BRAZILIAN SHEEP MEAT SUPPLY CHAIN: PROPOSITION OF MARKETING STRATEGIES TO VALUE CREATION AND TO INCREASE SECTORAL COMPETITIVENESS

CADEIA DE SUPRIMENTO DE CARNE OVINA NO BRASIL: PROPOSTA DE ESTRATÉGIAS DE MARKETING PARA CRIAÇÃO DE VALOR E AUMENTO DA COMPETITIVIDADE SETORIAL

Daniele Eckert Matzembacher[1]
Cynthia Mikaela Chemello Faviero[2]
Marcia Dutra de Barcellos[3]

Abstract

This study aims to understand the current situation of the sheep meat market in the south of Brazil to propose marketing strategies to create value to the supply chain and increase sectorial competitiveness. Thirty-two (32) semi-structured interviews were conducted with retailers, and content analysis was performed through NVivo software.The results indicate a lack of organization of the supply chain stakeholders, mainly in the production and slaughter stages. Thus, to develop the sheep supply chain, a better structure is necessary. Some suggestions are proposed, such as: introducing traceability systems, creating a "regional identity,"; and the demystification of customer's false beliefs.This research advances in the knowledge of the sheep meat market and offers strategies to develop this supply chain relevant in the debate on competitive advantages in the food sector. It also contributes to a theoretical framework with the main explanatory determinants of consumer behavior, providing better tools to understand this supply chain's perceptions.

Keywords: Competitive advantage; Lamb meat; Latin America; Sheep meat supply chain; Meat market; Retail studies.

Resumo

Este estudo tem como objetivo compreender a situação atual do mercado de carne ovina no sul do Brasil a fim de propor estratégias de marketing que criem valor para a cadeia produtiva e aumentem a competitividade setorial.Trinta e duas (32) entrevistas semiestruturadas foram realizadas com varejistas e uma análise de conteúdo ocorreu por meio do software NVivo. Os resultados indicam

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[1] PhD in Administration from the Federal University of Rio Grande do Sul (UFRGS). Associate professor at the Institute for Research and Continuing Education Economics and Business Management, Porto Alegre - RS. Email: daniele_eckert@yahoo.com.br

[2] PhD student in Administration at the Federal University of Rio Grande do Sul (UFRGS). Customer Success at Pmweb, Porto Alegre - RS. Email: cynthia.faviero@gmail.com

[3] PhD in Agribusiness from the Federal University of Rio Grande do Sul (UFRGS). Professor at the Federal University of Rio Grande do Sul (UFRGS), Porto Alegre - RS. E-mail: marcia.barcellos@ea.ufrgs.br

falta de organização dos elos da cadeia, principalmente nas etapas de produção e abate. Assim, para desenvolver a cadeia produtiva de ovinos, é necessária uma melhor estruturação. Para tanto, são feitas algumas sugestões, como: introdução de sistemas de rastreabilidade; a criação de uma identidade regional; e a desmistificação de falsas crenças dos consumidores.Esta pesquisa avança no conhecimento do mercado de carne ovina e oferece estratégias para o desenvolvimento dessa cadeia produtiva, as quais são relevantes no debate sobre vantagens competitivas no setor alimentício. Também contribui com um referencial teórico com os principais determinantes explicativos do comportamento do consumidor, fornecendo ferramentas para melhor compreender as percepções sobre essa cadeia de suprimentos.

Palavras-chave: Vantagem competitiva; Carne de cordeiro; América latina; Cadeia de abastecimento de ovinos; Açougue; Estudos de varejo.

Introduction

Sheep production has been growing worldwide since 2009, with China and Australia as the leading producers. Brazil is currently in the 18th position, producing approximately 17.5 million animals per year. Historically, the peak of Brazilian sheep production occurred in 1992. However, an ongoing crisis affected the sector, which had its worst productive momentum in 2002. The industry is currently growing but has not yet completely resumed the pace before the crisis (FAO, 2017).

In the southern region of Brazil, lamb production is a very traditional activity. Until 2018, Rio Grande do Sul was the Brazilian State with the largest number of animals in the country (IBGE, 2019). It is the State where the production and consumption of this meat is part of the local culture. However, the participation of Rio Grande do Sul in the national sheep meat production is in decline. For example, it decreased from 21.5% of the national output in 2015 to 16% in 2018, when the State lost its position as the leading national producer (IBGE, 2019). The production in Rio Grande do Sul faced a severe crisis, which resulted in a drastic reduction in cattle ranching and permanent destruction of the supply chain. As proposed De-Arriba (2016), this production needs to be stimulated, as the sheep sector is essential for rural development, especially in less-favored areas.

In the last decade, however, the Brazilian economy has been growing and, with the warmed market, emerged a niche that passed to value lamb as exotic meat, and, therefore, emerged opportunities for the chain to seek competitive advantages (MALHEIROS, HÖFLER & PATIAS, 2017; MALHEIROS, 2013; VIANA, REVILLION & SILVEIRA, 2013). There has been an increase in this meat consumption (GONSALVES et al., 2012; VIANA, REVILLION & SILVEIRA, 2013; VIANA & SILVEIRA, 2009). Even so, Brazil still imports lamb meat (MAPA, 2016), demonstrating that the domestic market has space and potential to grow.

To improve its competitive advantage, Brazilian producers ought to develop strategies to enrich the quality of products in the internal market, mainly regarding the physical-chemical and sensorial characteristics of the meat (VIEIRA et al., 2010) but also related to marketing strategies (VIANA, REVILLION & SILVEIRA, 2013). Strategies to enrich products' quality are essential for the chain, necessary for creating value (MALHEIROS, 2013). Also, learning about consumer's preferences and developing strategies to increase perceived value is fundamental to increase the demand for this product (BERNABÉU et al., 2018; GONSALVES et al., 2012; SEPÚLVEDA, MAZA & PARDOS, 2011; VIANA & SILVEIRA, 2009; DE BORTOLI, 2008), as well as value creation (PAL, 2017), particularly in non-traditional lamb-producing countries, as Brazil (ANDRADE et al., 2016).

Some authors defend that the distribution channel and retail stakeholders are responsible for conducting marketing promotions and listening to consumer preferences. These stakeholders, such as supermarkets, butchers, food distributors, meat boutiques, steakhouses, and restaurants, are essential to understanding this market's situation (MACIEL, 2017; VIANA & SILVEIRA, 2009). It is also essential to understand possibilities for value creation (PAL, 2017).

Despite its importance for Brazilian economic scenario, that is not yet a widely explored subject in the academic field (VIANA, REVILLION & SILVEIRA, 2013; VIANA & SILVEIRA, 2009). The few studies that exist were conducted with final consumers (BERNABÉU et al., 2018; ANDRADE et al., 2016; GRACIA & MAZA, 2015; MERCIO, 2013), which results in a limited

perception about how this value chain operates. Also, a lack of studies that allows us to infer strategic alternatives to stimulate the co-operation of productive agents' co-operation and increase sectorial competitiveness (VIANA, REVILLION & SILVEIRA, 2013).

For this reason, this paper focuses on the understanding of the sheep supply chain and has, as the main objective, to understand the current situation of the sheep meat market in the south of Brazil to propose marketing strategies to create value to the supply chain **to increase sectoral competitiveness**. For that, there were also defined specific objectives: 1) to understand the purchase behavior of lamb meat of the retail channels; 2) to identify what are the gaps of this specific chain; 3) to identify the perception of quality and compliance of lamb meat, and 4) to propose marketing strategies to create value to this supply chain.

Theoretical Background

Sheep meat production and commercialization is an important agribusiness activity in Brazil. Its production extends across the national territory, being a source of income and subsistence capable of generating economic growth and development in all Brazilian regions (ALVES *et al.*, 2014). The sheep species was one of the first to be domesticated by man to produce wool, meat, and milk. In the State of Rio Grande do Sul (south of Brazil), sheep farming was established as an economic activity in the 20th century. Sheep meat production in Brazil has always been a symbol of underdevelopment as it was executed mainly in marginal areas. However, agribusiness is beginning to perceive this activity as an economical, viable, and sustainable alternative. The good receptivity justifies the investments made in sheep meat production that sheep meat has had in sophisticated segments such as haute cuisine. It is considered exotic meat nowadays all over the world, and recently in Brazil. Several opportunities have been identified as attractive for expanding the sheep meat market (DECKER, FERNANDES, & GOMES, 2016).

Taking advantage of existing opportunities presupposes the definition of effective competitive strategies by actors in the sheep meat production supply chain, especially about options for low-cost production, quality improvement, or for offering uniqueness to consumers (DECKER, FERNANDES, & GOMES, 2016). It is necessary to improve market strategies related to the final product's quantity and quality, whether through the professionalization of sheep farmers, the industry, better organization of the supply chain, or changing consumer habits (ALVES *et al.*, 2014).

Marketing strategies to create value to the supply chain and increase sectorial competitiveness are inextricably linked to regional development. It involves the improvement of factors such as job creation and the development of markets (NOGUEIRA-FILHO & NOGUEIRA, 2000). Also, it is related to an increase in research aimed at animal production and processing of their products, the increase in the level of organization of producers, the increase in absorption of new technologies, the greater performance of supply chain agents since production to retail, and the increase in demand for products derived from sheep meat (VIANA, REVILLION & SILVEIRA, 2013). The better the coordination of the supply chain components in terms of market strategies for creating value, the lower the costs of each supply chain agent, the faster the adaptation to changes. There will be fewer conflicts between customers and suppliers (Batalha, 2001), which is reflected in value creation and increased sectoral competitiveness.

3 Method

Based on the literature (RAIMUNDO & BATALHA, 2015; MERCIO, 2013; BORTOLLI, 2008), previous works (BARCELLOS, 2002), and discussions performed with specialists, it was developed as a theoretical, analytical model, presented below, with the main explanatory determinants of meat distribution channels behavior and aims to help the understanding of the perceptions about lamb's supply chain (Table 1).

Table 1: Analytical Framework to understand the determinants of the behavior of meat distribution channels

Blocks and Phases		Categories of analysis
Block 1: The process of buying lamb meat from the different agents of the distribution channel.	Phase 1: Recognition of need	1. Responsible for purchasing.
		2. Routine and frequency of purchases.
		3. Suppliers.
		4. Purchasing criteria.
		5. Motivation.
		6. Difficulties.
	Phase 2: Information search	7. Type and characteristics of purchased products/cuts.
		8. Information sought for purchase.
		9. Origin of information.
		10. Availability of information.
		11. Trust in the information.
	Phase 3: Evaluation of alternatives	12. Differences between lamb meat and other meats.
		13. Advantages of lamb meat in relation to other meats.
		14. Disadvantages of lamb meat in relation to other meats.
	Phase 4: Buying decision	15. Determinants of purchase.
		16. Important Attributes.
	Phase 5: Post-Purchase Evaluation	17. Evaluation of post-purchase customers.
		18. Company actions from the evaluations.
		19. Relationship with suppliers to improve processes and products.
Block 2: Evaluation of lamb meat produced in the Region.		20. Purchase volumes.
		21. Price variation throughout the year.
		22. Knowledge about regional meat.
		23. Opinion and interest in lamb meat produced in the region.
Block 3: Retail's vision of the process for the purchase of lamb meat by final consumers.		24. Customers' consumption habits.
		25. Attributes valued by customers.
		26. Acceptance of the lamb from the Rio Grande do Sul versus others.
		27. Informal meat market, origin, and inspection.
		28. Points of sale in the city.
		29. Innovative products.
Block 4: Situation of the supply chain and Future Perspectives.		30. What's missing for the chain?
		31. Future Prospects and Market Potential.

Source: developed by the authors

Based on this Framework, qualitative research was carried out. The data were collected by in-deepth interviews with retail channels that work with this specific kind of meat. There were three (03) different cities of Rio Grande do Sul (RS) to conduct the research, aiming to have a complete picture of the sheep meat chain situation in this State of Brazil, considering that the State has very distinguished cultures.

Thirty-two (32) companies were interviewed in the cities of Porto Alegre (capital of the State), Santa Maria (more traditional region), and Caxias do Sul (first Italian and German colonies in RS). There were considered retail stores (22), restaurants (09), and other kinds of organizations

(01). The data was collected between April and May of 2016 with respondents directly connected to the buying process and contacted the final consumer - mostly the business' owners or managers.

The interviews were conducted with a semi-structured questionnaire with open-ended questions. To improve the questionary that would be used, the original script was discussed among a group of researchers in the Business School of UFRGS (research group From Production to Consumption). The first interview was conducted as a "pilot version" to empirically verify the questionnaire's validation after being evaluated by the research group. There was no need to change the questionnaire. Each establishment was interviewed only once, using the same questionnaire. The conversations were recorded and transcribed, totaling a total of 20 hours of recordings. Interviewees were guaranteed their anonymity, so fictitious names were adopted in the presentation of the results.

Table 2: Interviewed establishments

Establishment	Type	Interviewee	City	Duration (min)
A	Retail Store	Owner	Porto Alegre	00:33
B	Retail Store	Owner	Porto Alegre	01:15
C	Retail Store	Owner	Porto Alegre	00:35
D	Retail Store	Owner	Porto Alegre	00:50
E	Retail Store	Owner	Porto Alegre	01:45
F	Retail Store	Owner	Porto Alegre	01:02
G	Retail Store	Owner	Porto Alegre	00:20
H	Retail Store	Owner	Porto Alegre	00:28
I	Retail Store	Owner	Porto Alegre	00:25
J	Retail Store	Manager	Porto Alegre	00:30
K	Restaurant	Owner	Porto Alegre	00:48
L	Restaurant	Owner	Porto Alegre	01:00
M	Restaurant	Manager	Porto Alegre	00:33
N	Retail Store	Owner	Santa Maria	01:04
O	Retail Store	Owner	Santa Maria	00:48
P	Retail Store	Owner	Santa Maria	00:45
Q	Retail Store	Owner	Santa Maria	00:29
R	Restaurant	Manager	Santa Maria	00:14
S	Restaurant	Owner	Santa Maria	00:31
T	Restaurant	Owner	Santa Maria	00:13
U	Restaurant	Nutritionist	Santa Maria	00:27
V	Others	Lieutenant	Santa Maria	00:47
X	Retail Store	Owner	Caxias do Sul	00:37
Y	Retail Store	Owner	Caxias do Sul	00:25
Z	Retail Store	Owner	Caxias do Sul	00:15
AA	Retail Store	Owner	Caxias do Sul	00:36
AB	Retail Store	Owner	Caxias do Sul	00:34
AC	Retail Store	Owner	Caxias do Sul	00:31
AD	Retail Store	Owner	Caxias do Sul	00:27
AE	Retail Store	Butcher	Caxias do Sul	00:27
AF	Restaurant	Owner	Caxias do Sul	00:16
AG	Restaurant	Owner	Caxias do Sul	00:17

The technique of data analysis used was the content analysis, performed through Nvivo software. After mapping the transcripts, the information related to each category was analyzed. A cross-case analysis was performed, searching for general conclusions; the particularities of the different types of establishments (restaurants versus retailer stores) were also evidenced, considering the chain's main gaps perceived by each channel.

Results and Discussion

The results were performed based on the four specific objects presented in the introduction of this paper. Also, the analytical framework developed was used to guide the understanding of the proposed objectives. After presenting the result in relation to the four specific objects, subsection 4.5 discusses the paper's contributions in detail.

Purchase Process of Lamb's Meat of The Retail Channels

The process of buying the meat through the lamb distribution channels was divided into five main phases, which are described below.

Phase 1 - Recognition of need

The purchases are carried out mainly by the owners of the establishments. One of the differences noticed was that in the restaurants, beyond the owner, other employees can also be responsible for the purchase, such as the managers who run the restaurant or nutritionists.

The processes of buying are regular and occur weekly, with a few exceptions. Most retail stores maintain a stock of the product and, according to the demand, place orders to keep it at the ideal level. Some buy in larger quantities and stock for later sale. Others schedule orders in advance in times of increased demand, so the routine varies according to the nature of the business and customer demand. Restaurants in all cities usually order sheep meat weekly.

Many of the establishments interviewed present well-defined criteria that guide the process of buying lamb meat. Both retail stores and restaurants seek to follow the demand, always attentive to the movement registered and/or planned for the period in question. Also, quality and price emerge as key criteria in the purchase decision. The motivations that lead establishments to offer lamb meat are mainly related to consumers' demand.

The establishments interviewed generally buy sheep meat carcasses and some cuts, preferring the animal at a younger age - the lamb. Regarding the packaging, restaurants demonstrate a common behavior by buying different amounts, which they receive frozen vacuum packed. Meat houses usually buy fresh carcasses and make the cuts from their carcasses.

Phase 2 - Search of Information

Regarding information, respondents were more interested in seeking data about the supplier than their buying details. In general, the little information obtained comes from the seller and the packaging of the products. Respondents mentioned their own experience and market knowledge as the main source of information. The exact age of the animal when slaughtered was also a point cited by some establishments. The origin, treatment, vaccination, feeding, and region from which it comes were also interesting to know, mainly because of the need that the channels feel about telling the final consumer the history of that meat, adding value to the product and "justifying" the price.

Overall, respondents have shown a firm reliance on the information they receive, even though they usually check the food when they receive it - a moment in which they highlight their experience and knowledge of the market as being the most important attributes to identify the quality of the product received. They report a good relationship with suppliers, in which there is an established trust. A study conducted by Michalski, Montes & Narasimhan (2019) identified that although trust is one of the key requirements of supply chain relationships in any environment, the interactions of key supply chain management elements drive members to better performance are more complex and non-linear. Other aspects need to be included, such as information.

As found in previous studies, information is essential since final consumers also make their purchasing decisions based on the received data, which are important attributes considered quality parameters. These findings were consistent with other authors, such as Sepúlveda, Maza & Pardos (2011) and Vieira *et al.* (2010). They found that consumers and producers agreed that animals' feeding is one factor that most influences the sensory quality of meat. As the sensory quality of meat is related to consumer behavior (Gonsalves *et al.*, 2012), it is essential to make such information available.

Information quality impact in supply chain performance (IN et al., 2019). Myrelid & Jonsson (2019) explored how different determinants impact specific information quality dimensions in dyadic supply chain relationships. Their findings show how inter-organizational collaboration, intra-organizational process support, and composite information sharing directly affect relevance, accessibility, credibility, understandability, and operation ease. In this sense, a possible alternative is to think about traceability information's insertion along the supply chain. Traceability can be defined as the information necessary to describe the product history and its journey from the farmer to the consumer's plate (OPARA, 2003; WILSON & CLARKE, 1998). It is essential to provide food safety and quality information (JIN & ZHOU, 2014). Moreover, besides the importance of providing the information for the purchase decision, the lack of standardization reported by some

establishments in the previous phase could be solved partiality with accurate information provided by a traceability system.

Phase 3 - Evaluation of alternatives

It emerged as a common point among the respondents that lamb meat is seen as a complement in the market, whose sales volume is smaller than other meats: it is sold for eventual consumption. Even though it has the potential to grow, there is a consensus that the market will never reach the same level of sales of beef meat, which is a conclusion that goes in the same direction as the findings of Vieira *et al.* (2010), who also identified that the consumption of lamb meat by Brazilians is lower in comparison to other meat, such as beef, pork, and poultry.

In general, it has been reported by the establishments that having sheep meat to sell provides a different product to customer demand. Also emerged commonly, especially among restaurants, the distinctive flavor has an advantage, once this type of meat is classified as "exotic" or "premium." Andrade *et al.* (2016) also defined sheep meat as being exotic.

There was a significant variation in the responses of what is understood as a disadvantage of lamb meat by the interviewees. However, it is possible to point out a common point: the price, which significantly limits consumption, having a lower sales volume than other meats because of their flavor. Neethling, Hoffman, & Muller (2016) indicate that the meat's taste is influenced by race, age, gender, and the animal's diet. The delivery of a sheep as lamb can result in the consumer perceiving a stronger flavor, approaching the establishments' reports. This generates a loss of sales, less loyalty, and a lack of structure and standardization of the supply chain regarding product delivery and information.

Phase 4 - Purchase Decision

When deciding the purchase, a common and well-quoted point in all three cities is that the product's quality is a significant determinant of the purchase, usually related to fat finishing, size, and weight. The price exerts less influence, being subordinated to the quest for quality, as long as it is within a reasonable value range. Our results are in line with Mercio (2013).

The determinants of the purchase are price, quality, quantity of fat (most of which indicated preferring a not too large layer of fat and uniform fat), size, weight (responses varying from 12 to 18 kg maximum), good conservation, feeding of the animal (because it influences much in the flavor of the meat), product standardized, well slaughtered and well transported. Some actors even pointed out that if the palette is too large, the consumer rates as originating from an older animal.

In the same way that Dias *et al*. (2008) and Mercio (2013) found, in our results, the concentration of fat present in the meat indicates meat quality related to the best taste and softness. Moreover, the results showed the importance of meat tenderness. This is an important attribute since Pinheiro et al. (2009) indicate that the meat's softness is an essential parameter of quality. Therefore, softer meats present a greater commercial value.

The price is an attribute also considered important but not decisive on the buying process. As we found in this study, Raimundo & Batalha (2015) identified a meat consumer profile that they call "rigorous." The price factor little influences this group. It is very attentive to the products' organoleptic characteristics and appearance and the presence of quality seals. In this way, these consumers could be widely sensitized by investments in new packaging, certified as origin, quality, organic production, animal welfare, and certifications of good practices by the establishments.

Phase 5 - Post-purchase evaluation

In general, few customers of these establishments evaluate the post-purchase lamb meat. When the reports are positive, no significant points were mentioned in the evaluations, showing only general satisfaction with the product. When the establishments receive a negative review on the lamb meat, they generally pass the information directly to the supplier. Suppliers often investigate the issue and pass information to establishments about what might have happened. Moreover, regarding the relationship with suppliers to improve processes and products, no action can be identified.

The great majority of the establishments report the problems directly to their suppliers, making it possible to verify some specific actions related to the evaluations received. Restaurant K

reports that it first checks whether the problem is internal or with the supplier. He talks about some issues they had with paletas gaúchas[4] in the past, reporting what happened to his former supplier, but he was unwilling to verify the problem's origin. Faced with these problems with gaucho products, he decided to change suppliers, buying imported products. Restaurant L reports that, due to lack of chain integration, it can not report existing problems, as it does not have the traceability of the products to identify their origin. Retailer C reports that they have already traded suppliers due to ratings related to the meat's weight and appearance.

In this sense, traceability has been indicated in the literature as an important element since consumers place greater importance on the origin of the meat as a quality aspect (see SEPÚLVEDA, MAZA & PARDOS, 2011). Considering that in the case of lamb, the harshest meat was associated with older animals (SILVA SOBRINHO, 2005), traceability systems help establishments and consumers to be informed about which meat they are receiving and also help to identify cases in which they receive sheep rather than lamb, associated with establishments as one of the causes of rejection of this meat mainly by women.

Identification of the main Gaps of the Supply Chain

The main shortcomings of the production chain that were found can be divided into three main parts: (1) difficulties with suppliers; (2) lack of product advertising and consumer information; and (3) government issues.

Among the issues related to suppliers, the main complaints are related to the need for greater integration between the supply chain stakeholders. Also, there are few suppliers in the market, especially those specializing in lambs only. Many find it difficult to maintain a steady supply of products during all year among the existing suppliers.

It is perceived a great difficulty in the animals' slaughter, which is considered by the establishment's producers the weakest stakeholder in the chain. The strict inspection and the necessary processes for the animal's slaughter cause few abattoirs in the State, making the logistics of the establishments that raise the animals difficult. This logistics is time consuming and impairs the competitiveness of establishments. Thus, for the lamb meat chain to develop and grow in the State, it is believed that a better structure of the slaughter is necessary to improve the quality of products and increase the competitiveness of the supply chain.

In the question about product disclosure and consumer information, the interviewees stressed the need to "demystify" that sheep meat has a strong smell and/or taste since there is significant resistance to consumption due to this belief. The availability of information about the breed and age of the animal, among others, could help in understanding the characteristics of the product, making the consumer better informed about the product. It would also be interesting to divulge other forms of preparation besides the barbecue, to inform about the benefits of the consumption of sheep meat and uses for different cuts.

Regarding governmental issues, it was mentioned the need for public policies to encourage sheep farming and combat the considerable informality in slaughter, which hinders the development of the chain and consumers' perception of value.

Other problems cited were the difficulty found in the loss of sheep rearing space for soybean plantations since the profitability of soybeans in the short term is higher than that of sheep. Also, it was mentioned that there is a lack of professionalization of the chain, from the producer, through the refrigerator, and incorporating the butchers. This little professionalization refers to technical and administrative issues, such as organizing the business to generate revenues more than the expenses, which impacts the whole chain. Finally, there was also criticism of the lack of concern about product quality in the chain. Recently, Malheiros, Höfler & Patias (2017) and Viana, Revillion & Silveira (2013) found similar results once they identified deficiencies of flow between the lamb chain stakeholders. However, some studies have found different results. For example, Porto, Salum & Alves (2013) identified that this productive chain is well structured in the commercialization in some regions of the Brazilian northeast.

Perception of Quality and Compliance of the Lamb meat

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[4] Gaúcho(a) is a term referring to products or even people that are from Rio Grande do Sul.

There is specific trouble in maintaining the quality standards concerning the size of pieces, amount of fat, and the type of meat received to be always lamb. That results in a significant variation of the characteristics of the product throughout the year. Therefore, there is a need to increase product supply and quality.

In this sense, traceability appears as an alternative to a part of the problem since it informs the product's characteristics from its origin and allows greater transparency. To the other part of the problem, perhaps an option to maintain the pattern throughout the year is the alternative of confinement of lamb, indicated by Poli *et al.* (2008) and by Vieira *et al*. (2010) as capable of providing better nutritional quality, besides quality lamb meat in the off-season.

Viana, Revillion & Silveira (2013) and De Bortoli (2008) identified that the heterogeneity of lamb products makes it difficult to coordinate efforts for the sector's growth, so it is critical. In the case analyzed, these problems are not always passed along the chain, or often corrective measures are not taken for the situations encountered. Several respondents find it easier to switch providers than to seek joint development work. Improvements in this regard are aligned with Silva Sobrinho *et al*. (2015) suggestions about the importance of care with the techniques of creation in the lamb supply chain, aiming for greater productivity and quality, serving a more demanding consumer market.

Value Creation on the Lamb's Supply Chain

To develop value creation to the chain as a whole, the ideal scenario would be to strengthen the ties between suppliers and their customers (retailers and restaurants) so that when problems are perceived, there is feedback on the issue, showing the suppliers' willingness to provide information, exchange the product when necessary - a joint work in systems of quality improvement, an effective partnership between the stakeholders of the supply chain. The situation perceived in this study is still very far from this.

Issues related to the marketing of lamb meat have also been mentioned, emphasizing the need for integrated actions in the whole chain, suggesting that this starts from some association of race, in the molds of what was done with Angus beef. One of the restaurants interviewed also commented that lamb meat does not have traceability, whereas bovine has already, and that in the future, this type of information system can be important.

Most of the interviewees consider that there are positive prospects for the lamb meat market, noting an increase in demand from their customers and product supply from their suppliers. However, they realize that much work remains to be done to ensure that these positive perspectives come to fruition. The vast majority believe that the lamb meat market will continue to grow, as has been the case in recent years. However, this growth will only be achieved when some of the above problems are solved.

Another important point is that this problem faced by the lamb supply chain is not new, since Viana, Revillion & Silveira (2013) and Viana and Silveira (2009) pointed out that the productive seasonality of the activity, the lack of a constant market, the demand for a regular supply of animals and the search for young animals by the slaughterhouses are difficulties faced by the producers in the marketing of animals for slaughter via the market. Although previously identified, the problem lacks treatment and prevents the chain from adding value to products.

Paper Contributions

Our findings reinforce previous studies such as Gonsalves *et al*. (2012) and Viana & Silveira (2009) concerning the importance of learning about consumer preferences and developing strategies to increase perceived value to increase meat products' demand. Our paper's contributions advance these studies by identifying that actions aimed at increasing the chain's competitiveness should pay attention to the quality of products, the diversification of cuts, and marketing strategies.

A framework was developed to better organize the whole supply chain's findings, presented in Figure 1, with the drivers and barriers to the four most relevant stakeholders: producers, slaughterhouses, retail channels, and consumers. The mentioned Framework is presented below.

Figure 1 - Framework of the drivers and barriers of the chain
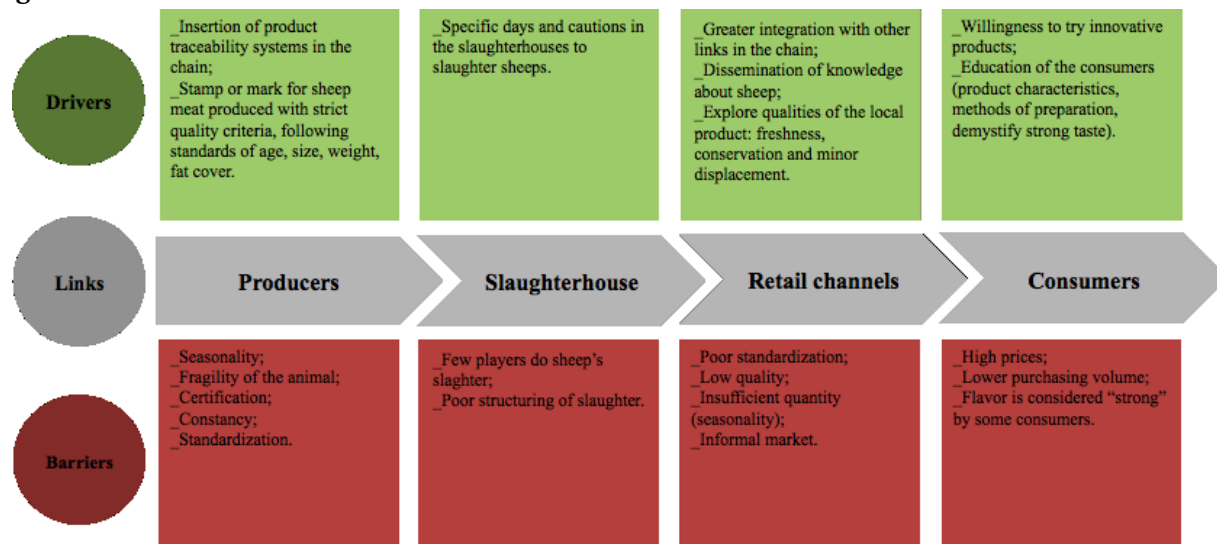
Source: developed by the authors

It was noticed that one of the decisive criteria in the purchase of lamb among establishments is the quality of the product, regardless of the final price. There is a prevalence in the search for a product that follows quality standards mainly in terms of fat, size, and weight and whether they prefer suppliers that meet demand regularly during all months of the year. Based on this demand for quality, it is worth mentioning that there is an opportunity to market products with higher added value. In other words, a better structure of the lamb meat chain, with constant supply, standard, and quality products, even if they present a high price, leads to a greater loyalty of the establishments that buy the product.

The chain of meat quality is long and certainly, in its course, is influenced by factors that must be controlled to offer a quality product. In this sense, it is identified the possibility of introducing traceability systems of the product in the supply chain, informing the origin of the animal, its race, feeding, treatments received, classification of lamb (if it is sheep, lamb, or capon), and the age at the date of slaughter. The availability of this information represents an aggregation of value to the products.

A very prominent point refers to the prejudice on the part of the consumers about the taste of the lamb meat, often coming from ignorance or negative experiences. It is believed that extensive disclosure about the characteristics of the product, its correct mode of preparation, and the types of animals that exist, which may help to demystify false perceptions about lamb meat is necessary. A job of educating the establishments to pass this information to their customers can help at the time of purchase and post-purchase.

This customer education can help to improve the value perception of lamb meat. When customers do not understand what a quality product is, they may question the product's final price. Moreover, ignorance about the product causes the price charged in the informal market to be compared with that of formal establishments since the consumer considers that there is no difference between the meat of these two markets. One possibility would be the work with tastings that allow the adequacy of the product's perception and the provision of recipes for kitchen chefs and teaching preparation alternatives. Also, a divulgation could be made about alternative uses for the various cuts of lamb meat that the client does not always value. Providing information and suggesting possibilities for using the product can change the current scenario, so parts that are not always consumed can be exploited and become profitable to the chain.

One point worth mentioning is that both establishments and end customers seem not to care much about the origin of meat, the most important factor being the quality of the product. Local production and consumption should be encouraged. Far beyond the market, one of the advantages in this sense that can be exploited is that a product originated from a nearby region is generally fresher and has a better state of preservation because it does not have to be displaced for long distances. Imported meats, on the other hand, are purchased frozen. Once some markets have restrictions on frozen products since these are often considered "old" and can not be prepared immediately, the refrigerated product of Rio Grande do Sul has a wide advantage in this respect.

Marketing strategies are also important to increase the lamb supply chain's competitiveness (VIANA & SILVEIRA, 2009). In this way, it does not seem to be a "regional identity" of lamb meat. To develop this perception in the market, a significant investment inactions of both the chain's improvement and the dissemination and education of the consumers would be necessary. One of the examples brought by several interviewees was beef with the Angus seal, so it is believed that the practices instituted in this supply chain could serve as an example.

Some of the suggestions for improvement or structuring of the lamb meat chain are centered on the creation of a seal or mark for the meat that identifies the production according to strict quality criteria, that is, to ensure that the defined standards of age, size, weight, fat cover, among others, do not suffer considerable variations, assuring the customer a standardized product and with fewer chances of a negative experience. To encourage the development of Rio Grande do Sul production, it should be noted that this seal could be regional, creating an identity for the local product that adds value to it by demonstrating the structuring of the supply chain as a whole.

In this sense, Gracia & Maza (2015) studied consumers' acceptability for lamb meat from the local breed and found positive results mainly with animal breed issues and their social embeddedness with the local area. This could also be explored in the gaucho chain, making an appropriate food policy to inform consumers about the importance of the animal breed in the quality of the meat and the local origin.

Conclusions

This study aimed to understand the current situation of the sheep meat market in Rio Grande do Sul to identify its limitations and future perspectives. For that, 32 establishments were interviewed. The results indicate a lack of organization of the supply chain stakeholders, mainly in the production and slaughter stages. In section 4.5 (paper contributions), a framework of the chain's drivers and barriers is presented. Thus, to develop the sheep supply chain, a better structure is necessary. For that, some suggestions are made, such as: introducing traceability systems, creating a "regional identity"; and the demystification of customer's false beliefs.

Since studies in this sector are rare, this research advances the knowledge of the lamb meat market. It offers strategies for developing the supply chain relevant to the debate on competitive advantages in the food sector. Academically, it contributes with categories of analysis to understand the consumers' behavior of meat in retail channels. Moreover, it was proposed a theoretical, analytical model that lists the main explanatory determinants of consumer behavior in the distribution channel. They helped to understand this scenario in the lamb supply chain along the retail channels in the research carried out in this study. It can be tested and used to study consumer behavior in other contexts of lamb markets or even be adapted to other meats.

One of the limitations of this work is to have carried out this analysis only in three cities of Rio Grande do Sul with lamb retail channels, even if they are the most relevant ones. Another one is the unfeasibility of controlling individuals' sincerity in answering questions. Considering that many of the difficulties found in this study refer to the production of lamb from the origin, it is believed that analysis with the initial stakeholders of the supply chain is fundamental to identify the main difficulties of these agents, which are passed on to the whole chain. With the mapping of the current situation, it would be possible to suggest specific actions for the productive stakeholder to facilitate the supply chain's alignment as a whole.

This study could also identify if there is interest on the part of producers in developing a regional seal and the conditions for it. Similarly, a specific study with slaughterhouses would be interesting, allowing a detailed understanding of the existing situation and why there is such a lack of standardization and regularity in supply. Also, a consumer survey could be performed to complement the information found in this study. Finally, an analysis of the practices instituted with the beef chain could be carried out. Specifically, it would be interesting to investigate how the process of Angus beef development was made. Such a study could generate insights and a plan of action for the improvement of the lamb sector.

Acknowledgments

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