



How Companies Compete in the Dairy Industry in the Altos de Jalisco Local Strategies of Agribusiness

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Abstract

Jalisco has positioned itself as the main producer of milk in Mexico, with a total production of more than two thousand million three hundred thousand liters produced in the year 2017, with a total value of the production equivalent to almost thirteen thousand million pesos, of agreement with the Agri-Food and Fisheries Information Service [1]. However, it has been observed that the conditions in which this growth has been generated in the volume produced, has not been reflected in the conditions of development of the dairy producers. Therefore, this document seeks to approximate this phenomenon, based on conceptual models of the market, which allows providing elements of analysis that justify some strategies in these businesses, to deal with the situation that exists in the state.

Keywords: Market Structure; Productive Organizations; Strategy

Dairy production in Los Altos de Jalisco in the face of commercial opening

Consequences of having a production model inefficient in comparison with the evolution of the production systems of some developed countries such as the United States, New Zealand, France and Switzerland, currently considered as dairy producers World-wide competitive [2].

While the business model ADOP by the producers in this Jalisco Region, which is mostly Traditional-Unskilled family, seemed to be effective because of the low costs of C and intensive Labor with which they developed, this scheme presented serious complications to the incorporation of Mexico to the Trade Agreement on Tariffs and Trade (GATT) carried out in 1987, and with the signing of the free trade Treaty of I loved Northern Rica (NAFTA) at 1992 [3]. With this background, the foundation for the new productive and commercial organization of the dairy industry in the country was established, which postulated a real threat mainly for small farmers of the Highlands region of Jalisco, significantly compromising its stability in the market.

With regard to this, Vázquez y Aguilar [4], consider that a fact so important as the commercial opening of the it was carried out without a diagnosis and adequate planning with respect to the dairy industry in the country, since it was not took into account. The asymmetries of the existing production models, where in the case of Mexico, and in particular of the Altos de Jalisco, there were large structural disadvantages, such as non-specialized production and the lack of subsidies and incentives for production compared to the producers of the other countries involved.

While one of the objectives of a strategy commercial of such magnitude is to form an economic region with more competitive and integrated markets, which can represent a set of opportunities for companies, it is clear that these results cannot always be achievable by all companies involved mainly due to the restrictions on productive capacities and resources economic with those who count. As Vargas and Guillén mention [5] who consider that the business opportunities can only be used by the company that have the capacity to manage their resources that they have to appropriate them, or if they do not have these capacities, it can be

transformed strategically to turn their weaknesses into strengths and thus to take advantage of the opportunities presented to them, while reducing the possible threats of the market.

In contrast to the above, the Angel [6], mentions that there are traits common among Mexican agri-food companies, including production organizations Lechera, which it has been observed that mostly they do not have business planning mechanisms that allow them to adequately manage the resources and productive processes, as well as reduce the technical and financial risks they have, preventing them from designing strategies that give them access to a Integration into value chains, as well as the Incorporation of technologies for productive efficiency and generate economies of scale.

Considering the foregoing is impressionable analyze the way the milk producers of the Altos de Jalisco they have managed to remain in the market and what possible conditions they have faced given their capacity constraints with which they count, so that the components can be identified what can improve your situation current and achieve to travel to the formation of advantages that will help them to stay on the market a sustainable way.

The competitive production market dairy

According to the Regional Livestock Union of Jalisco, and listen More than 15000 producers of milk Located in the high of Jalisco, this being one of the productive activities most important in the region, thus constituting the largest milk-producing region in the country. The municipalities with the greatest contribution in dairy production are Acatic, Arandas, Encarnación de Díaz, Jalostotitlán, Lagos de Moreno, San Juan de los Lagos, San Julián, San Miguel el Alto and Tepatitlán de Morelos, which together produce the little more than 60 per cent of the state production for the year 2017 according to data from the Agri food and Fisheries Information Service (SIAP-2017).

Due to the significant number of micros, small and medium-sized companies involved in dairy production in the region, it can be consider is what these make up a market structure of competitive, which is why one of the first conditions they face is to be Price takers, making this variable no considered as a factor controllable on an individual basis for every company.

LA number of companies participating in this activity and the condition that marginalize them to be price takers, makes it essential to have associations local for the organization of this activity productive, which it can contribute to improve the conditions of

the companies through the cooperation and the exchange of technical and productive resources, as well as to favor the negotiating capacities in the productive chain to which they are integrated, mainly with the dairy industry, to seek to negotiate a better price of the take.

To Respect Vázquez y Aguilar [4], analyzed the behavior of farmers ' associations in the region and found that the members that are part of these, they consider that the interests of the organization have not been reflected in more favorable results, since they perceive that the negotiating capacity of the coordinators of these associations has been limited to comply only with the requirements of the industry.

This observation defines it Peng [7] words to perspective of the teoría of the agency, where he mentions that the main (company owners) delegate authority to the agents (people who serve as managers of the organization) with the intention that these represent them in the negotiations, however, this relationship favors conflicts between principals and agents, to the extent that the interests of the agents do not fully represent IOS does not what it is one of the main the key factors that are incurred in this situation is the asymmetry of information between the representatives of the association and the producers businessmen.

In particular, Vázquez y Aguilar [4] argue that dairy farmers present a condition that not only limited to account with a sequel inefficient production ema, but also in analyzing the interaction with the industrial companies of dairy in the region, there are at a disadvantage due to its limited negotiating power, despite belonging to a cattle or dairy association.

This fact of disintegration of the dairy producers ' associations had been observed by Cervantes., *et al* [8]. Qualifying this process as an effect of commercial opening, as they mention that this process completion the organizational scheme of the dairy industry national, bringing with it affectations for the dairy production complex of the country, because the domestic dairy market was defined by domestic demand, so the productive chains faced the challenge of reformulating their productive strategies and to remain in the market before the imminent entry of new competitors to the market. As a result of this unflattering organizational model for dairy farmers, a process of weakening began the productive chain of dairy in the region, where small livestock producers were relegated to providing the raw material for the dairy industry, constituting only as a link for the supply of raw material.

All of these observations are reflected in the current production model, where it is made present the situation regarding milk producers, where Jalisco has positioned itself as the main milk producing entity in Mexico, with a total production of more than 2,300,000 (thousands of liters) produced in the year 2017. So, these figures refer only to the volume of production reached, not the specified conditions in which this growth has been generated.

According to the data provided by the SIAP [1], the average annual price per liter of milk paid to producers in the municipalities of this region mentioned above, was \$5.20 in 2014, \$5.12 in 2015, \$5.01 in 2016, and \$5.48 in 2017, figures showing a comport behavior that does not provide favorable expectations for the total income of producers as result of an effect provoked in the rise of the prices of the product, leaving them only as an alternative to seek

to increase the volume of production in order to obtain higher income, such is the case of the increase in the volume of production since 2014 where the total of the produced in these municipalities was of 1,243,510 (Thousands of liters), and for 2017 a volume of 1,409,378 was reached (thousands of liters).

To be milk producers only suppliers of said well, and by counting with the disadvantage in the negotiation of the milk price for being acceptable price, are limited to only manage of optimal way the production costs of the company, which they are basically made up of direct inputs and direct labor, given that the business model is generally little technology intensive. The objective is search widen the gap between the costs and revenue received, so that the profit margin as much as possible and seek in this way to achieve greater economic benefits for the company. As shown in figure 1.

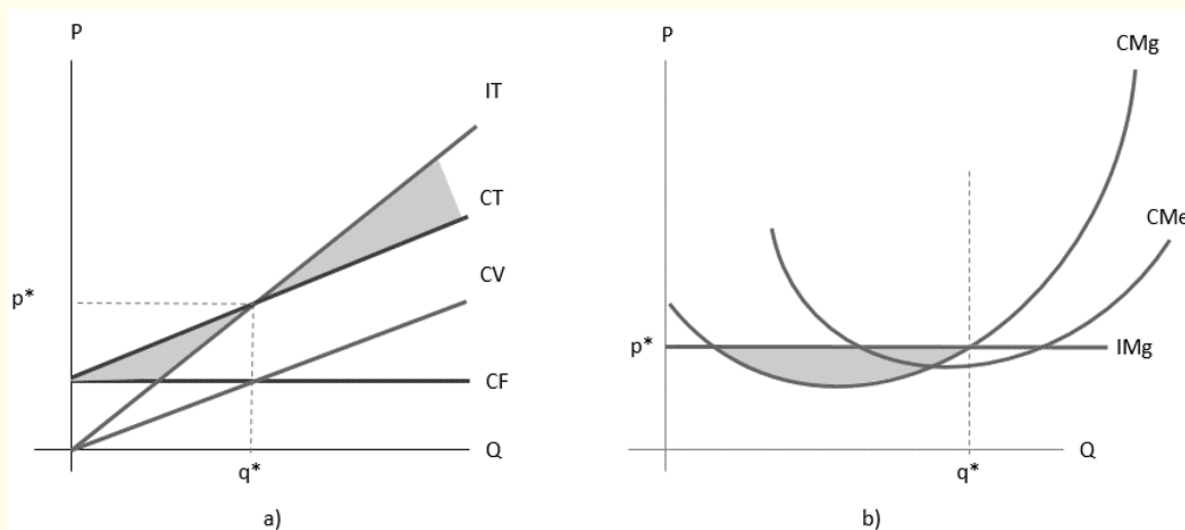


Figure 1: Short-term offer for a company acceptable price.

The section a It shows the relationship between income and costs of the milk-producing company [10]. The section b Shows as the Company maximizes your profits producing the amount Where the Ingres are equal Marginal and marginal cost $P=Img = CMg$ [12].

Some of the strategies that make it possible to achieve a greater economic benefit in the milk-producing companies, focus on the strategic management of the working capital, for example, the appropriate stock annex in insu inventory for production, the access to financing from suppliers to acquire direct inputs with a cost or financial that store to zero, or model of efficient productive process that allows to increase the productivity labor ad for workers, general economies of scale by volumes of purchased supplies and merchandise volumes generated by the company, implement inputs for

production with high technological content and biogenetics that increase. The ability of productive yields and un shared economies scheme of the bines of capital with which it is counted.

The oligopolistic market of the dairy industry

Dairy production is not an activity that is managed independently in the market, but it requires to be integrated into productive chains that allow to transform it into various products and add economic value. Within the productive chain one of the most

important links influencing the behavior of this activity is integrated by the industrial companies of Lacteous, that in the case of Jalisco, the industrial plant is mainly formed by dairy companies Guadalajara, L The purity, Parmalat, Nestlé, 19 Brothers, Lala and Alpura (UGR), 2018).

EL small number of companies located in Los Altos de Jalisco, encourage the Competition between them is constituted as an oligopoly, as Vázquez and Aguilar confirm [4]. Who by studying the interactions between economic agents of the production they identified the presence of an oligopoly formed these big companies QEU dominates the market for dairy industrialization in the region, including a con.

This oligopoly model is only the achievement of a global trend for the dairy market, with confirms Hernández and Del Valle [3]. Who they point out that the new situation is characterized by presenting a new strategic space of global dairy oligopoly, formed by a group of large dairy companies covering a wide range of pipelines, technologies and markets, where Mexico given its open economy, is not considered the exception.

For to analyze whether the productive activity of the dairy industry is characterized as an oligopoly structure or with monopoly power in your case, Ortiz, Lopez, and Ortega [9]. They developed an analysis of the companies that participate in this market. A through the index herfindahl-hirschman, which is measured the concentration of the capacities of operation of the companies in the market, they found that indeed, and jalisco there is an oligopoly in which it is the parastatal company that has the greatest presence in the dairy industry¹.

Because companies competing in an oligopolistic market maximize their profit when the marginal cost is equal to marginal income, as shown in figure 2. The main objective of EStas Organizaciones is to reduce to the maximum the price of the milk that they acquire with the producers, since this being its principal input, a lower cost in the direct raw material, can represent a comparative advantage for an organization industrial, a situation that can be seen in section B of the same figure, where two or more companies compete for the market, considering as a strategic reference the cost structure with the account each.

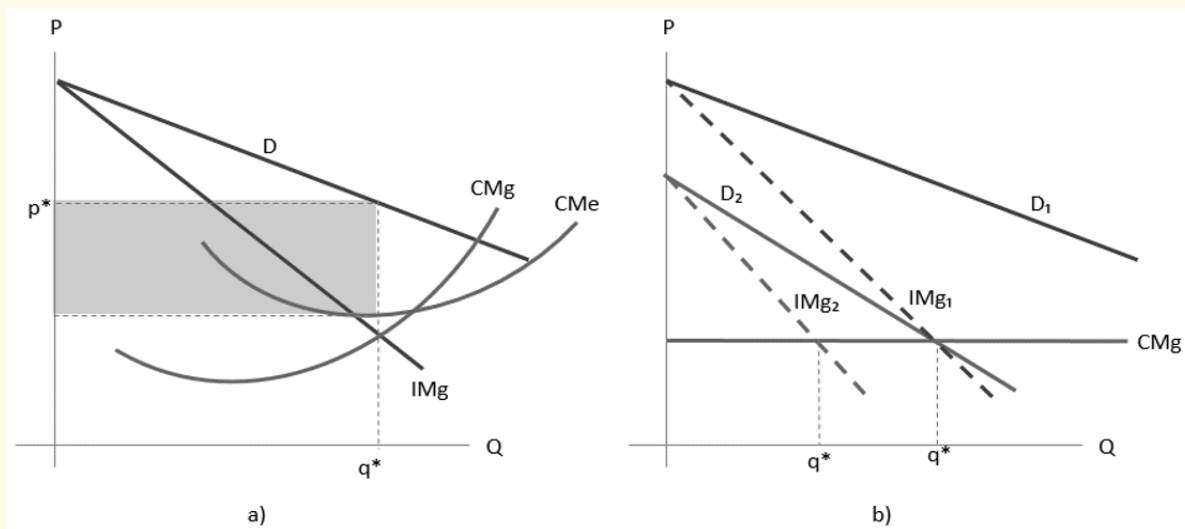


Figure 2: Production decision of an oligopolistic company.

The section a the demand curve facing the company, where the price It is superior to the marginal cost and the level of production in which the company maximizes its profit. The section b Shows The interaction between two companies that produce a homogeneous good and the production decision they are going to have considering the level of production of your competitor [13].

¹The program of Social supply of milk implemented through the parastatal organism called Nacional Distribuidora y Regulatoria, S.A. de C.V. (NADYRSA) which originated in the year 1944, known today as SA. Of C.V., has as a purpose to increase

Subsidized the supply of high quality milk for the population in conditions of food poverty.

Clash of two market structures in the Same Dairy production chain: oligopsonio and the Transfer of benefits Economic

In reviewing the market structure in which milk producers participate, in a competitive market, and industrial dairy companies, in an oligopolistic market, by linking the two models you can identify an interaction existence of oligopsony type, which is characterized by diverse suppliers that in this case the dairy producers make it), but only a few buyers concentrating all the intermediate demand in the production process (represented by industrial companies).

Vázquez y Aguilar [4], corroborate this argument, finding that most producer groups in the highlands of jalisco depend on only a few companies that concentrate marketing of dairy existing, so there is a real asymmetry in terms of negotiating capacities where power is predominantly focused on the dairy industry, thus limiting the capacities of small producers located in the region.

This behavior conceptualizes it peng [7], who mentions that one of the necessary conditions that favor the negotiating power of buyers is that there is only a small number this provides them with the capacity to reduce prices and demand improvements in the quality of the goods acquired.

Figure 3, section a shows that a dairy farmer maximizes his economic benefit at the level of production where the marginal costs are equal to marginal income (equal to the sale price), however, in section b it can be Note that, given the bargaining power of a dairy industrialization company, it has the capacity to reduce the price of the milk it acquires up to the average cost of the dairy producer, (passing from the point of tangency at p^* and the curve dotted IMg of the industrializing company, to the point in p^{**} that crosses with the solid curve of IMg), in such a way that the industrializing company continues acquiring the same amount of product q^* but at a lower price.

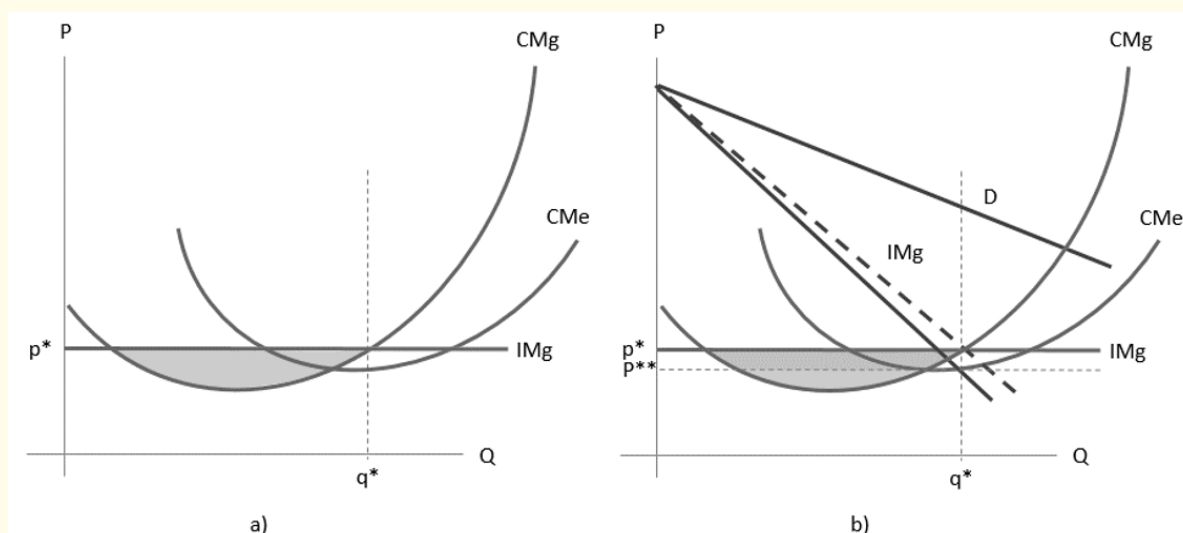


Figure 3: Price fixing in an oligopsony.

The section a Shows maximizing the benefit of a company in perfect competition; The section b It shows the condition to which a producer in perfect competition is subject to a buyer in oligopoly. The relationship End is an oligopsony.

Source: Own Elaboration.

The direct effect on the milk-producing company is a snapshot reduction of its economic benefit, since part of you exceeds transferred to the buyer, either because the industrial company sets a direct price less than the product or because it transfers the payment of transaction costs to the producer, thereby reducing its net income, as stated by Cervantes, Alvarez and Pérez [10].

Peng [7], mentions that one of the causes leading to the supplier (milk producer) a in a situation of disadvantage is that none of the

companies producing of milk dominates the market given a high volume of production and supply of this well therefore to haber a large number of dairy producers, the negotiating power is transferred to the few buyers that you have (industrializing companies).

Although one of the strategies carried out by the milk-producing companies to counteract this effect, is to have associations of producers dairy that allow cope with the conditions to those exposed in the negotiations, éstas have failed to generate the expected results.

In a complementary way, you can see that the effects generated by the interaction itself of the two market structures they are entrenched with the presence of a dairy substitute in the market, milk powder and other derivatives, which represent, as mentioned by Hernández and Del Valle [3], a threat to dairy producers, since Mexico is the main importer of this product for consumption human, which enters at a highly competitive price with respect to nationals, thereby generating an oversupply of this good on the market, without considering the inferior quality that has comparatively with milk fresh obtained from local producers.

Respect Peng [7], mentions that this case can occur mainly in commodities, since when you have a substitute for that good, this can represent a problem for suppliers if the change in the implementation of the substitute symbolizes a cost lower for buyers.

In figure 4, shown How Economic benefit is reduced (π) of milk-producing companies in the face of pressure from buyers to maintain a low price, either by the effect of the bargaining power or by effect of access to a cheaper dairy substitute, happening then of π^* with dotted line, a π^{**} with the solid line. you can even see that the point of equilibrium of the company is reached until it achieves a higher level of production, due to the reduction in the contribution margin to the profit that this condition provides.

The reduction price effect on milk produced by livestock farmers, provides a further impact on the oligopolistic market in which industrial companies compete, such as you can see in the section b of the same figure. how the industrial company, after having acquired a lower price of milk, which translates into lower marginal cost, this gives you a greater comparative advantage to other

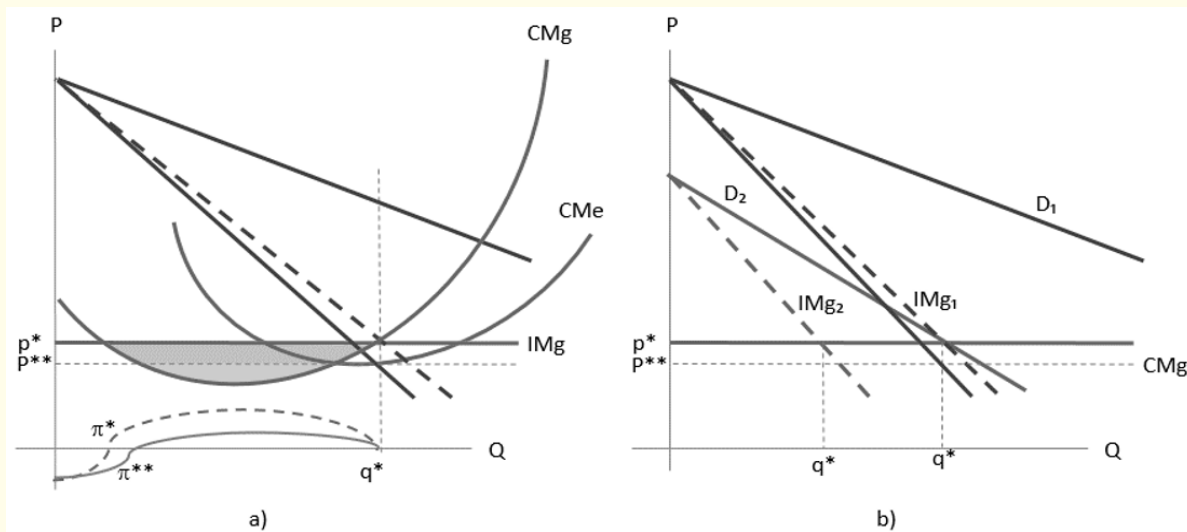


Figure 4: Effects on the reduction of the price of milk.

The section a shows reducing the economic benefit of the milk-producing undertaking; and section b it shows how the price reduction represents a comparative advantage for the industrial company when faced with a oligopolistic market.

Source: Own Elaboration.

industrial companies, because they all face the same demand curve, but each one seeks to maintain a cost function minimum.

The cost advantage an industrializing company gets to Competitors of the OLigopolio in which it is immersed It can be seen in the reduction of the marginal cost each one assumes. In the section b In figure 4, you can see how a company instead of assuming a marginal cost equal to P^* , assumes a marginal cost equal to P^{**} Maintaining the same level of Production Q^* , which allows you to use this advantage to compete for price in the market or in your

case to essentially increase your profit Economic total But With the same level of production q^* .

Strategy Short-term as they allow to boost the development of Dairy farmers

The problem faced by dairy farmers in the region of the Altos de Jalisco can be multidimensional and therefore not have a single solution to solve it but should be carried out actions from different approaches that are not mutually exclusive as mentioned below.

The first strategy identified corresponds to the Transition forward in the productive chain, which is explained by the case Of Study carried out by Espinoza, Arriaga and Boucher (2015), Who Analyzed the value generation in the traditional dairy production chain, taking as shown some companies Dairy producers, collectors and processors of the Central Mexico, Where Identified the Level of Value added that is generated in Each of the stages of the Productive process of cheese, where they found that Dairy producers are those who receive the least percentage of such remnants, being the Processing Companies The greater proportion they acquire.

The results obtained support the viability of the strategy of transition forward in the chain of value, Where the milk-producing company, in addition to producing it, can also carry out processing processes in dairy derivatives, with the aim of capturing a higher proportion of the value added of the final product, which makes producers not only suppliers of milk, but in rivals at the level local in the industries dairy.

Rivera and Alvarez [11], refer to this strategy and mention that small companies dedicated to producing milk derivatives in this region of Los Altos de Jalisco, They are increasing their participation in the local market, since there is a direct integration with the small producers of milk, which Facilitating the exit The impositions and exigencies in the quality control imposed by the industries, allowing them in this way to increase their profit margin.

This situation Peng [6] the dimension saying that the producers they can increase their negotiating power if they are willing and able to enter the industry focused by means of forward integration into the value chain, i.e. suppliers can threaten to become suppliers and rivals of the industry at the same time.

Another strategy Corresponds to the Called Shared economies that can be achieved between a group of milk producing companies, where the objective is to share the use of machinery, production equipment and technology, so that the result of the optimal use of these goods in a shared way, can be seen a reduction in the combined cost function of the producers, rather than when they operate separately each, and thus achieve a greater margin of contribution to the utility.

This is mainly facilitated by companies that are vertically integrated backwards, that is to say that they are not only milk producers, but are also producers of food inputs for livestock, so that by using the assets for the Production in a shared way, the costs of

production of direct inputs can be reduced, and therefore the total costs of production.

Conclusions

The milk-producing companies of the Altos de Jalisco Have with the Opportunity Is business that offers a mercado Dairy Expanding However, in order to be able to appropriate these opportunities, they need to evaluate the feasibility of increasing their organizational, technological and financial capacities, so that they can explore market strategies that will help them to generate value to their Product.

Although, the interaction between the companies that are part of the dairy production system of the region poses important challenges for there to be an integration that favors the development of both the dairy producers and the industrializing companies, only due to the effect of belonging to structures asymmetric market, the main factor that encourages this behavior is the fight for the price of milk. This can be attributed to the fact that milk is a basic commodity easily replaceable, so that, in order to transform this condition, dairy producing companies need to integrate technological processes that add value to this production.

Although the current conditions of the market structure caused by a global trend represent a disadvantage in the traditional business scheme, it is possible to cope with this situation by retaking as a strategy the essence of the products with high Local content and transit in the productive chain to generate value, as the standardized products offered by major industries do not provide this quality in the greatest of cases.

Finally, it is worth mentioning that the problem faced by milk producing companies of the Altos de Jalisco has been valued from different approaches, such as microeconomic and financial analysis, vertical and horizontal integration in the value chain, the link with the companies of the dairy industry, as well as the interactions that result from the formation of associations of producers in the region. However, there is a peculiarity of the regional dairy production system of the Altos de Jalisco that differentiates it from the rest of the country, and it refers to the traditional-family production system, which suggests that it is not only about analyzing the resources and capacities of the company itself, but analyze the qualitative aspects of the decision makers in each company, from a behavioral economics approach, same aspects that can be crucial factors to achieve not only a growth in dairy productivity in the region, but more important, an adequate development of these companies.

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