Production chain of artisanal sugar cane spirit in Paraná State: A Porter taxonomy application

ABSTRACT

The spirit produced in Paraná Coast has relevant recognition in the world scenario since the period of the Portuguese colony. Although it is important, information on this productive chain is little or scarce. In this context and in order to promote the analysis of the production and the trade of this beverage on the Porter taxonomy approach, it was carried out between August and November 2016, a descriptive exploratory study with six managers of alembic places. It was observed that the production of artisanal sugar cane spirit is characterized by the use of its own raw material and a system of spirit production that aims the production of nobler drinks in order to facilitate market insertion. The strategies adopted by the companies and that generated competitive advantage over their competitors, were the quality of the drink and the marketing system, directly to the consumer. The main implications of the activity are the excessive demands of the supervisory institutions and the high taxation practiced by the government. The perspectives of sector on entrepreneurs’ view is that the segment has a favorable growth trend, due to the enduring competitive advantages that these industries have in relation to the current market, and by the perspective of growing the artisanal beverage in the Brazilian and world market. Regarding the Porter taxonomy, the predominant strategies among managers were leadership in total cost (n = 50%) and focus (n = 35%).

KEY WORDS: Strategy, management, sugar cane spirit, alembic place, Michael Porter.
INTRODUCTION

The sugar cane spirit, a drink popularly known as cachaça, is produced from the sugar cane distillation process, which with fermentation converts sugar into alcohol. This beverage has been gaining acceptance in the market in recent decades, showing to be an important product for agribusiness in Brazil.

The international scenario is also promising to the growth of the this beverage consumption, which, although it still represents a small share (only 1% of what is produced in Brazil) compared to other more traditional distillates such as whiskey and vodka, the market points increase for this sector and in this aspect the recognition of this Brazilian drink internationally has been perceptible (VERDI, 2014; ANACLETO et al., 2014).

The sugar cane spirit is the 2nd most consumed alcoholic beverage in Brazil, being the beer the favorite national drink (VERDI, 2014) and in the world scenario it is the 3rd most consumed drink. (EXPO CACHAÇA, 2016).

The production of sugar cane spirit in Brazil is around 1.7 billion liters per year, with approximately five thousand companies, which together generate 500 thousand jobs, it should be pointed out that the production of industrial spirit has remained stable in the last two decades, however the production of artisanal sugar cane spirit, around 300 million liters per year, has shown an average growth of 5% per year (VERDI, 2014; OLIVEIRA et al., 2012; ANACLETO et al., 2013).

According to Espartel et al. (2011) and Anacleto et al. (2016), Paraná State has 400 producers, from these only 40 are engaged in the production of artisanal sugar cane spirit, a significant part of these producers is located in the coastal region of Paraná, where it is the main production system of this drink. Paraná State, especially the coastal region since the colonial period, is the region where artisanal cane sugar spirit is produced and traded. (ANACLETO, et al., 2014).

Nowadays, the region has achieved prominence in the Brazilian scenario and in 2016 three State brands won prizes during the 2nd Cachaça Cúpula, considered the most important competition in this segment (CUPULA DA CACHAÇA MAGAZINE, 2016).

The sugar cane spirits produced in the region have a differentiated flavor due to the climate that influences in the production of sugarcane and also due to the way of the sugar cane spirits are produced in the region, in artisan processes, being the knowledge of the production processes and especially the aging process of the spirit, passed from generation to generation (ANACLETO et al., 2013).

The production of artisanal sugar cane spirit, similarly to the other activities related to agribusiness at Paraná Coast, in a general context, it is described as fragile and lacking of more professional aspects of commercial management that should be adapted to the producers and considered as a strong hindrance to regional development. (ANACLETO et al, 2014).

In this context, little is known about the performance of the managers of the alembic places, as well as about the strategies used in relation to the production and commercialization, which can prospect the activity.
Despite the economic importance of sugar cane spirit to the Paraná Coast since the time that Brazil was a Portugal Colony, the production chain of artisanal cachaça is lacking of information about production and trade, and in this context it is urgent that producers and traders can promote adaptations in their business, since a lot of the changes are occurring in agribusiness, especially in the political, economic and technological spheres, which impose the necessity of insertion in the planning processes of the organizations (ANACLETO et al., 2014).

Increasing the efficiency levels of a production chain is more easily achieved by establishing strategies that meet the interests of several stakeholders involved, such as consumers, producers and wholesalers, in this context, given the lack of information about the production chain of the artisanal industry of sugar cane spirit in Paraná Coast, according to Anacleto et al. (2016), it is urgent to carry out studies that may facilitate the understanding of the scenario of a productive chain, and that can, based on a set of information, subsidize the establishment of new commercial propositions to the sector.

The definition of business strategies becomes essential to the development of any activity, since it is an essential condition for the development to identify the short and long term objectives and the actions to be undertaken, in accordance with its mission and vision of the future that promote the interaction of the company with the environment in a competitive way, in this context the generic strategies are those that determine the business model adopted by a company and the directions of each business (PARNELL; HERSHEY, 2005).

From the twentieth century, it was intensified the search for the organization of business models that considered beyond the momentary performance, the structured questions of long-term planning and the interpellations of the organization with the environment (CAMPBELL-HUNT, 2000; HUNT; ARNETT, 2004; PARNELL; HERSHEY, 2005), so the generic strategy concept emerged that is derived from the fact that there are similarities among several taxonomies of corporate strategies (HUNT; ARNETT, 2004; PARNELL; HERSHEY, 2005).

Among the several strategic taxonomies that have had greater acquiescence in the corporate context, it is highlighted the generic strategy of Porter (2004) that was the most directed to the industry, being then divided in three strategic approaches that the managers can obtain potential success: leadership strategy in the total cost, differentiation and focus.

The essence of the formulation of any of the strategic competitive typologies is to relate a company to its environment, having a notion that not all companies have the same potential (PORTER, 2004), as well as, the strategy is embodied in managers who have reached the top, while they are seeking a set of strategic initiatives to be taken (BURGELMAN et al., 2012).

From the company point of view, when it comes to analyzing its strategic objectives, it needs to assess whether it has people capable of getting where it wants to be (FERNANDES, 2013).

There are only three strategic approaches that managers can achieve potential success in facing competitive forces, total cost leadership, differentiation and focus strategy (PORTER, 2004). What will vary is the degree of competition that, according to Porter (2004), depends on five basic competitive forces that are, entry, substitution threat, bargaining power of buyers, bargaining
power of suppliers and rivalry among current competitors, the set of these forces determine the intensity of competition as well as the profitability, these forces become crucial in the formulation of strategies.

Whether or not the initial success is a result of competence or luck, the role of top management is to articulate an organizational strategy that will help ensure the company survival (BURGELMAN et al., 2012).

For Porter (2004), the key to developing a strategy is to research in depth and analyze the sources of each force, an effective competitive strategy takes an offensive or defensive action in order to create a defensible position against the five competitive forces.

Once it is diagnosed the forces that affect the competitors in an industry and its root causes, the company is in a position to identify its weaknesses and strengths in relation to the industry in order to create a strategy that puts the company in a position of defense, from the strategic position, the crucial conditions are the company position as to the basic causes of each competitive force (PORTER, 2004).

In this context, it was held a study of the sugar cane spirit production chain in Paraná Coast, which specifically aimed to investigate under the context of the strategic taxonomy of Porter the following questions:

i. Characterization of the production and trade of artisanal sugar cane spirit in Paraná Coast.

ii. Identify the strategies adopted by the companies and whether they generate a competitive advantage over their competitors.

iii. Diagnose the implications and perspectives of the sector in the view of the entrepreneurs.

MATERIAL AND METHODS

Exploratory descriptive research was carried out among managers and owners of alembic places in Morretes – Paraná Coast, Brazil, a city in which it stands out because it contains the largest concentration of alembics on the coast, which in percentage terms represents 47% of all artisanal cachaça production of Paraná State.

Initially with the intention of identifying the formal and informal establishments, it was contacted the Morretes City hall.

The study was directed to 19 alembic managers, by receptivity, only 6 agreed in participating.

The script of the interviews was based on a questionnaire with 15 open questions, 11 closed according to Rudio (1980), being initially explained to the interviewees the reasons of the research and after the consent, the process of data collection was started.

In order to determine the socioeconomic profile of the managers, the field research was in accordance with it was proposed by Santos (1999), which includes a physical visit and semi-structured questionnaire.
With the intention of identifying what Porter strategies were used by the managers, which resulted in a competitive advantage for the production and commercialization of sugar cane spirit, a specific questionnaire was organized.

The questionnaire was composed by three alternatives, which directed the classification according to the typology proposed by Porter (total cost leadership, differentiation or focus strategy) and the respondent could choose only one alternative.

Similar to that proposed by Peinado and Fernandes (2012) and Anacleto et al (2016) for other strategic models, if the respondent manager informed the answers in most of the alternatives in a given type, the strategic classification was thus defined in that class.

RESULTS AND DISCUSSION

The production of sugar cane spirit in Paraná Coast was carried out by 19 producers, being the city of Morretes with the largest number of active alembic places (n = 9). But only six managers were predisposed to participate in the study, four of them were male. The average age was 41.6 years old, which in most of the situations evaluated (n = 50%) were in the segment by bond or family inheritance, and the production of sugar cane spirit was the main economic activity in the properties visited.

The production and trade of sugar cane spirit was a recurring activity among the interviewees, and it was observed that most of them (n = 66%) had studied until high school, and it was revealed that their way of managing is derived from their empirical knowledge and experience of daily practice.

The average time in management activities is 12.33 years, which indicates experience in the activity.

In the main context of the adopted strategy, which in the perception of the alembics’ managers generates a competitive advantage in relation to the production of other regions, it is the form of production that results in a drink with not found in other producing regions, linked to the good service, where viral marketing is the focus of attention.

The alembic’s managers (n = 3) with less infrastructure reported that they had regular customers, and this customers in a viral marketing process indicate the products to their family, friends and people that appreciate this kind of drink, in this turn they also contribute to spread the information. So this strategy of direct relationship with the customer, provides loyalty, transforming them into a means of dissemination for their products, making them part of a process popularly called "word of mouth marketing", being classified as an important competitive advantage.

The intermediaries (wholesalers and retailers) were not identified in the sector and in all cases the producers were in charge of the commercialization, which in the perception of them it was a competitive advantage since the profits were not divided with other segments of the production chain.

It was observed that the more structured alembic places, although they still maintain the familiar character in the enterprise, as time goes by they have
broadened the company performance forms to new perspectives, hiring professionals that added value to the company, it was noticed in the alembic places that sought regularization in order to sell in larger quantity, within the standards required by (MAPA) (Ministry of Agriculture, Livestock and Supply – Ministério da Agricultura, Pecuária e Abastecimento), and then expanding trade outside Brazil, and having to comply with the norms and legislation required by the international market, as well as to develop new strategies to satisfy the audience as the needs and requirements of international clients since they are different from those from the internal market.

The totality of the alembics’ managers interviewed in the present study reported that they follow the artisanal sugar cane spirit segment, but all with different strategies regarding the target audience. The artisanal sugar cane spirit brings with it a distinct flavor, seeking an audience that has a desire for differentiation, and something more exquisite than what exists in the traditional market, for this reason the emphasis given to the production process in these places becomes one of the main competitive advantages, when compared to the industrial production of this beverage.

It was reported by the interviewed managers that among the greatest difficulties encountered by them in the segment, the greatest is the lack of specialized labor force (n = 43%), followed by the unfavorable production climate (n = 29%), very strict inspection (n = 43%) and competition with products from other regions that imitate local production (n = 14%).

It was observed in the field research that there was a variation in relation to the production structure among the producers interviewed, some of them work in a small-scale production (n = 60%) and other in large-scale, the flavors differentiation is in the details of the production what is not revealed by the managers.

The production chain of artisanal sugar cane spirit in Paraná Coast presented similarity among the producers that compose it, mainly related to the commercialization channels, which most of them adopt several retail channels as outflow way, being by the totality of the interviewees classified as an important competitive advantage the productive process domain.

According to Porter (2004) typology, in most of the properties visited, managers revealed that the dominant strategy (n = 50%) was the total cost leadership.

The total cost leadership is the strategy that aims to achieve commercial leadership, which can be regional, as in the case of Paraná Coast, through a set of functional policies oriented towards this basic objective, to obtain the low cost in relation to the competitors, it is the central theme of this strategy, although other areas cannot be ignored, the low-cost position can protect the company against the five competitive forces (PORTER, 2004).

The results obtained in this study contrasts with what was described by Peinado ans Fernandes, (2012) and Gimenez et al. (1999) related to the application of this taxonomy to small companies, according to the authors, most small companies would fit into a single strategy type (focus strategy), situation not observed in the commercial propositions among the interviewees in Paraná Coast.
The probable explanation for this situation may lie in the fact that although the artisanal sugar cane spirit from Paraná Coast seems to have quality and peculiar flavors of the region that appeals to consumers' taste, other two issues described in Porter's competitive forces may influence this current trend.

The first factor that may be influencing the adoption of this strategic typology is the strength of competitors, especially products came from other regions, and according to the totality of the respondents it is common to find some flavored industrialized products with the aim of imitating artisanal spirits. This type of product reaches the local market and can influence the decision of a group of consumers.

The second factor that encourages managers to adopt this strategic typology lies in facilitating access to the raw material, since all respondents have their own sugarcane plantations, an essential resource for the production of spirits.

According to Porter (2004), if the company wants reach a low total cost position, the market must use advantageous positions, such as favorable access to raw materials, and this group of producers in Paraná Coast use the access to raw material as a competitive advantage in cost reduction and thus they can compete in the market in conditions of equal price with other regions.

Porter (2004) says that the implementation of a low-cost strategy through low price fixing can cause initial losses to consolidate the company in the market. However, apparently the availability of the raw material, which can be used in manufacturing all year round, cancels this factor and allows the adoption of the strategy.

The company adjusts product prices based on changes in costs, demand and changes in buyers and situations. As the competitive environment changes, they decide when will initiate price changes and when will react to them (KOTLER; ARMSTRONG, 2003).

According to Kotler and Armstrong (2003), the determination price strategies usually change as the product progresses in its life cycle. The introductory stage is particularly challenging. Pricing is difficult because products have demands and costs related to what will be faced in different degrees of competition. Companies often adjust their basic prices based on differences between customers, products and locations.

This situation can also be observed in the production chain of artisanal sugar cane spirit in Paraná Coast, since the second strategy by Porter (2004) taxonomy, most recurring among the interviewees was the focus strategy (n = 35%).

This kind of strategy, according to Porter (2004), consists in directing productive efforts towards a particular buyer group, a segment of the product line or a geographic market. The offer of distinct products is highly desired by the customers, and if the company succeeds in the strategy adopted, this may result in potential above average profit returns for the industry (PORTER, 2004).

However, in order to put this strategy into practice successfully, different resources and skills are required, which also imply different organizational arrangements, control procedures and creative systems. This typology is described by Porter (2004) as the strategy that seeks to offer a product of the highest quality and that tries to meet the needs of a select group of consumers,
where the high value of the product is not the focus, but the satisfaction in obtaining a product with such exclusivity.

The organizations belonging to this typology, are highly specialized in a particular area of operation, in this case it is the production, specifically in what concerns the production of artisanal sugar cane spirit in Paraná Coast the advantage obtained and which is the core of this strategic typology, results from the historical processes of production since the period when Brazil were a Portuguese colony. The results obtained in the production processes that have been passed on from generation to generation have resulted that the alembic places from Paraná Coast could be recognized by the quality of the beverage. The evidence of this assertion is confirmed by Anacleto et al. (2016), who reported that the region has been specialized in the production of noble sugar cane spirits, and according to the authors the production has been very directed to the Premium and Extra Premium beverages, which are those that contain 100% of sugar cane spirit aged in a suitable wooden container for a time not less than 3 years, and highly accepted by the foreign market.

For decades the quality of the spirit produced in Paraná Coast is highlighted, according to Luz (2005) who says that in the last decade, in sensory evaluation with more than 200 mills of the most traditional brands from Paraná Coast, always received great quality scores. According to Torrente (2016) in blind tests of sensorial evaluation of brands from all over Brazil, at the beginning of this decade, again one of the most traditional brands from Paraná Coast won the award for best Brazilian sugar cane spirit and another brand was in the seventh place among all Brazilian brands.

The year of 2016 also confirms the previous reports, since a brand of sugar cane spirit produced in Paraná Coast won the first place, being considered the best in Brazil in 2016, a prize won during the 2nd edition of the Cúpula da Cachaça, considered the most important prize in this segment, in addition to the first place, two other state spirits were highlighted in the event, which is valid until the year 2018. (CÚPULA DA CACHAÇA MAGAZINE, 2016).

Generic strategies may also require different styles of leadership and translate into quite different atmospheres and cultures in companies. Consequently, the ongoing commitment to one of the strategies as a primary

Thus, in the case of the sugar cane spirit production chain, the experience curve is considered a sustainable competitive advantage, which can be classified as a triumph obtained by a company or business sector resulting from strategic decisions, from its acquired competences, the way of acting and from its capacity for innovation, but the competitive advantage is only sustained if the competition has difficulty in imitating or still grant bargaining power with the other segments, a factor observed in the regional production of sugar cane spirit.

The combination of competitive advantages according to the totality of the interviewees allows the sector to be classified as promising, given the potential of expanding markets and increasing consumption of this type of beverage.

**FINAL CONSIDERATIONS**
The production of artisanal sugar cane spirit is characterized by the use of its own raw material in a production system of spirit that seeks the production of more noble drinks to facilitate its insertion in this market.

In a predominant way the strategies adopted by the companies the quality of the beverage was highlighted, which generated a competitive advantage in its system of direct commercialization with the consumer. The most notable implications of the activity are the innumerable demands of regulatory bodies and institutions, and the high tax burdens imposed by the government.

The prospects for this sector are favorable to growth, because of the competitive advantages identified, thus show these enduring advantages that the industry of sugar cane spirit has in the market at the present time, due to the fact that the market strongly points to the expansion of the drink in the national and international market.

Regarding the Porter Taxonomy, a smaller percentage of the managers, presented a tendency to apply the strategy of differentiation, in the production and commercialization of the product. This fact occurs in the analysis of the method of the beverage sale, where the manager does not have an external sales place to his property, even if irregular under the law, is the place where his sales happen. Consumers look for the beverage in the production facilities, due to the attractive flavor provided, it is worth pointing out that for this manager the competitive force that was indicated by the most threatening, was the competition of similar products, the predominant strategies among the managers were the total cost leadership corresponding to (n = 50%) and focus (n = 35%).
Cadeia produtiva de aguardente artesanal no litoral do Paraná: Uma aplicação da taxonomia de Porter

RESUMO

A aguardente produzida no litoral do Paraná tem relevante reconhecimento no cenário mundial desde o período da colônia portuguesa. Apesar de relevante, são poucas ou escassas as informações sobre essa cadeia produtiva. Neste contexto, visando promover a análise da produção e comércio da bebida sobre o enfoque da taxonomia de Porter, realizou-se entre agosto a novembro de 2016, estudo exploratório descritivo, junto a seis gestores de alambiques. Observou-se que a produção de aguardente artesanal, se caracteriza pelo uso da matéria prima própria e de um sistema de produção de aguardente que visa a produção de bebidas mais nobres para facilitar a inserção no mercado. As estratégias adotadas pelas empresas e que geravam vantagem competitiva frente aos seus concorrentes, era a qualidade da bebida, o sistema de comercialização diretamente ao consumidor. As principais implicações da atividade são o excesso de exigências das instituições de fiscalização e a elevada carga de impostos praticada pelo governo. As perspectivas do setor no que se refere a visão dos empreendedores é que o segmento apresenta uma tendência favorável ao crescimento, em função das vantagens competitivas duradouras que as indústrias de aguardente possuem em relação ao mercado atual, e pela perspectiva de crescimento da bebida artesanal no mercado brasileiro e mundial. Relativa a taxonomia de Porter as estratégias predominantes entre os gestores era a de liderança em custo total (n=50%) e de enfoque (n=35%).

PALAVRAS-CHAVE: Estratégia, gestão, aguardente, alambique, Michael Porter.
REFERENCES


