for an international growth strategy which includes acquisitions and mergers with important companies that are already established in the producing countries (Pozzobon, 2008). This makes it possible to benefit from important advantages such as: installed capacities, developed abilities, supply of significant and homogeneous lots of calves in the vicinity of specialized farms (Schejtman, 2004), overcome some non-tariff barriers, such as the case of the health barriers, which are very frequent in this sector (Shwedel and Zorrilla, 2013).

Particularly in Brazil, Argentina, Australia, Uruguay and Paraguay (Millen et al., 2011), who have important grasslands where the cattle can graze (Bell et al., 2011), JBS has found the opportunity to produce at a lower cost compared with grain based cattle production.

In contrast, the Mexican firm *Su Karne* has grown within Mexico through a dense network of collection centers (CNSPBC, 2010) which allows it to buy calves from small cattle farmers spread throughout the national territory, with a heterogeneous supply with respect to genetic quality and physical condition of the animals (Galduf et al., 2011) that is combined with the double purpose, in which the development of the calf is frequently sacrificed for seasonal milk production (Reist et al., 2007). This situation has repercussions on a calf production model that is technologically inefficient and increases costs from the supply of calves. Added to this is the competition for raw material with the stockers of calves for live export to the United States.

With respect to the financing strategy, the role of the Brazilian government bank (Honorato Teixeira et al., 2010), added to the securitization of the capital, were very important to leverage and detonate the explosive growth of *JBS-Friboi.* In the case of *Su Karne*, the fact that it is based on its own resources and recurs basically to financing from the private sector, has been a limitation for its growth, which has recently expanded with a production plant in Nicaragua. It is convenient to point out that due to the perception of risk

prevalent in Mexico of agricultural activities, to lever the growth of a firm such as *Su Karne* through investors in the stock exchange is extremely difficult.

Despite its growth dynamic, size and leadership, the Mexican firm *Su Karne* is at least 15 times smaller with respect to installed capacity, production and total volume of sales than the multinational *JBS-Friboi*, thus the acquisition of new firms in the international market is a considerable challenge for the Mexican firm.

5. Perspectives for the Mexican beef meat industry

Su Karne has managed to develop in Mexico a global and competitive firm in the meat agroindustry, which is very important for national livestock production, as it implies the generation of income from exports and the added value to raw materials, and the generation of jobs directly or indirectly by all of the producers involved in their supply. In addition, it exerts an important traction over the other links of the productive chain, through the capitalization of the sector, the adoption of innovations that permit the modernization of the infrastructure and production practices, promotes formality in the production models and induces the adoption of good practices of production and food safety, which finally benefits consumers. However, there are threats and challenges to face given the relevance of the firm, as it generates externalities that permeate the entire livestock sector of Mexico.

Faced with the sudden appearance of unexpected occurrences, such as BSE in the U.S., countries are not exempt from suffering the blockage of their exports. In this sense, with the concentration of production in only two countries, the model of *Su Karne* is more vulnerable than the diversified production model of *JBS-F*riboi (Christensen and Montgomery, 1981). In this way, the public policy for health protection of the livestock inventories is crucial, therefore each sector should insure the strict application of the health norms and the implementation of public policies oriented to safeguarding the health status of Mexico.

The transnational corporation *JBS-Friboi* has increased its exports from several meat producing countries and seeks new market niches (Schirrmeister and Costa, 2011). In this sense the national and foreign market of *Su Karne* could be snatched by *JBS-Friboi* (Zanine and Silva, 2006). Therefore, the competition in the beef meat value chain will be more intense. Consequently the Mexican packers will have to strengthen their competition strategies, in order to benefit from economies of scale and reach

(Berkshire_Económic_Departament_Corporation, 2006); as well as to consolidate volumes, improve supply, and homogenize quality.

The supply of raw materials is a very important factor which firms should consider in the delineation of their business model. Thus, JBS, through a very aggressive growth strategy has opted for the acquisition of processing plants in countries that are real livestock powers, where it has been able to benefit from comparative advantages such as the availability of raw materials (Schirrmeister and Costa, 2011) like the supply of calves of homogeneous genetic quality and the availability of grasslands in countries of the Mercosur, Australia and the U.S. On the other hand, *Su Karne* has had to implement aggressive strategies for the collection of calves and the importation of grains, key inputs in its business model and in which the country shows low competiveness. The establishment of an agribusiness under these conditions has required the development of specific capacities for administering relationships with a great amount of small suppliers. This could be an important entrance barrier (Chesbrough, 2010) to the Mexican agroindustry on the part of the multinational *JBS-Friboi.*

The supply of calves seems to be a great challenge for the national meat industry, thus the firms should explore options such as the following: implement development strategies of suppliers with medium sized livestock breeders through sharecropping or financing systems; become integrated to calf production through renting pastures or association with cattle breeders; strengthen their collection systems principally in the cattle production zones of the south or southwest of Mexico, where the export market of live calves is less attractive; seek the supply of raw materials in other countries of Central and South America, such as *Su Karne* has done in Nicaragua in the case of cattle, and with the United States in the cases of chicken and pork meat.

Competition for the internal market will be increasingly intense in Mexico, as the supermarkets that are supplied with both national and imported products tend to gain terrain in the preference of the consumers. Therefore, Mexican firms will face competition from other firms, both domestic and foreign. Thus the Mexican packers should strengthen their presence in practically all of the national market, emphasizing the benefits of Mexican meat, as well as the health or safety status of its products.

Additionally, the Mexican firms should design strategies of differentiation of their products and brands, and work within a system that will insure the traceability of national meat products. This will enable the firms to strengthen niches, such as the Japanese market or the markets that require specific certifications such as the Jewish or Moslem communities.

Finally, the Mexican firms can explore the construction of strategic alliances with commercial chains specialized in market niches that privilege good production practices and animal welfare and whose participation is important in the European markets.

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