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**SUPPLIER RELATIONSHIP MANAGEMENT UNDER AN ENVIRONMENT OF  
REGULATORY INSTITUTIONAL VOIDS: A CASE STUDY OF A DAIRY  
COMPANY AND ITS SUPPLIERS**

**São Leopoldo  
2017**

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## **DEDICATION**

I dedicate this dissertation to my parents, Eli and Judit. I thank them for lovely supporting me since I was a child. Especially because even though not having an undergraduate degree, they have always believed that education makes a difference and never measured efforts to invest in my studies.

I also dedicate this work to my wife, Thassiane, for her patience, love, and support during these three years. Her love and support were essential to keep me emotional stable during this journey, especially living so far away from home.

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## **ABSTRACT**

Institutional voids are typically found in emerging economies. When governments lack in essential facilities, in order to ensure the well function of their supply chains, companies have to properly deal with this situation by themselves. An example is a situation happening in Rio Grande do Sul, Brazil, since 2013, where a sequence of investigations focused on the dairy industry. Due to a lack of regulation, milk was the target of adulterations throughout the supply chain processes of the companies. The frauds affected processes of companies from different sizes and nationalities. However, in this context, a local cooperative called Cooperativa Languiru, one of the leader dairy companies in the state, has different practices with its suppliers and was not affected by this contingency. Thus, the purpose of this research, through a case study, was to analyze the relationship between a dairy buying company and its suppliers in this environment of regulatory institutional voids. Aiming to have a wider perspective, this qualitative study explored how the lack of institutions affected the sector. As results, it was verified that political and economic interferences affect the chain as well as political lobby acts. Likewise, the lack of inspectors and infrastructure impact the well-functioning of it. Nevertheless, the close relation between the Cooperativa Languiru with its suppliers abled the company to have record results without having situations in terms of adulteration. Thus, this study proposed a research framework conceptualizing that firms must closely manage their relations with suppliers in order to deal with institutional voids.

**Keywords:** Institutional voids. Supply chain. Emerging markets. Buyer-supplier relationship management.

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## 1 INTRODUCTION

Interactions among businesses became more complex, because a set of modern challenges also began to surround firms in an increasingly integrated global economy, especially for those operating in special institutional contexts. (MARQUIS; RAYNARD, 2015). Within this complex and competitive scenario, developing markets are significant places for organizations, mainly due to their supply of raw materials and labor at low prices, although, they present many peculiarities (ROTTIG, 2016). Investing in these emerging economies may be much more challenging for companies than they usually expect, particularly, in their supply chain activities (KARAMCHANDANI; KUBZANSKY; NISHANT, 2011). Companies must deal with the occurrence of institutional voids in its different forms (labor, regulatory and contracting mechanisms) in the raw material, manufacturing, distribution, and marketing phases of the supply chain (PARMIGIANI; RIVERA-SANTOS, 2015).

The aforementioned absence of efficient institutions demands firms to make strategic choices in order to operate in institutional voids environments (PENG, 2003). From an institutional perspective, these emerging markets have considerable institutional idiosyncrasies that usually are not found in advanced economies (ROTTIG, 2016). For that reason, Peng; Wang and Jiang (2008) affirm that an interesting mechanism to understand foreign investment decisions in the context of emerging economies is to use institutional theory, because it captures essential characteristic elements of the countries of origin and destination of the investments. These circumstances are not approached by other theories. The theory in analysis, therefore, addresses institutional features that are rarely observed in developed economies, such as government's specificities, institutional adjustments and, primarily, institutional voids (ROTTIG, 2016).

Even though it is possible to find institutional voids in all types of markets, they are more intensely observed in emerging economies. Economic, social, environmental, regulatory and cultural characteristics of these markets facilitate the absence or weakness of productive institutions to the business environment and to the society. Khanna and Palepu (1997), in a key work about the theme, defined the term, under an economic perspective, as a lack of formal institutions that are essential for business operations. From a social point of view, Mair, Marti and Ventresca (2012) expanded this analysis, asserting that institutional deficiencies are market sources of exclusions in a way that the deficiency of institutions can be viewed as a market exclusion for different actors. Ultimately, Mair, Marti and Ventresca (2012), Khanna and Palepu (1997), as well as Khanna, Palepu and Sinha (2005) agree that institutional voids

interfere in business' infrastructures and can be considered as market failures that affect all stages of the supply chain.

There are studies that discuss marketing (SEELOS; MAIR, 2007) and distribution challenges in the context of institutional voids (VACHANI; SMITH, 2008). Other studies define types or the expansion of the definition (KHANNA; PALEPU; SINHA, 2005) and how these gaps affect subsistence markets (MAIR; MARTI; VENTRESCA, 2012). However, rare are the analyses that approach how institutional voids affect supply chains (PARMIGIANI; RIVERA-SANTOS, 2015). Thereby, this master thesis aims to describe the relationship between a dairy company and its suppliers in an environment of regulatory institutional voids.

Considering the complexity that involves the whole system - each stage and actor of a supply chain - it is reasonable to consider the role of supplier relationship management, particularly in regulatory institutional voids environments. Supplier management may be a suitable alternative to obtaining a sustainable value chain and, as a result, to offer a superior quality of production. The supplier management, made by a leader company, may enable a creation of new arrangements to fulfill pre-existing defective or non-existent institutions. Nevertheless, sometimes, companies have to manage their suppliers and to pull out initiatives that are able to ensure their quality standards.

Organizations react differently to distinct contingencies, especially because they come from many different types of contexts. Therefore, this research seeks to understand the relation between a leader company and its suppliers in an environment characterized by the lack of regulation. Thus, these considerations comprise the basis for the following research question: **How does a company manage its relationships with suppliers in an environment with a regulatory institutional void?**

Institutional voids may affect any place or industry, which is the case experienced by the dairy chain in the state of Rio Grande do Sul, Brazil. Safety standards and food quality, considered as a global trend, have exclusive characterizations in the case of Rio Grande do Sul, one of the most important states of the country in the dairy sector. A sequence of frauds involving milk adulteration over the logistics' processes and production challenges dairy processing companies. In Brazil, milk fluid had an estimated consumption of 177 liters per capita per year in 2014. Most of this amount was internally produced, with an inexpensive volume imported from Argentina and Uruguay. This happens because the Brazilian milk is considered the top flavored one in the Latin America market, due to its manufacturers' investment in innovation in order to pursue health requirements and keep this recognition. Within the Brazilian context, the milk - the main component of cheese, dry whole milk powder,

yogurts, and butter, among others - has most of its production done in the south and southwest regions (UNITED STATES DEPARTMENT OF AGRICULTURE - USDA, 2014).

The south region of Brazil has been the target of reported fraud scandals on news since 2013<sup>1</sup>. An operation by the Brazilian Federal Police found out that, aiming to delay expiration dates and to increase volumes, substances, such as caustic soda, water, sodium bicarbonate, urea, formaldehyde, hydrogen peroxide, and ethyl alcohol were added to the milk. Most of this fraud happened in the transportation process, cargo carriers would add the substances. However, police also discovered that in some cases the adulteration would occur in the production line of companies. It is important to mention that those are not the first cases of milk adulteration that happened in Brazil. In 2007, cooperative organizations were also exposed while committing the same crime, except that, in this case, during the production process.

The referred economic frauds evidence the lack of regulatory institutions in the industry in the analysis. Although the Brazilian Agricultural Ministry emphasizes that routinely inspections are constantly made, firms have become responsible for their supplier's selection, which, consequently, makes them responsible for the occurrence of frauds (MINISTÉRIO DA AGRICULTURA DO BRASIL, 2013). This is, however, a contradictory assertion because, apart from the referred 2007 case, no previous fraud was detected; this was the first time that the transporters' involvement was revealed.

Recently, a specific dairy legislation was established by the state of Rio Grande do Sul: Law Number 14.835, of January 06, 2016 (RIO GRANDE DO SUL, 2016). This law attempts to fulfill legal gaps existent in the dairy sector: it includes more regulation over the supply chain as well as a number of innovative requirements, attesting the existence of a legal void in the sector<sup>2</sup>. According to the author of the bill, state representative Gabriel Souza (2015, website), "the law's main merit is to try to end the legal vacuum that currently favours carriers that operate

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<sup>1</sup> Cases of milk adulteration during the logistics' process were informed by different Brazilian news, such as: *Jornal do Comércio*. Operação identifica fraude em indústria catarinense. Available at: <<http://jcrs.uol.com.br/site/noticia.php?codn=170505>>. Access in: April 16. 2016.

*Correio do Povo*. Operação combate fraude em leite e queijo em quatro empresas gaúchas. Available at: <<http://www.correiodopovo.com.br/Noticias/569891/Operacao-combate-fraude-em-leite-e-queijo-em-quatro-empresas-gauchas>>. Access in: April 16. 2016.

*Folha de São Paulo*. Após operação, fábrica Latvida é interditada por vender leite adulterado no RS. Available at: <<http://www1.folha.uol.com.br/cotidiano/2013/05/1275247-apos-operacao-fabrica-latvida-e-interditada-por-vender-leite-adulterado-no-rs.shtml>>. Access in: April 16. 2016.

*Veja Online*: Leite com formol, soda cáustica e água oxigenada foi vendido em SP. Available at: <<http://veja.abril.com.br/noticia/economia/leite-com-formol-soda-caustica-e-agua-oxigenada-foi-vendido-em-sp>>. Access in: April 16. 2016.

<sup>2</sup> Regulatory institutional void is part of a legal deficiency; the term will be better defined throughout out this study.

freely, without any link with the rest of the chain”<sup>3</sup> (own translation) (ASSEMBLEIA LEGISLATIVA DO ESTADO DO RIO GRANDE DO SUL, 2015). It is important to mention that this is only a Rio Grande do Sul’s state law, not being applied to others states of the country.

Thus, there is a clear crisis, stimulated by a lack of regulatory institutions in Brazil. Quality and safety patterns of milk are questioned by society, which affects and defies the business in the area. To avoid this situation, companies have to pull out initiatives that are able to improve their quality standards and the control of the whole process involving the milk production, from the farming stage until the final product of consumption.

## 1.1 OBJECTIVES

Given the research question above, this section presents the following objectives of this thesis:

### 1.1.1 Main Objective

To analyze the relationship between a dairy buying company and its suppliers in an environment of regulatory institutional voids.

### 1.1.2 Specific Objectives

In order to assist the main objective of this study, this thesis has the following specific objectives:

- a) to describe the dairy chain configuration of the state of Rio Grande do Sul;
- b) to describe main institutions’ role, and their perceptions on milk frauds;
- c) to identify a dairy company’s best practices towards its suppliers.

## 1.2 RELEVANCE

In the last two decades, within the context of a higher competitive economy, supply chain management has become a significant research theme to business professionals, academics and policy makers (SILVESTRE, 2015). There are studies that exclusively analyze

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<sup>3</sup> “O projeto de lei tem como principal mérito tentar acabar com o "vazio legal" que, atualmente, favorece os transportadores que atuam livremente, sem ter nenhum tipo de vínculo com o restante da cadeia.”

the challenges faced by companies due to the opportunistic behavior of partners when operating in emerging markets (CHILD; YAN, 2003). Other studies explore the distinct goals between partners (CHEN; PARK; NEWBURRY, 2009), challenges faced by firms in distribution (VACHANI; SMITH, 2008), and marketing to subsistence markets (SEELOS; MAIR, 2007).

However, despite the relevance, due to the contemporaneity of this theme, there are few researches within the business literature that combine institutional voids with supply chain (PARMIGIANI; RIVERA-SANTOS, 2015). Hence, the great contribution of this study to the literature is the combination of these two referred themes, institutional voids, and supply chain, under the perspective of buyer-supplier relation.

Understanding the factors that lead to institutional voids, as well as, how to deal with them in the supply chain, can leverage important contributions to the research in the area of institutional voids. Furthermore, analyzing how businesses deal with this situation helps to comprehend how supplier management can be a beneficial mechanism to deal with these difficulties produced by the inefficiency and/or inexistence of strong and active institutions in the market.

Evidencing the significance and the state of the art of the topic in business administration, the theme is the target of remarkable journals of international business, association of scholars and specialists in the field of international business, which is the case of, for instance, the Academy of International Business (AIB) and the Journal of International Business (JIBS). In addition, the annual conference of AIB 2015 that happened in Bengaluru, India, called for papers on institutional voids (ACADEMY OF INTERNATIONAL BUSINESS – AIB, 2015). Moreover, the Journal of International Business (JIBS) called for papers in a special issue on this topic in 2014, for attempting publication in 2016 (JOURNAL OF INTERNATIONAL BUSINESS STUDIES - JIBS, 2014). Therefore, these samples of calls for papers surely demonstrate the importance of the subject for the literature and its relevance for society.

Many researchers from different areas of interest pursue the construction of knowledge that, in the end, comprises progress to society as well. This study interacts directly with this perspective, since the expected effects are not only improvements to the actors of the supply chain, but to all the members of society. An institutional void in a supply chain may jeopardize the whole population since they frequently are the final consumers. The inefficiency of regulations of government agencies in a supply chain might cause irreversible damages to people, as it is the case of the use of prohibited or harmful components in a product. This work aims at creating opportunities for reflection that may benefit society, such as discussions on the

consequences of institutional voids. Additionally, stakeholders of the chain can benefit from learning how to adapt themselves to operate in an environment characterized by a lack of institutions.

Finally, this study contributes to the empirical field. The understanding of the Brazilian dairy chain's structure, as well as the identification of the difficulties that affect it, may benefit the whole system. Beyond that, legal institutions may take advantage of this research to improve public policies aiming to minimize the impacts to the dairy chain, which may stimulate higher foreign investors and the development of said chain. Moreover, regarding managerial contributions, this research can assist corporations and their managers in understanding the importance of efficiently dealing with challenges caused by regulatory institutional voids in their supply chain. Therefore, it is noticeable the importance of the subject to society, to academy and to the empirical field, being advisable the completion of more studies for new findings in the area.

## **2 LITERATURE REVIEW**

The literature review begins with a brief introduction of the institutional theory. In the following subsection, the topic of institutional voids is approached, being introduced the identification of institutional voids contexts and its types. Finally, in the last section, the topics of supply chain and supplier relationship management are presented, and its structures and concepts are explored.

### **2.1 THEORETICAL BACKGROUND**

#### **2.1.1 Institutional Theory**

The institutional theory highlighted sociological aspects and introduced variables like value sharing, legitimacy, and isomorphism in study organizations, as well as, the relationship between the environment and organizations. The institutionalism stressed the requirements to consider the activities of social structures, people and their group manifestations, the interposition of the relationship between social configurations, and behaviors of individuals (DIMAGGIO, 1988).

Based on that, institutions are constraints created to structure social, political, and economic interactions. In this analysis, institutions that operate with lower transaction costs and assurance of property rights generate greater economic performances. North's (1990) economic perspective bases the understanding of the institutional theory, which is a valid instrument to business studies because of its ability to comprise different elements - social, cultural and legal - into one analysis. From this point of view, this theory is suitable for this study since it aims at understanding the interferences, the particular characteristics, and the elements of an institutional context in the way that companies deal with situations on institutional voids. For the purpose of this thesis, it is necessary to briefly understand the theory concept and the studies that gave rise to it, as well as to explore the institutional pillars.

#### ***Institutional Environment Pillars***

There are three pillars that structure the institutional environment. First, distance from the regulatory institutional pillar; second, distance from the normative institutional pillar; and, third, distance from the cultural-cognitive institutional pillar.

- **Normative institutional pillar:** The normative institutional pillar covers the principles and values, which determine the types of behaviors considered appropriate to social characters' opinion. Firms and persons are assessed by society based on standards and values. This pillar, therefore, can be represented by a local culture, comprising values, norms, and beliefs related to specific people behavior. Corruption and bureaucracy may also be included as characteristic elements of the normative pillar, although still having a relation with the regulatory pillar as well. In the institutional normative pillar, differing from the regulatory institutional pillar, adaptations do not occur because of coercive pressures, but rather because of normative pressures based on moral obligations (ROCHA; ÁVILA, 2015).
- **Cultural-cognitive institutional pillar:** The cultural-cognitive institutional pillar refers to the way by which people interpret and understand reality. Understanding is an act with subjective characteristics that may differ according to the individual perception of each element (ROCHA; ÁVILA, 2015). In this context, to understand the institutions beyond an objective consideration of the social background, a subjective interpretation made by the participants is required. Due to its similar characteristics, there is not much clarity in the differentiation between the normative and the cultural-cognitive pillar (SCOTT, 2001). In the cultural-cognitive pillar, people distinguish what is or is not true, as much as they have the capability to do it or not. In the normative pillar, on the other hand, individuals discern whether they should or should not do something (EDEN; MILLER, 2004).
- **Regulatory institutional pillar:** Being able to boost or discourage certain behaviors, the regulatory institutional pillar involves the rules and regulations established legally or, in some cases, validated by public opinion. The regulatory institutional environments may be measured in a higher or lower quality level. Places where there is greater consideration of the rights and freedoms, in which coercive instruments for control and maintenance of compliance to the regulation are used, are classified as having higher quality. On the contrary, lower quality is present in locations where government inconveniently interfere. For instance, cases that rules are not transparent, solid, effective and/or reliable, influencing directly in business (ROCHA; ÁVILA, 2015).

Based on these pillars, from the perception of another theoretical institution stream, the neo-institutionalism, organizations are rewarded for their legitimacy and survival capabilities, all based on the consent of the coercive and mimetic institutional pressures. In this circumstance, values, symbolic representations, strategies, and structures originate isomorphism (DIMAGGIO; POWELL, 2005).

DiMaggio and Powell (1983), in a seminal study, presented relevant reasons about institutional isomorphism. The authors supported the idea that organizations became more similar, without being more efficient, due to the foundations of bureaucratization and organizational structures. The reason for becoming more similar to others is the isomorphism: **coercive** (explicit imposition of organizational models, political and legal [regulatory] influences), **mimetic** (uncertain behavior that drives businesses to imitate a model considered successful) and **normative** (influences of a standardized and categorized model of education to business professionals).

Williams et al. (2009) stated that coercive pressures result from dominance through the force and requests for other participants to join an association, which can arise through government rules and laws or between suppliers and customer actions. Regarding regulatory pressures, they directly influence business decision-making and are originated from cultural components of where the operating environment standards are developed. When it comes to mimetic pressures, these arise from the companies' aspirations to be similar to other successful organizations and environmental legitimacy, mimicking its structures, results, and practices.

More than addressing an efficient pursuing behavior, the institutional theory finds regulatory, social and cultural aspects that have effects on the survival and legitimacy of firms (BRUTON; AHLSTROM; LI, 2010). This theory leads to the assessment that, for a good functioning of the market, institutions have to be effective in normative, cognitive and regulative aspects. If one of these structures has not been satisfied, then institutional voids emerges.

### **2.2.1 Institutional Voids**

The expression "institutional voids" has become more popular after a sequence of works of Khanna in the 2000s, in which the author researched business groups in emerging markets. The seminal study of Khanna and Palepu (2000), in an economic prospection, revealed that organization groups can overcome the barriers created by the non-existence of institutions that supports the internal market development. Although extremely important to the progress of the theme, Khanna and Palepu (2000) do not provide an explicit conceptualization for institutional voids. Similarly vague are several others meaningful researchers who use institutional voids as a background for studying other subjects, such as emerging markets or business groups (SCHRAMMEL, 2013).

North (1990), from an economic perspective, states that economies are determined according to their institutions' performance. The absence of institutions, rules and regulations are harmful gaps for the thriving function of an economy. Likewise, efficient institutions are the ones that are able to answer for troubles of measuring and enforcing at the lowest transaction cost (NORTH, 1990). Scrammed (2013), based on North's (1990) ideas, determines that the transaction costs are likely to be higher in institutional ineffective contexts. This happens because the lack of formal proficient institutions that preserve contracts and profitable markets typically have to be replaced by informal mechanisms, which naturally increases the costs.

Schrammel (2013) affirms that the North's (1990) perception on the failures of institutions is a macroeconomic concept. However, Ricart et al. (2004) expand this notion to a microeconomic one, because they include the idea of absence of intermediaries to the definition. The complement made by Ricart et al. (2004) is accurate because intermediaries are the economic actors among other actors that make transactions easier. Moreover, intermediaries are absolutely relevant when the complexity of transactions grows (SCHRAMMEL, 2013).

Institutional voids occur where there is a lack of specialized intermediaries that a certain company usually trusts. When this deficiency is materialized, crucial strategic choices are harder to be made, affecting the industry's assessment, positioning, and sustainability. Nevertheless, these are adverse effects that firms with worldwide operations have to absorb, dealing with this existing element in the interactions between places and companies (KHANNA, 2002).

Chakrabarty (2009), also through an economic insight, states that institutional voids consist of the nonexistence of institutions installations, rules, and regulations that are essential for the functioning of an economy. Explaining some of the consequences of this phenomenon, the author indicates that national culture has a stronger influence in institutional voids contexts. Accordingly, when institutional voids are overcome, the national culture also reduces its influences.

Approaching the subject from a different perspective, more oriented to a social perception, Mair and Marti (2009) characterize the market as a specialized social structure that demands specific rules from institutions in order to exist. Nevertheless, in critical markets with institutional voids and high poverty indexes, due to the privation of institutions to assist markets, institutions are prevented from having market participation. Mair, Marti and Ventresca (2012) extended this social analysis, assessing that institutional voids are consequences of divergences among communities, religions and local political conditions. The authors argue that institutional voids are market sources of exclusions, where weaknesses and lack of

institutions are considered barriers to the market inclusion. In this context, to redesign the market architecture and to accept new actors can be considered two kinds of inclusion arrangements. In sum, for them, institutional voids are the absence of institutions that assist markets in circumstances where other substantially institutional compositions exist.

Although not being specific, it is noticed that distinctive academic domains have employed the term institutional void. Economists point out the inhibition to the well-functioning market and the consequent growth of transaction costs that the institutional voids produce (NORTH, 1990, KHANNA; PALEPU, 2000). Social entrepreneurs, as Mair and Marti (2009), analyze the consequences of institutional voids to market participation, social structures, and opportunities for social entrepreneurship. Furthermore, Mair and Marti (2009) analyze that political scientists, social economists, and anthropologists argue that the construction of markets is prevented by the fragility of governance structures. The authors state that, based on these different views, the institutional voids research is detailed in three broad fields: the voids that prevent the functioning of market (economists), the gaps that obstruct the market development (political scientists) and, finally, the disruptions that block the market participation (social entrepreneurs). Bellow, in table 1, it is possible to check a summary of the main theoretical streams and seminal references of institutional voids.

Table 1- Main theoretical areas of institutional voids

<b>AREA OF KNOWLEDGE</b>	<b>CONCEPT</b>	<b>AUTHOR</b>
ECONOMISTS	INHIBITION OF THE FUNCTIONING OF THE MARKET AND THE CONSEQUENT GROWTH OF TRANSACTION COSTS.	CHAKRABARTY (2009); KHANNA AND PALEPU (1997, 2000); NORTH (1990)
POLITICAL SCIENTISTS AND ANTHROPOLOGISTS	CONSTRUCTION OF MARKETS IS PREVENTED BY THE FRAGILITY OF GOVERNANCE STRUCTURES.	WOODRUFF (1999)
SOCIAL ENTREPRENEURS	INSTITUTIONAL VOIDS PREVENT MARKET PARTICIPATION; CONSEQUENTLY, THERE ARE OPPORTUNITIES FOR SOCIAL ENTREPRENEURS.	MAIR AND MARTI (2009); MAIR, MARTI AND VENTRESCA (2012)

Source: Designed by the author (2016).

Therefore, this master thesis employs the economic approach. North (1990), Khanna and Palepu (2000), and Chakrabarty (2009) insights provide the supportive arguments to this study's purpose, since they aim at comprehending the relationship between a company and its

suppliers in situations that prevent the efficient functioning of the market. Therefore, the following concept description is the one that better fits this research:

According to the call for papers, in a special issue on the topic of institutional voids in 2014, for attempting publication in 2016, of the *Journal of International Business Studies* (2014),

The term 'institutional void,' often taken to suggest a missing institution, may reflect a less developed inefficient or poor functioning form that can exist in any type of market.

It is important to mention that the journal supports the expansion of this concept, since it can allow a more in depth analysis of the nature and the different approaches that address the potential actors that may respond to institutional voids.

### **2.3.1 Emerging Markets and Types of Institutional Voids**

Marquis and Raynard (2015) point out that those emerging economies have taken a significant role in international economy. Then, due to the sudden growth and progress of Brazil, China, India, South Africa, among others, many investors, managers, and academics have been curious about these kind of economies (DAVIS; MARQUIS, 2005). Nevertheless, despite the fact that the topic is truly interesting, the term emerging markets has not a formal definition and has been under constant changes. Although it has been frequently used in the literature, the term is regularly not defined (PENG, 2003).

In one of the works that clearly defines the term, Marquis and Raynard, (2015) refer to them as economies that present fast industrialization and economic liberalization with an enhanced participation in the global market. Hoskisson et al. (2000), at that time, in a study that cataloged a group of 64 countries, described them as low-income countries that had experienced drastic institution transformations providing fast progress indexes grounded on economic liberalization.

Recently, Hoskisson et al. (2013) upgraded this definition, since some countries have kept the same position and others have gotten improvements in their market institutions and in their essential economic infrastructures, such as the case of the BRICS (Brazil, Russia, India, and China), which, even though having large disparities among themselves, they all have reached new advances. Besides that, there is the group of just developed countries, which have recently

achieved symmetry between their institutions and infrastructure, just as the already developed ones, which gives them the conditions to be competitive, such as South Korea.

Therefore, Hoskisson et al.'s (2013) classification considers that there are countries designated as traditional emerging economies (countries that have kept the status, such as Nigeria and Tajikistan), mid-range emerging economies (like BRICS and Mexico) and newly developed economies (such as South Korea). As a result, based on the literature, the definition of emerging markets that is used in this study, since it fits better with its objectives, is the following description:

According to Hoskisson et al. (2000, p. 249),

Emerging economies are low-income, rapid-growth countries using economic liberalization as their primary engine of growth. They fall into two groups: developing countries in Asia, Latin America, Africa, and the Middle East and transition economies in the former Soviet Union and China.

Although there are distinct classifications on literature, the majority of authors is unanimous to assert that emerging economies are the ones coming from East and Southeast Asia, Latin America, Southeast Africa, Middle East, Central and Eastern Europe, likewise recently formed countries from Soviet Union (TRACEY; PHILLIPS, 2011). Peng (2003) states that these emerging economies are remarkably characterized by pervasive changes. Similarly, Tracey and Phillips (2011) emphasize that these countries typically have volatile and underdeveloped institutions.

In this stream of literature, Rottig (2016) observes that the absence or weakness of certain institutions is a factor typically detected in developing countries, which illustrates that as an usual characteristic of emerging economies. However, Witt and Lewin (2007) demonstrated that this is not an inconvenience exclusive to developing countries. Witt and Lewin (2007) highlight an alternative strategy (foreign direct investment) to existing institutional voids in advanced industrialized nations. According to them, in sophisticated industrialized nations, the incidence of voids is entirely related to the degree of social coordination in the economic policy of the country. They illustrate that, in the case of Germany, for instance, in just 13 years (1990-2003), there was an increase of 400% of foreign direct investments in other countries in response to high taxes, high rigidity, and inflexibility of the regulatory institutions. In this case illustrated by Witt and Lewin (2007), the inflexibility and slowness of institutions to adapt themselves to new business requirements eventually created a situation, at least from the

perspective of organizations, of the poor quality of institutional services, which made companies reconsider their investments.

Rottig (2016) considers that market failures caused by institutional weaknesses are the improper or not reliable information to consumers, businesses, and investors, preventing them from considering the quality of products, services, and investments. Besides that, the author mentions judicial inefficiencies that may generate uncertainty, unpredictability, and suspicion in the fulfillment of contracts, which increase the transaction costs for firms. In addition, misguided regulations consist in failures that generally benefit political ambitions in detriment of greater economic efficiency: inflexible laws in the labor market, for instance, used to try to enhance social stability, but that are ultimately negatively affecting the market.

In other words, analyzing both interpretations, institutional voids can be found in all kinds of markets. Both developing and developed countries might experience the phenomenon, however, they are more intensely observed in emerging economies. Economic, social, environmental, cultural and regulatory characteristics of these markets facilitate the absence or weakness of productive institutions to the businesses and to society itself. In a key work about emerging markets and group's responses to this kind of economies, Khanna and Palepu (1997) categorize the existence of five types of institutional voids that are related to product markets, labor markets, capital markets, contracting and regulations. Bellow, each void is better described according to the authors' ideas.

1) Product market voids are failures that affect buyers and sellers because of a deficiency in information that occurs in three stages. The first is that, in this kind of economies, there are no efficient information structures, such as telephones or postal services, preventing marketers to interact efficiently with clients. The second is that, even when information is minimally feasible, there are lacks of mechanisms that support the demand of sellers. The existence of autonomous consumer-information organizations is sporadic and the government regulating agencies are virtually useless. Besides that, the scarce experts that rate the products are usually less refined in comparison with the ones from developed countries. Finally, the third is that consumers generally do not have protecting instruments in cases of products not functioning as it was expected of them.

In these economies, extrajudicial arbitration tools are unusual and the law is regularly unpredictable and lagging. Due to this deficiency in information, firms have excessive costs in order to compose a reliable brand. The authors, Khanna and Palepu (1997), suggest that groups of business may circumvent this difficulty since they can split their costs with other companies and use their previous reputation for a product or a service. In this circumstance, it is expected

that the group maintains its brand quality; otherwise, the other business components of the group would have to pay the bill.

2) Capital market voids are deficiencies intimately connected to information voids, since, with the lack of information, investors become concerned about investing where they are not experienced. The risk of investing capital market in developing economies is substantial: whether developed countries have institutional mechanisms, such as reports and specialist companies of risking evaluation for new opportunities, developing economies lack institutions to preserve unsophisticated investors that may be cheated by dishonest industrialists' conducts. The inexistence of institutions to protect investors increases the risks and, as a result, makes it difficult for new businesses to raise capital since investors become fearful of investing in new business.

Nevertheless, investors are likely to finance groups believing in their capability of evaluating and auditing new opportunities. This way, groups may use their capability of raising funds as an advantage, using their capital for an increase of an existing business or investing in a new desired one. Additionally, corporations may perform the role of a financial institution, providing financial resources to their main customers and suppliers, lending money for small companies that have limited access for acquiring capital.

3) Labour markets voids refer to inadequate professional training facilities, as well as, poorly trained employees. In this perspective, Khanna and Palepu (1997) understand that, again, groups have advantages since they can provide their own professional development programs, allowing them to spread costs with all other business components, or making partnerships with professional schools to fill up this gap. In developing economies, governments interfere on companies' actions in terms of adjustments on the number of workers, even due to an economic adaptation. Inflexible law and labor unions affect firms directly; however, groups of companies may react to this by having their own workforce that can be reallocated into the group firms. Furthermore, in distant places, companies may create communities surrounding their plants where basic services, such as educational, religious and medical provisions, can be provided. Other than that, firms have to recruit openly, but in these nations, there is a lack of valued institutions and the workforce differs widely.

4) Regulatory voids are characterized for being completely different in a comparison between emerging and developed countries. Governments in developing economies intercede considerably in companies' operations, moreover, firms have to adapt themselves to predict the behavior and conduct of regulatory organizations. In some places, such as India, it is mandatory to request government authorization for many actions, like, for instance, importing raw

materials, pricing adjustments and even quitting a business. The law is capricious and has subjective criteria, considering that bureaucrats, bribes, and corruption work very close in this void. Therefore, this uncertainty caused by regulatory systems may penalize emerging economies with more costs.

Politics, government, and industry have strong ties and, frequently, firms have to give way and end up working with government bureaucrats. This relation seems to be the norm for developing economies and the result is that managers have to learn how to deal with this situation. Groups, in this context, may have advantages because they usually have experience and connections, which makes it less costly. Sometimes, companies have a kind of “industrial embassies” to solve the possible regulation situation. However, in other cases, education may be the alternative, since financing projects for the education of government officials can prevent troubles and save resources.

5) Contracting voids concern the enforcement of contracts. Although there is extensive government intervention in developing countries, courts are usually unpredictable and inefficient, because they lack instruments to enforce contracts and property rights. This uncertain judicial system creates obstacles in business, making firms to not discuss its contracts jurisdictionally. Under these conditions, groups may also have an advantage for having credit from previous transactions and for having respected contracts with partners before, which makes suppliers and customers be more likely to work with them without major complications. In emerging markets, considering the inefficiency and unpredictability of judiciary in enforcing contracts, relations are considered to be an asset. Technology and financing firms, for instance, demand for local associates to run their business, having, however, apprehension about their partner misleading behavior. According to the authors, a consistent reputation might be a precious source of competitive advantage (KHANNA; PALEPU, 1997).

Besides these five types of institutional voids discussed by Khanna and Palepu (1997), other formal institutions, such as government, and correlated institutions, bureaucracies, the courts and law execution organizations are considered institutional voids as well (PUFFER; MCCARTHY; BOISOT, 2010). Trienekens (2011) affirms that the lack of government legislation, regulations and policies perform institutional voids because they can create trade barriers, imposing unfavorable taxes or denying infrastructural investments. Hence, the concept of institutional voids, as demonstrated, is wide and with several existing typologies.

### 2.4.1 Supply Chain and Supplier Relationship Management

Gereffi, Humphrey and Sturgeon (2005) stated that due to the current economic changes, companies' vertical disintegration has been occurring. This change has happened because of firms' efforts to add value worrying about their core business and leaving the considered secondary activities to be produced externally. This has transformed the business panorama to a supply chain competition (BEAMON, 1998).

Mentzer et al. (2001) define the supply chain as the whole transformation process comprised of the raw material to the final consumer. Several partners support the system through a flow of information, capital, and goods that involve the corresponded activities of material purchasing, production, assembly, distribution, inventory controlling, and marketing management. Krause, Handfield and Scannell (1998) state that, to successfully support those activities, firms have to carefully choose their partners, managing their suppliers and creating mechanisms, such as contracts.

This notion presented by Krause, Handfield and Scannell (1998) is appropriated because Lambert and Cooper (2000) pointed out that the number of actors in the chain may differ according to the product complexity, supplier, and raw material's availability. Surrounding focal companies, there are actors such as logistic providers, retailers, and financial supporters, among others. Thus, this is perceivable a complex system, which requires a close management due to the numbers of activities that may be involved.

The relations in the supply chain demand an extensive coordination due to their complexity. However, some factors might enhance or prevent the implementation of a supply chain philosophy, such as trust, commitment, interdependence, organizational compatibility, vision, key processes, leading and top management support in the structuring of values, guidance, and direction to participant companies (MENTZER et al., 2001).

In accordance to this, for the well-functioning of the system, the supply chain literature shows that it is essential the existence of a leader company managing the relations (MENTZER et al., 2001). Ellram and Cooper (1990) affirm that a leader company in a supply chain is like a channel captain in the market channels' literature. This leader has a crucial role in the coordination and supervision of the supply chain's system due to its power and capability for creating value because of its significant management. The value might be created within the hierarchy of the company and others through informal social relations or contractual associates. (DUNNING; LUNDAN, 2008). As the literature shows, typically there is always a leader

company managing the chain. This thesis focuses on one of the leader companies in the dairy chain, due to its influence and leadership to the system.

The value-creating activities of leader companies have been impacted by the development of technology, knowledge, and innovation, throughout the last decades (CANTWELL; DUNNING; LUNDAN, 2009). Due to its changes and based on the pursuit of value-creating, it can be considered the conception of creating value through the supply chain. For Gereffi, Humphrey and Sturgeon (2005), in order to understand the changes that happened on trades and on the industry, firstly, it is necessary to understand a value-added chain. According to Gereffi, Humphrey and Sturgeon (2005, p. 79), a value chain is “the process by which technology is combined with material and labor inputs, and then processed inputs are assembled, marketed, and distributed”. It means that a value chain is an industry model that transforms a product adding value from a raw material to the end-consumer through its many activities involved.

All chains are positioned within a set of institutions, which are the basis for economic exchange (PARMIGIANI; RIVERA-SANTOS, 2015). Institutions determine the rules, and formal practices. Moreover, institutions ensure the property rights and transparency for the well-functioning of the market (MAIR; MARTI, 2009). However, if there is an institutionally restricted enforcement power, this lack may thwart economic interactions and prevent an efficient market (PARMIGIANI; RIVERA-SANTOS, 2015).

With globalization, the expansion of international markets and the increasing income of middle and high classes in several emerging markets, opportunities for developing country producers have emerged. However, producers have to improve their control over production, trade, and distribution aiming to ensure the quality and added value of their products, operating cost-effectively (TRIENEKENS, 2011). Besides that, producers need to adapt themselves to the severe quality, safety standards, and regulations (DOLAN; HUMPHREY, 2004).

Khanna (2000) demonstrated the need for strategies to operate in emerging economies, suggesting the use of close ties in order to reduce the costs produced by institutional voids. Under this perspective, supplier relationship management may represent a sensitive tool to perform that task. Mentzer et al (2000) states that the supply chain management represents the management of the relationships between firms. Thus, for the authors, constructing a relationship represents a successful investment for a company. For a successful implementation of a supply chain management, it must exist close partner relationships with key customers and suppliers (LAMBERT, 2008). This relationship is a partnership described according to Lambert as:

According to Lambert (2008, p. 257)

A partnership is a tailored business relationship based on mutual trust, openness, shared risk and shared rewards that result in business performance greater than would be achieved by the two firms working together in the absence of a partnership.

Understanding the meaning of partnership gives basis to the supplier relationship management (SRM) definition, which, as a way of achieving superior financial performance, can be considered as a strategic, process-oriented, cross-functional, and value-creating process for buyer and supplier (LAMBERT; SCHWIETERMAN, 2012). Thus, this master thesis uses the definition as described:

According to Lambert and Schwieterman (2012, p. 337)

Supplier relationship management is the business process that provides the structure for how relationships with suppliers are developed and maintained. Supplier relationship management has become a critical business process as a result of: competitive pressures; the need to consider sustainability and risk; the need to achieve cost efficiency in order to be cost competitive; and the need to develop closer relationships with key suppliers who can provide the expertise necessary to develop innovative new products and successfully bring them to market.

In order to understand the SRM, it is important to comprehend the different types of relationships between buyers and suppliers. There are distinctive views on how relationships with sellers can be categorized based on the value they produce to companies (TRENT, 2005). According to Trent (2005), buyer-supplier relationships can be counterproductive (lose-lose), competitive (win-lose), cooperative (win-win) or collaborative (win-win), consisting these different types in the Four C's of supplier relationships.

A different model to categorize the relationships between suppliers and buyers is the one developed by Cox (2004), who affirms that buyers and suppliers interact in two-dimensional relationships. Similarly, to the understanding of trend, the author also describes four types of relationship: adversarial arm's length, non-adversarial arm's length, adversarial collaboration and non-adversarial collaboration (COX, 2004). Differing from the referred models, the model created by Kraljic classifies products in high/low supply and high/low-profit characteristics. In the author's analysis, suppliers with the products of the preferred groups can be classified in strategic, bottleneck, leverage, and non-critical, among which the strategic and bottleneck suppliers are the most important for companies (NELLORE; SODERQUIST, 2000). Considering the variation of the models, it can be observed that companies cannot have the

same relationships with all suppliers. It is necessary, therefore, to classify their suppliers in order to decide the most suitable way to relate to them.

Trienekens (2011) sustains that relations among actors are distinguished under two perspectives: one based on the power relationships view and other instituted in the transaction cost perspective of Williamson (1985). Thus, these relations are complex, with many crucial factors that influence how companies and suppliers are connected. Institutions, history, development of the rules of the game, geographic and social situations are some examples that may be determinant for these connections (GEREFFI; HUMPHREY; STURGEON, 2005). Therefore, this thought perfectly matches the content of this thesis.

### 3 METHOD

This section features the methodological choices of the study, such as selected method, unit of analysis, data collection and empirical research context used in order to scientifically address the research question.

#### 3.1 DEFINITIONS AND PLANNING

One of the discussions of this research is that institutional voids occur in distinct environmental contexts, both in developing economies as well as in developed markets. However, the actors who fill the gaps may be different for each kind of economy: that is why, in the case of emerging markets, it is assumed that leader companies have to satisfy, by themselves, the referred voids. Therefore, it is necessary to analyze the relationship between a dairy buying company and its suppliers in an environment of regulatory institutional voids.

A previous literature review on institutional voids, emerging markets, and supply chain was made to support this study. Among the papers analyzed, the predominant methodological approach applied was qualitative investigations with cases studies analyses. For Edmondson and McManus (2007) researches are categorized in three maturity stages: nascent, intermediate and mature. For nascent theories, the suitable method is the qualitative one due to its power of instigation and encouragement to new researchers about a phenomenon. An exploratory research is used when there is little or no previous investigation about a subject (COLLIS; HUSSEY, 2009). This way, as the topic of this study is in constant evolution and with much to be explored and studied, it is understandable why most of the studies about the theme have a qualitative structure.

Based on that and, especially, because this study explores the company relationship with its suppliers in an environment of regulatory institutional voids, the data collection happened according to Yin (2008) and Myers (2009) concepts. The authors categorize the case study research as an empirical investigation that considers a contemporary phenomenon into its realistic exact context, particularly for occasions when there is not a clear distinction between the context and the phenomenon. This way, a case study research properly fits the purpose of knowing more about a new phenomenon, and allowing the use of distinctive data collection procedures, such as papers, interviews, questionnaires and observations (EISENHARDT, 1989).

Besides essential to a better understanding of what is happening and why, case studies research accepts the analysis of people, episodes, decisions, periods, projects, policies,

institutions or whichever system that are holistically studied by one or more than one method (THOMAS, 2011). Moreover, this method includes theoretical, practical, and analytical aspects, and likely, it is the reason why it is the predominant approach used in most of the papers investigated about the theme.

In addition, a case study research has the characteristics that seek to understand "how" a complex and modern phenomenon occurs (YIN, 2008). Case studies are realized in the field of real life and are little controllable (LESSARD-HERBERT; GOYETTE; BOUTIN, 2005), such as the case of the institutional voids along the supply chain. Because of this, a case study research properly suits the requirements to reach the objectives listed in the beginning of this thesis.

In addition, analyzing the literature review and the purpose and specific objectives of this research, it was decided to analyze a leader company of the dairy sector in the state of Rio Grande do Sul. Due to its relevance to the chain and its ties, the analysis of a leader company gives a good panorama about the condition of the chain. This consolidates the concept that other links are part of the research context, but not the immediate topic of study (YIN, 2008).

The choice of studying a leader company is because, usually, it is the most economically significant segment of a chain. A leader company usually has high-quality standards, as seen in the literature review, and has more responsiveness with its suppliers due to its consumer's requirements. Likewise, this type of company usually controls their chains, making it is possible to identify the relationship management of these companies with suppliers in a context of institutional voids.

This study is based on the Neuman's (2011) concept that says that an inductive research arises from detailed observations and changes towards the more abstract generalizations and ideas. Therefore, this idea fits well with this study since two of its objectives are to describe the dairy chain of the state of Rio Grande do Sul, as well as, to describe institutions' role and their perceptions on milk fraud. Based on this, a descriptive research was applied.

In addition, a qualitative method facilitated this study to direct the research on persons and precise situations. For this reason, it allowed the study to focus on descriptions in place of quantities, creating an understanding of the events, actions, individualities, and experiences of actors that affect the context of this research. Several times, the method demonstrated unexpected occurrences that potentially contributed to the uniqueness of the research (MAXWELL, 2013).

Additionally, another reason for having chosen this method is because it is flexible and it encouraged a reflexive thought that built an in depth understanding of the researched context

(SILVERMAN, 2013). The approach allowed an advanced understanding of the cultural and social aspects of the dairy chain, likewise, the actions and decisions making of the dairy company (MYERS, 2009).

To summarize, this is a single case study research, descriptive and exploratory, with a qualitative inductive approach. In the following section, the stages of activities (exploratory stage, case selection, data collection, data analysis, and conclusion) completed to match the ambitions of this study's research question are presented.

### 3.2 UNIT OF ANALYSIS

Identifying the unit of analysis is essential to determine the scope and perspectives of a study. This way, the unit of analysis of this study was the relationship of a dairy company with suppliers in a context of regulatory institutional voids. That is, a dyad analysis to understand how a dairy company deals with its suppliers in this environment.

To analyze this, it was essential to explore the lack of institutions. Inspecting institutions allowed a deeper level of analysis since legal, political, social, cultural, and economic interferences of the context cleared influenced in the frauds and, as a consequence, in the companies' relations with suppliers. Thus, it was made an analysis of the dairy sector of the state of Rio Grande do Sul, at the level of the supply chain, comprising different actors affected by the regulatory institutional voids. However, the unit of analysis is the dairy company relationship with suppliers.

In sum, it was explored a set of intuitions (institutional level) that consistently influence the supply chain, such as the Brazilian Ministry of Agriculture, Livestock and Food Supply (MAPA) and the Secretary of Agriculture, Livestock and Agribusiness of the state of Rio Grande do Sul (SEAPA/RS). Nevertheless, the unit of analysis is the relationship between a dairy company with its suppliers.

### 3.3 CASE SELECTION

After analyzing the literature review and deciding the method to meet the requirements of this thesis, this study followed three criteria for the selection of the case for empirical analysis:

- a) The case should happen in an emerging economy context;

- b) Because of the regulatory institutional voids, it should be a leader company operating in the dairy sector in the state of Rio Grande do Sul;
- c) The company clearly had to have good practices with suppliers.

As this study started interviewing institutions, it was considered the participant indications about possible focal companies that could be studied. However, the choice of the case was made by convenience, after a suggestion of one of the participants about a company that entirely matched the aforementioned criteria. Thus, based on that, the case study company chosen was the Cooperativa Languiru. It is one of the most important dairy companies of the state, which will be better presented in the next section.

In this case, the studied company, Cooperativa Languiru in turn suggested its suppliers and other important actors to be explored. This procedure is quite applied as a non-probabilistic sample system, in which a small group of initial informants' refers another participant who meets the study requirements. This technique takes the risk of having a research bias, because participants may recommend only other actors who corroborate to their ideas (MORGAN, 2008). Despite this, this study was careful in making systematic reviews of participants until having reached the theoretical saturation, when the participants did not have anything else important to add to the research (GLASER; STRAUSS, 1967).

Therefore, summarizing, the first interviews occurred in institutions and, because of the snowball technique, the institutions indicated other relevant institutions and so on until getting the focal company that conveniently matched the mentioned criteria. The focal company, in turn, suggested its suppliers and other important actors. These stages are better described in the next section.

### 3.4 RESEARCH PHASES

Following, the six research phases used in this project are presented, each one with its methodological choices and characteristics descriptions, as it may be verified in Table 2.

Table 2 - Stages of research

STAGE	PHASE	DESCRIPTION
1 <sup>ST</sup> PHASE	THEORETICAL PHASE AND FIRST EXPLORATORY INTERVIEWS	LITERATURE REVIEW, RESEARCH QUESTION, CHOICE OF METHOD
2 <sup>ND</sup> PHASE	EXPLORATORY RESEARCH	SECONDARY DATA
3 <sup>RD</sup> PHASE	REVIEW OF RESEARCH QUESTION, OBJECTIVES AND CASE SELECTION	ADJUSTMENTS AND CASE SELECTION

4 <sup>TH</sup> PHASE	DATA COLLECTION	IN-DEPTH INTERVIEWS, DIRECT OBSERVATIONS, REPORTS AND DOCUMENTS' ANALYSIS
5 <sup>TH</sup> PHASE	DATA ANALYSIS	SECONDARY DATA COLLECTED, NARRATIVE AND ANALYSIS OF THE INTERVIEWS

Source: Designed by the author (2017).

### 3.4.1 First phase: Theoretical Phase and First Exploratory Interviews

In the first phase of this study, a literature review was made about the themes of the supply chain, emerging markets, and institutional voids. For that, scientific papers, call for papers of specialized journals, and a temporal cutting for analysis in institutional voids and supply chain was searched. The material was gathered from EBSCOHost, Scopus (Elsevier platform's database) and Web of Knowledge (Institute for Scientific Information platform's database).

Because of the massive amount of material found, the criteria for choosing papers was the highest number of citations and contemporaneity. This way, it was analyzed the 20 most cited and current papers about institutional voids, the 20 most cited and current papers about emerging markets, and the 20 most cited and current papers about supply chain. These criteria allowed for significance to the theme and the state of art representativeness. Below, in table 3, it is exposed a list of papers used, divided by author, area, and theme of study.

Table 3 - Theoretical basis for categories of analysis

Area	Theme	Authors
<b>INSTITUTIONAL VOIDS AND EMERGING MARKETS</b>	INSTITUTIONAL THEORY	(NORTH, 1990); (DIMAGGIO; POWELL, 1983); (PENG; WANG; JIANG, 2008); (DIMAGGIO, 1988); (MEYER; ROWAN, 1977); (NORTH, 1990); (ROCHA; ÁVILA, 2015); (SCOTT, 2001); (EDEN; MILLER, 2004); (DIMAGGIO; POWELL, 2005); (WILLIAMS et al, 2009); (BRUTON; AHLSTROM; LI, 2010)
	EMERGING MARKETS, REGULATION AND TYPES OF INSTITUTIONAL VOIDS	(MARQUIS; RAYNARD, 2015); (DAVIS; MARQUIS, 2005); (PENG, 2003); (PENG; WANG; JIANG, 2008); (HOSKISSON et al., 2000); (HOSKISSON et al., 2013); (TRACEY; PHILLIPS, 2011); (ROTTIG, 2016); (WITT; LEWIN, 2007); (KHANNA; PALEPU, 1997); (PUFFER; MCCARTHY; BOISOT, 2010); (CHAKRABARTY, 2009); (TRIENEKENS, 2011); (SILVESTRE, 2015); (MARTINEZ et al., 2007); (SCHRAMMEL, 2013); (MAIR; MARTI; VENTRESCA, 2012); (NORTH, 1990); (KHANNA; PALEPU; SINHA, 2005); (KHANNA; PALEPU, 2000); (KHANNA; PALEPU, 1997); (VACHANI; SMITH, 2008); (KHANNA, T.; PALEPU, K., 2010) (RICART et al., 2004); (CHAKRABARTY, 2009); (MAIR; MARTI, 2009); (PARMIGIANI; RIVERA-SANTOS, 2015); (KWOK; TADESSE, 2006); (ZHAO; TAN; PARK, 2014) (PAVLOVICH; SINHA; RODRIGUES, 2016)

<b>SUPPLY CHAIN</b>	COMPANIES STRATEGIES AND SUPPLIER RELATIONSHIP MANAGEMENT	(GEREFFI, 1994); (GEREFFI; HUMPHREY; STURGEON, 2005); (ALVAREZ; PILBEAM; WILDING, 2010); (KEESING; LALL, 1992); (BASSOLI, 2010); (TRIENEKENS, 2011); (LEE; GEREFFI; BEAUVAIS, 2012); (MENTZER et al., 2001); (MARTINEZ et al., 2007); (SILVESTRE, 2015); (FINDLAY; GRES, 2012); (BEAMON, 1998); (KRAUSE; HANDFIELD; SCANNELL, 1998); (ELLRAM; COOPER, 1990); (LAMBERT; COOPER, 2000); (CANTWELL; DUNNING; LUNDAN, 2009); (NELLORE, R.; SODERQUIST, K, 2000); (COX, 2004); (VOSS, C.; TSIKRIKTSIS, N.; FROHLICH, M., 2002); (TRENT, 2005); (LAMBERT; SCHWIETERMAN, 2012); (ALVAREZ, G.; PILBEAM, C.; WILDING, R, 2010); (PARMIGIANI; RIVERA-SANTOS, 2015);
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Source: Designed by the author (2017).

In addition, books, websites, reports, and call for papers of important journals composed the literature review, and were significant for the review of key concepts and issues about the theme. Among these materials, other relevant cited studies were identified and thereby used to complement the literature review, just like the snowball sampling technique. Thus, it followed methodic steps to reach a theoretical review and, as a result, guided to construct the question that conducted this phase, that is: How a dairy company in an environment of regulatory institutional voids manages its relationship with suppliers? The analysis embraced the perspective of the supplier management, considering the institutional dimensions and their influences.

Consequently, in this 1<sup>st</sup> phase, the research method was defined and empirical evidence was preliminarily examined to the case selection. Subsequently to the literature review and the choice of the method of study, it was made two exploratory interviews, aiming to explore more about the theme and to verify if companies were really affected by the regulatory institutional voids in the dairy chain.

Two interviews with opened questions were applied. The first interviewed was the specialist professor Andrea Troller, Professor of the program of veterinary (FAVET), and substitute coordinator of the graduate program in Agronomy and Agribusiness of the Federal University of the State of Rio Grande do Sul (UFRGS). The second interviewed was the federal agricultural inspector, Milene Cristine Cé, of the Brazilian Ministry of Agriculture, Livestock and Food Supply (MAPA). The inspector graduated in Veterinary medicine by the Federal University of the State of Rio Grande do Sul (UFRGS) and specialized in Laboratory Diagnosis of Poultry Diseases by the Japanese International Cooperation Agency. She participated in all fraud investigations of the dairy sector since the beginning.

These interviews were enlightening both from the theoretical, and from the practical point of view. It explained how the technical milk analysis was made, and pointed out many agents that participate in the complex process of the milk production. It shown that all kind of enterprises were being affected by the regulatory institutional voids in the dairy sector, and that frauds used to occur both during production, as well as during the transport. In addition, these interviews contributed providing secondary data sources and led to eventual further interviews, as the snowball technique recommends.

### 3.4.2 Second Phase: Exploratory Research

Because the researcher did not have much experience in the studied field, it was decided to have an exploratory step in the second phase of the research. It helped to have a better understanding of how the dairy chain was really structured and the stakeholders involved in it. In addition, at this stage, it was designed the most suitable procedures to be applied in the data collection.

Table 4 - Sources of secondary data

SOURCE	TYPE	WEBSITE
EUROMONITOR INTERNATIONAL	DATABASE	<a href="http://www.euromonitor.com">HTTP://WWW.EUROMONITOR.COM</a>
CANADIAN DAIRY INFORMATION CENTRE	DATABASE	<a href="http://www.dairyinfo.gc.ca">HTTP://WWW.DAIRYINFO.GC.CA</a>
BRAZILIAN ASSOCIATION OF FOOD INDUSTRIES - ABIA (ASSOCIAÇÃO BRASILEIRA DAS INDÚSTRIAS DA ALIMENTAÇÃO - ABIA)	CLASS ASSOCIATION	<a href="http://www.abia.org.br">HTTP://WWW.ABIA.ORG.BR</a>
SULINA ASSOCIATION OF CREDIT AND RURAL ASSISTANCE - EMATER/RS-ASCAR (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS-ASCAR)	SUPPORTING ENTITY	<a href="http://www.emater.tcche.br/site/">HTTP://WWW.EMATER.TCHE.BR/SITE/</a>
STATE LEGISLATURE OF RIO GRANDE DO SUL (ASSEMBLEIA LEGISLATIVA DO ESTADO DO RIO GRANDE DO SUL)	NORMATIVE ENTITY	<a href="http://www.al.rs.gov.br/site/">HTTP://WWW.AL.RS.GOV.BR/SITE/</a>
GAUCHO INSTITUTE OF MILK - IGL (INSTITUTO GAÚCHO DO LEITE - IGL)	SUPPORTING AND ASSOCIATIVE ENTITY	<a href="http://iglr.com.br/site/">HTTP://IGLRS.COM.BR/SITE/</a>
GAUCHO ASSOCIATION OF THE DAIRY INDUSTRY - AGL (ASSOCIAÇÃO GAÚCHA DE LATICINISTAS E LATICÍNIOS - AGL)	ASSOCIATIVE ENTITY	<a href="http://www.agl.org.br/agl/">HTTP://WWW.AGL.ORG.BR/AGL/</a>
SECRETARIAT OF AGRICULTURE, LIVESTOCK, AND AGRICULTURE OF THE STATE OF RIO GRANDE DO SUL - SEAPA/RS (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO DO ESTADO DO RIO GRANDE DO SUL - SEAPA/RS)	REGULATORY AND NORMATIVE ENTITY	<a href="http://www.agricultura.rs.gov.br">HTTP://WWW.AGRICULTURA.RS.GOV.BR</a>

BRAZILIAN MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY - MAPA (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA)	REGULATORY AND NORMATIVE ENTITY	<a href="http://www.agricultura.gov.br">HTTP://WWW.AGRICULTURA.GOV.BR</a>
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD)	DATABASE	<a href="http://unctadstat.unctad.org">HTTP://UNCTADSTAT.UNCTAD.ORG</a>
WORLD BANK	DATABASE	<a href="http://www.worldbank.org/">HTTP://WWW.WORLDBANK.ORG/</a>
UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)	DATABASE	<a href="https://www.usda.gov">HTTPS://WWW.USDA.GOV</a>

Source: Designed by the author (2017).

At this phase, as secondary data, it was utilized information sourced by reports, books, websites, and papers. Table 4 lists the sources of secondary data analyzed at this stage of research. These resources mapped out the sector composition, and provided useful statistical data. Additionally, through the secondary data, it was possible to have an insight about the leader companies in the sector, as well as the identification of actors and regulations.

### 3.4.3 Third Phase: Reviewing of Research Question, Objectives and Case Selection

Succeeding the exploratory phase, it was made adjustments in the objectives and research question. This phase was relevant because adjusting the empirical object in the analysis to the theory supported a successful result to the research. Besides that, at this phase, the company was selected, based on profile earlier mentioned in the case selection section.

### 3.4.4 Fourth Phase: Data Collection

Aiming to meet the exploratory and descriptive steps, semi-structured interviews were applied (Research Protocol – Appendix A), with a specific script for each tie in the chain. The scripts were submitted to an expert in the supply chain for validation, aiming to have higher reliability and avoid potential unfitting questions. They were constructed based on the theoretical analysis of the research, as summarized and previously presented in table 3, on theoretical phase. To answer the question, it was necessary to interview executives, administrators, employees, technicians, suppliers, farmers, prosecutors, lawyers, and professors. All of them were directly related to the research question, which is involved in some way with the frauds, institutions, and the chain or with the supplier management in the dairy chain.

To achieve the requirements of the method and to follow ethical procedures, some actions were considered prior to these interviews, such as:

1. An invitation was sent to the interviewed mentioning the purpose of the research, as well as, the expected duration of the interview;
2. Authorization to record the interviews was requested in advance;
3. Authorization to use and publish the data collected in the interviews was requested in advance, and;
4. A semi-structured script was used for all the interviews.

In the moment of interviews, it was requested materials, reports and any additional information that assisted in the understanding of the research problem. Additionally, all the interviews were recorded and later transcribed to facilitate the analysis process.

Twenty two (22) interviews were conducted: thirteen (13) with institutions and class entities, three (3) in the focal company and six (6) with suppliers, resulting roughly twenty-two (22) hours of recordings. All interviews were conducted in person at the interviewees' workplace (*in loco*), as shown in table 5.

Table 5 - Detailing of the interviews conducted with institutions

CHAIN TIE	NAME	DATE	JOB POSITION	TIME OF DURATION (HOURS)	MODE
1	GAUCHO ASSOCIATION OF THE DAIRY INDUSTRY - AGL (ASSOCIAÇÃO GAÚCHA DE LATICINISTAS E LATICÍNIOS - AGL)	19/08/2016	PRESIDENT	00:39:01	IN LOCO
2	GAUCHO INSTITUTE OF MILK - IGL (INSTITUTO GAÚCHO DO LEITE - IGL)	28/07/2016	FORMER EXECUTIVE DIRECTOR	01:11:39	IN LOCO
3	GAUCHO INSTITUTE OF MILK - IGL (INSTITUTO GAÚCHO DO LEITE - IGL)	28/07/2016	LEGAL AND PARLIAMENTARY ADVISOR	00:33:33	IN LOCO
4	ASSOCIATION OF SMALL DAIRY INDUSTRIES OF RIO GRANDE DO SUL - APIL (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL)	25/07/2016	EXECUTIVE SECRETARY	01:18:36	IN LOCO
5	ASSOCIATION OF SMALL DAIRY INDUSTRIES OF RIO GRANDE DO SUL - APIL (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL)	29/07/2016	MEMBER OF BOARD OF DIRECTORS AND FORMER PRESIDENT	01:23:24	IN LOCO
6	SULINA ASSOCIATION OF CREDIT AND RURAL ASSISTANCE - EMATER/RS-ASCAR (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS-ASCAR)	02/08/2016	STATE TECHNICAL ASSISTANT OF DAIRY CATTLE	01:20:16	IN LOCO
7	AGRICULTURAL FEDERATION OF RIO GRANDE DO SUL - FARSUL (FEDERAÇÃO DA	02/08/2016	FINANCIAL DIRECTOR AND COORDINATOR OF THE GRAIN AND	00:37:05	IN LOCO

		AGRICULTURA DO RIO GRANDE DO SUL - FARSUL)		MILK COMMISSIONS		
8		UNION OF RURAL WORKERS OF TEUTONIA AND WESTPHALEN (SINDICATO DOS TRABALHADORES RURAIS DE TEUTONIA E WESTFÁLIA)	05/08/2016	PRESIDENT	01:28:30	IN LOCO
9		LABORATORY OF INSPECTION AND TECHNOLOGY OF MILK AND ITS DERIVATIVES, EGGS, AND HONEY OF THE FACULTY OF VETERINARY OF THE FEDERAL UNIVERSITY OF RIO GRANDE DO SUL (UFRGS) – LEITECIA (LABORATÓRIO DE INSPÇÃO E TECNOLOGIA DE LEITE E DERIVADOS, OVOS E MEL LEITECIA DA FACULDADE DE VETERINÁRIA DA UFRGS - LEITECIA)	06/06/2016	COORDINATOR AND PROFESSOR	01:26:28	IN LOCO
10		BRAZILIAN MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY – MAPA (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA)	14/06/2016	FEDERAL AGRICULTURAL INSPECTOR	01:12:49	IN LOCO
11		SECRETARIAT OF AGRICULTURE, LIVESTOCK, AND AGRICULTURE OF THE STATE OF RIO GRANDE DO SUL – SEAPA/RS (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO DO ESTADO DO RIO GRANDE DO SUL – SEAPA/RS)	08/07/2016	TECHNICAL COORDINATOR OF MILK PRODUCTION CHAIN SECTORIAL CHAMBER OF THE STATE AND EXECUTIVE SECRETARY OF THE FUNDOLEITE	00:44:50	IN LOCO
12		PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF RIO GRANDE DO SUL – MPRS (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS)	22/07/2016	PROSECUTOR	01:05:23	IN LOCO
13		PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF RIO GRANDE DO SUL – MPRS (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS)	22/08/2016	PROSECUTOR	00:31:35	IN LOCO
				TOTAL	13:33:09	

Source: Designed by the author (2017).

The research was split into two stages. In the first one, it was interviewed representatives of institutions that influence the dairy chain, as showed in table 5. In the second stage, it was interviewed respondents who are directly linked to the dairy company (case study), or who are affected by the supply management and institutions, as it can be seen in table 6.

Table 6 - Detailing of the interviews conducted with the dairy company and suppliers

CHAIN TIE	NAME	DATE	JOB POSITION	TIME OF DURATION (HOURS)	MODE	
1	DAIRY COMPANY	COOPERATIVA LANGUIRU	17/08/2016	DAIRY INDUSTRY MANAGER	01:44:01	IN LOCO
2		COOPERATIVA LANGUIRU	17/08/2016	VICE PRESIDENT	01:13:37	IN LOCO
3		COOPERATIVA LANGUIRU	17/08/2016	PURCHASER	00:17:51	IN LOCO
4	SUPPLIER TYPE A	REINIGEND QUÍMICA DO BRASIL LTDA.	17/08/2016	PRESIDENT	00:47:14	IN LOCO
5	SUPPLIER TYPE B	MILK PRODUCER	17/08/2016	FARMER	00:56:00	IN LOCO
6		MILK PRODUCER	04/08/2016	FARMER	00:17:23	IN LOCO
7		MILK PRODUCER	04/08/2016	FARMER	00:12:33	IN LOCO
8	SUPPLIER / COOLING STATION	COTREL	03/08/2016	QUALITY CONTROL MANAGER AND RURAL ANIMAL TECHNICIAN	01:47:09	IN LOCO
9		COTREL	03/08/2016	RURAL ANIMAL TECHNICIAN	01:11:08	IN LOCO
				TOTAL	08:26:56	

Source: Designed by the author (2017).

Regarding the interviews, the data collection occurred right away the review of the objectives and the research question. All respondents were formally invited to accept the university's contract agreement authorizing the use of information for academic purposes. In addition, as mentioned before, in the first and in second part of the data collection, the interviews were conducted *in loco*, visiting in person the institutions, companies, and the rural properties. This procedure was made in order to validate the results and enrich the understanding of the research problem. A remarkable point regarding the interviews was that, because of the crises involving the sector, especially due to the arrests that were happening in the period of the data collection, many interviewed were afraid to be interviewed. Nevertheless, just after starting the interviews, they usually felt comfortable with the questions.

### 3.4.5 Fifth Phase: Data Analysis

To analyze the interviews, the following procedure was used:

1. All of the 22 interviews were transcribed by Rosemarie Ripoll, a professional specialized in this kind of service;

2. All the interviews were categorized and analyzed at the same time. For that, it was used a specific software to analyze qualitative research, in order to make easier the process of analyzing;

3. It was made a chapter exclusively to present the research data, where it was produced graphics and summary tables to facilitate the understanding;

4. For validation purposes, it was applied the triangulation of cross verification between all of the content of interviews, the secondary data, the author's perspective and theoretical references. The result of it is a chapter of discussion and results, and final considerations.

At this stage, all collected information were categorized for a better analysis. Moreover, because it was desired to have the interviewee's perceptions about the relationship of the company with its suppliers in an environment of regulatory institutional voids, the narrative was used as an instrument to present the data. The narrative fitted properly to this project, since it has three well-defined stages (beginning, middle and end) and it is used to know the interviewee's points of view about how things go on in a process that comprises many actors, in a specific scenery, with a particular story (AYRES, 2008). Thus, the narrative is mostly used in studies that involve processes (LANGLEY, 1999), which are the conditions of the company, suppliers, and institutions of this research.

## **4 RESULTS AND DISCUSSION**

In this section are presented the results and discussion of the field research realized to this study.

#### 4.1 THE DAIRY CHAIN INDUSTRY IN RIO GRANDE DO SUL

In the State of Rio Grande do Sul the dairy chain is organized among small producers, shipping companies, milk cooling station companies, dairy manufacturing companies, and retailers. The process seems not to be complex, however, although the few number of participants, the interference of intermediates affects the supply processes and challenges companies.

Both local companies and multinationals have to deal with the possibility of having their quality milk affected by unwanted components on their products. The dairy industry has experienced times of mistrust since the commodity has been the target of adulteration. Aiming to have an expiring date and volume benefits, some small producers and, especially, transporting intermediate companies defraud the product during the gathering, using different chemical substances to benefit their operations.

The region of the state of Rio Grande do Sul is mainly constituted by small producers that traditionally sell their milk to the transporting companies which, in turn, resells it to the dairy manufacturing companies. That is, the transporting firms used to command the gathering of the milk and control the small milk producers. These fraudsters employed specialized professionals in chemistry, such as chemical engineers, to mix chemical substances with the milk. That way, these actions were hard to be identified by either companies or government. However, not only because they used complex adulterations, but also because there were no appropriated regulations and enough governmental inspectors to attend the demand of inspections. Thus, this lack of regulation and inspection coerced companies to get used with this, as a habitual process.

As mentioned before, even though companies have leverage, because of the local characteristics of the chain, multinationals and local firms were affected by frauds in Rio Grande do Sul. This happened because small farmer suppliers, and transporting companies frequently were the same for both kind of companies.

##### **4.1.1 Ambiance of the Dairy Industry in Rio Grande do Sul**

The State of Rio Grande do Sul has 497 cities; the milk production is present in 493 of them, meaning 99%, and all of them are in some way linked to the milk industry. There are 479.692 rural properties and the milk production exists in 198.467 of these properties, meaning 41,4%. On average the rural properties have 40.7 hectares, while the rural properties producing

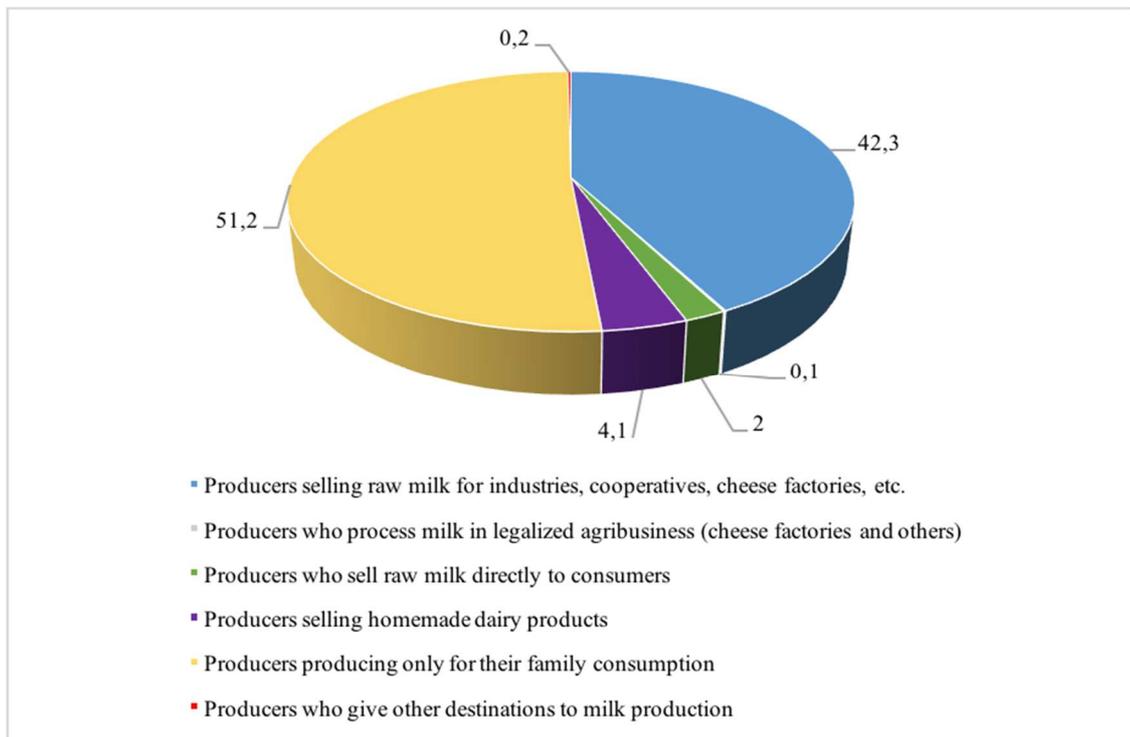
milk have 19 hectares and each property produces 64,3 liters per day, which shows that milk production is mainly produced by small producers. In the state, there are 6 types of milk producers, as described in table 7, as follows:

Table 7 - Classification of types of milk producers in Rio Grande do Sul

Producers selling raw milk for industries, cooperatives, cheese factories, etc.
Producers who process milk in legalized agribusiness (cheese factories and others)
Producers who sell raw milk directly to consumers
Producers selling homemade dairy products
Producers producing only for their family consumption
Producers who give other destinations to the milk production

Source: Adapted from EMATER-RS (2015).

Table 8 - Distribution of milk producers in Rio Grande do Sul according to the predominant destination of production (%)

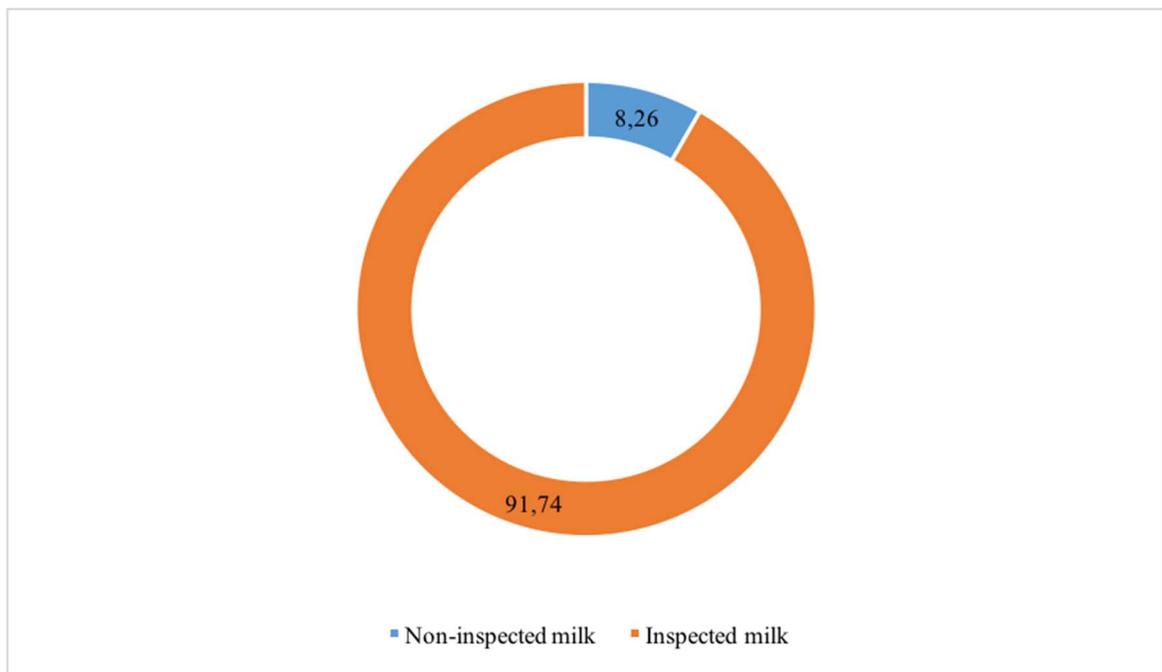


Source: Adapted from EMATER-RS (2015).

As shown in the graph above, 42,3% (83.975) of producers sell raw milk for industries, cooperatives, cheese factories, etc. 51,2% (101.570) of producers produce milk only for their own family consumption. Only 0,1% (224) of producers process milk in legalized agribusiness (cheese factories and others). 4,1% (8.139) of producers sell homemade dairy products. 2,0% (3.971) of producers sell raw milk directly to consumers. Finally, only 0,2% (397) of producers

give other destinations to their milk production. It is estimated that 17,5% of rural properties in Rio Grande do Sul are associated with the dairy industry, and 97,6% of them are family farmers, which demonstrates the social significance of this industry. In addition, around 12.100 producers are not legalized in the state and this has an impact on the distribution of milk. As a result, table 9 shows that 8,26% of the milk distributed in the state of Rio Grande do Sul is not inspected (EMATER-RS, 2015).

Table 9 - Distribution of the milk according to the level of formality (%)



Source: Adapted from EMATER-RS (2015).

Regarding the animals, there is about 1.427,427 milk cows in the state. The three main cow breeds in the state are Holstein-Frísia (Dutch cow) with 58,4%, Jersey (British cow) with 16,3% of a herd of cattle, and the mixed breeding of Holstein-Frísia with Jersey that represents 16,5% of a herd of cattle. The rest are Gir, Zebu, and other mixed breeding. This herd of cattle makes the state reach the mark of 4,6 billion liters of milk produced every year (EMATER-RS, 2015).

Milk has a significant importance in the state, it corresponds to R\$ 3,78 billion (roughly US\$ 1,2 billion) per year, featuring, on average, R\$ 2,4 million (roughly US\$ 1 billion) for each city yearly. The value made by milk for each rural property, on average, is R\$ 19,000 (roughly US\$ 6,000), which means R\$ 1,590 (roughly US\$ 500) per month. This value gets a little better for properties that can sell to cooperatives or to cheese factories. In this case, the annual value

goes to R\$ 41,100 (roughly US\$ 13,000), which means R\$ 3,425 (roughly US\$ 1080) per month, as it can be seen in table 10 (EMATER-RS, 2015).

Table 10 - Difference of value produced between normal rural properties and properties that can sell to cooperatives or to cheese factories

	Normal rural properties	Properties that can sell to cooperatives or to cheese factories
Annual value produced	R\$ 19,000 (roughly US\$ 6,000)	41,100 (roughly US\$ 13,000)
Monthly value produced	R\$ 1,590 (roughly US\$ 500)	R\$ 3,425 (roughly US\$ 1080)

Source: Designed by the author (2017).

This is likely the reason why only 60,7% have appropriate physical conditions for hygienic milking, and only 38,7% has heated water, which is extremely important for the right hygiene of the equipment of milking and cooling. Even though, 2.102 companies buy milk in the state, corresponding an average of 4,5 companies by each town, among these companies, there are the cooling stations. In the state, there are 59 of them able to support 10,5 million liters per day, which represents an average of 181.224,4 liters per day for each cooling station. 89,8% of them are under (federal) SIF inspection, 6,8% under (state) CISPOA inspection and 3,4% under (municipality) SIM inspection<sup>1</sup> (EMATER-RS, 2015).

Also, in the state, there are 255 milk processing industries, 67,8% of them are considered small unities (with municipal inspection), and represents 1,3% of the total processing milk. On the other hand, 35 industries, all large companies (with federal inspection) are able to process 17,2 million liters/day, corresponding to 93% of the total processing. The total capacity of industrialization in the state is 18,5 million liters/day, or 6,75 billion/year, but only 62,4% of this goes to the industry, representing 38% of industrial idleness.

An important statistic is related to the production difficulties in the state. The data shows that 46% of producers has a lack of labor, 41% have no descendants or, the ones who have, their descendants do not have an interest in the activity. 31,7% of them have milk quality deficiency, and 29,5% have a reduced scale of production. Also, 22,8% have restrictions on the supply of electric energy, and 22,6% are affected by the precariousness of roads for milk collection. In addition, 10,7% suffer from the industry's lack of interest in acquiring milk, and 8% of the producers have credit access difficulties.

<sup>1</sup> The inspection terms and functions are going to be better explored in the next subsection.

## 4.2 HOW DAIRY COMPANIES' CERTIFICATION SYSTEM WORKS

In Brazil, dairy companies must be legally registered in one of the three existent programs. Any agroindustry to be certified to legally commerce products of animal origin is required to obtain one of these 3 seals: The seal of the Municipal Inspection System - SIM (Sistema de Inspeção Municipal - SIM); in the case of the State of Rio Grande do Sul, the Seal of the Coordination of Inspection of Products of Animal Origin - CISPOA (Selo da Coordenadoria de Inspeção de Produtos de Origem Animal - CISPOA); or the Seal of Federal Inspection System – SIF (Sistema de Inspeção Federal - SIF).

- The seal of the Municipal Inspection System - SIM (Sistema de Inspeção Municipal – SIM) is provided by city halls. It allows the commerce of dairy products only within the respective municipalities.
- The seal of the Coordination of Inspection of Products of Animal Origin - CISPOA (selo da Coordenadoria de Inspeção de Produtos de Origem Animal - CISPOA) is issued by the Secretariat of Agriculture, Livestock and Agribusiness of the state of Rio Grande do Sul. It permits the commerce of dairy products between municipalities within the borders of the state.
- The seal of the Federal Inspection System - SIF (Sistema de Inspeção Federal – SIF). The Ministry of Agriculture, Livestock, and Supply concede SIF and it allows dairy companies to trade within and even outside the country (UNIVERSIDADE DE PASSO FUNDO - UPF, 2016).

SIF is the most important certification among the three existing ones. Currently, there are more than four thousand Brazilian establishments working according to SIF's inspection. All products with animal origin under the responsibility of the Ministry of Agriculture, Livestock, and Supply are registered and approved by SIF. The certification aims to provide sanitary and technological quality for consumers. This is very important because presently Brazil exports products of animal origin to more than 180 countries, standing out as one of the main exporters worldwide (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA, 2017).

It is important to mention that companies certified by the three different certifications (SIM, CISPOA, SIF) were involved in the frauds, proving the existence lack of regulation and enforcement, in this case. The next section shows how these companies used to make the frauds.

## 4.3 HOW ADULTERATIONS HAS OCCURRED

### 4.3.1 Beginning of Investigations and Chemical Processes

According to the interview of MPRS, in the early of 2013, it was the first stage of operation Leite Compensado, which in a free translation means reimbursed milk. Leite Compensado is a task force among official agents to investigate and combat the milk frauds in the state of Rio Grande do Sul. According to the interviewed prosecutor that still coordinates the operations, Mauro Rockenbach, all started when his colleague, the prosecutor Alcindo Bastos, who investigates crimes against consumers, called him asking if he would be willing to make an investigation into the milk sector. That because Alcindo Bastos received two reports from the Ministry of Agriculture, Livestock and Food Supply (MAPA) that pointed out the presence of Formaldehyde, a carcinogenic substance, in a milk sample. This information was gathered as part of a technical cooperation agreement that was signed in 2007, involving the Ministry of Agriculture, Livestock and Food Supply (MAPA), the Secretariat of Agriculture, Livestock and Agribusiness of the State of Rio Grande do Sul (SEAPA-RS), and some laboratories certified by both the SEAPA-RS and the MAPA to make analyses on dairy products.

The reports analyzed samples of milk products ready for the consumption, available to the consumers on the shelves of the supermarkets. At the time, four brands of milk were already adulterating the product. Firstly, the Public Prosecutor's Office of the state of Rio Grande do Sul (MPRS) drew up a strategy to identify what other substances could be being added to the product, since the report only revealed formaldehyde. Then, the strategy was to discover who was making the frauds, where they were doing it, and how they were buying or manufacturing this product.

Mauro Rockenbach revealed to have been frightened and astonished with the situation. Because it was a carcinogen substance available to consumers, he wondered if it was not up to them to warn the population through the press, about the risks of consuming specific brands. However, if he had done that, they would not know now who, when, where, why, and what method was used by fraudsters, since the fraudsters would be warned and, then, would modify their operations.

This way, MPRS started the investigation by identifying the product. They had an information, coming from an inspector, that in the western part of the state, he heard one of the transporters (one of the drivers) say they had a "magic little white powder" that was usually

added to the milk during the gathering. Then, the MPRS requested to the inspector to collect a sample of the milk transported by this transporter. At that point, the MPRS did not know what that “magic little white powder” substance was, what it was for, and if it was industrialized or handmade. They only knew that it could have formaldehyde in the milk and this chemical substance was used to conserve the milk 30 years ago when the rural sector had a higher lack of infrastructure. However, this kind of fraud was no longer used because of the access to electricity and the current equipment used in the farms.

The return of this crime 30 years later caught the attention of the technicians of the MAPA and prosecutors of MPRS. As time went on, the investigation advanced and the MPRS had access to a dossier that circulated over the whole state. It was a dossier elaborated about the milk production chain in which businesspersons and technicians knew specific situations. Through this dossier, the MPRS had access to specific information from people who knew about the frauds. This way, the operations were focused on two main cores, the core of Birubá and the core of Guaporé, two cities in the state. It was the operation Leite Compensado I that identified two main groups practicing volume frauds, which consisted of adding water to the milk.

Therefore, as fraudsters added water to the milk, that extra water changed the technical milk patterns, specifically changing a pattern called cryoscopy. A cryoscopy is a laboratory mechanism used to determine the freezing point of a solution. It allows identifying the concentration of a solution or the volume of solute that has been dissolved in a solvent. This is a test especially used in the dairy industry to measure the milk quality, accordingly to Andrea Troller Pinto, coordinator of LEITECIA, a specialized milk laboratory of the Veterinary School of the Federal University of Rio Grande do Sul (UFRGS). Essentially, milk has a freezing point (-0,530°C to -0,550°C) other than the freezing point of the water (0°C). Consequently, when fraudsters put water in milk, the water has a reverse movement, this simple addition causes milk's freezing point to approach zero, not meeting milk standards.

In order to cheat the process, fraudsters used a very skilled specialist in chemical procedures, such as chemical engineers and industrial chemicals. These professionals discovered that adding urea (urea fertilizer) to milk hides the addition of water from the laboratory analyses. This happens because, although urea contains non-protein nitrogen, unlike milk, which has protein nitrogen, urea has some substances that deceive laboratory analysts during the testing. These substances cause the freezing point of milk to be stabilized according to milk standards during the cryoscopy test.

However, urea contains formaldehyde. It is important to mention that formaldehyde fraud was not the one intended by fraudsters, they did not put formaldehyde to conserve the milk. The formaldehyde fraud was incidental; it emerged incidentally in the milk with the employment of urea. Then, the MPRS contacted Petróleo Brasileiro S.A. (Petrobras) and Petrochemical poles of Camaçari and Triunfo and discovered that formaldehyde was recently being used as one of the substances to produce urea fertilizer. It was not used before, but lately, it had been added to urea to make it more efficient as a fertilizer. Then, the formaldehyde appeared incidentally in the milk, because the fraudsters did not realize that urea had an improved formula, which contained formaldehyde in it.

#### **4.3.2 Three Existing Types of Frauds**

There are three types of frauds: fiscal fraud, fraud of quality and fraud of volume. Fiscal fraud occurs more intensely with cheese products. The cheese is made from a specific quantity of liters of milk. The milk used is desorbed and dehydrated, such as "whey", and then, it is curdled and added the needed products on it. After that, the cheese is pressed to eliminate the whey from the cheese. That is when fraudsters act, they use this whey again in the milk, and they return it to the milk. It is relevant to mention that it cannot be misidentified as tax evasion. However, it also happens during this process, but it is not proper. Fiscal fraud is spinning off something back to the original product.

According to Andrea Troller Pinto, coordinator of LEITECIA, fraud of quality happens when chemical substances are added in order to recover, adjust or stabilize a milk that was being lost. Milk is a living substance since it has Micro bacillus (living beings inside it), the product is in constant changes. The same product now will be different in two hours and so on. Therefore, the specialist in chemistry discovered some substances that fix the most varied nature changes in the product. For instance, if milk is getting acidic, which is a normal process due to the time, fraudsters stabilize it by placing alkaline substances, reducing the acidity. According to Mauro Rockenbach, one of the alkaline substance used by fraudsters is caustic soda, which is extremely alkaline.

Additionally, when the normal process of microbial action is happening, the microbes begin to proliferate inside the milk. At this moment, fraudsters put an antiseptic solution to stabilize it, stopping the proliferation of microbial action. This antiseptic solution is hydrogen peroxide. This substance has the same chemical structure composition than water, which makes it difficult to detect in tests. Hydrogen peroxide chemical composition is H<sub>2</sub>O<sub>2</sub>, while the water

is H<sub>2</sub>O, so it has just one extra molecule of oxygen than water. In short, if the milk is acid, they use caustic soda. If the milk is having microbial action, they put hydrogen peroxide.

Finally, as already mentioned before, the fraud of volume occurs when fraudsters supplement water or some other cheap product to increase the quantity of the milk. To mask the water inside the milk, they use sugar, but especially salt. The salt is used to freeze it faster because lowering the temperature, it lowers the freezing point of the milk. In the table 11 bellow, it is summarized the three existent types of frauds.

Table 11- Existent types of frauds

<b>FISCAL</b>	<b>QUALITY</b>	<b>VOLUME</b>
TYPICALLY OCCURRED IN THE CHEESE PRODUCTION, FISCAL FRAUD IS BASICALLY BACK THE SPINOFF BACK TO THE ORIGINAL PRODUCT.	FRAUD OF QUALITY IS THE USE OF CHEMICAL SUBSTANCES IN ORDER TO RECOVER, ADJUST OR STABILIZE A MILK THAT WAS BEING LOST.	FRAUD OF VOLUME IS THE SUPPLEMENT OF WATER OR SOME OTHER CHEAP PRODUCT TO INCREASE THE QUANTITY OF THE MILK.

Source: Designed by the author (2017).

Thus, as it can be seen, many are the tricks used by fraudsters to improve their profits. Following, it is explained how it usually happens.

#### **4.3.3 How Frauds Happened**

In the milk chain, between the farmers and the dairy companies, there are the intermediary entrepreneurs, which are the transporting companies and owners of the cooling stations. After farmers making the milking, the product goes straight to the industry or it can pass through cooling stations, which are silos. The entrepreneurs who have the silos receive several small loads and store it in their larger silos to, then, transport it again. This happens because there are many farmers that are too far from the dairy companies. This way, the milk must be properly frozen before it arrives at the company, otherwise, it would deteriorate.

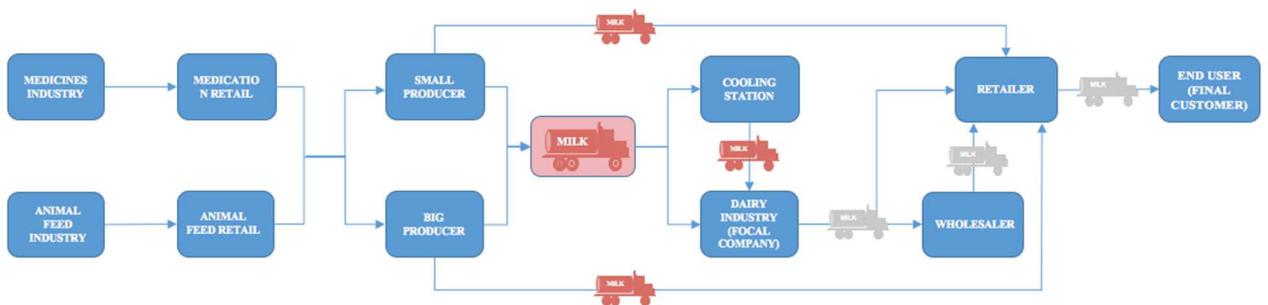
In this scenario, in the middle of the supply process, there are the transporters. These freight carriers usually are self-employers that work as entrepreneurs, putting an isothermal tank on top of their trucks and make the transport of milk from the farmers to the cooling station. This independent entrepreneur figure emerges because the industry would have to spend too many resources to do the logistic process, which is a secondary activity for them. The companies would have to invest too much money for having employees and trucks to gather the milk in the assorted regions of the state.

The state of Rio Grande do Sul traditionally has the characteristic of having very small farmers that produce very small quantities of milk; this peculiarity may change accordingly to the state. Then, in reason of this, there are too many small rural roads that only small trucks can access it. These trucks that meander the countryside roads usually can load up to seven thousand liters of milk in their tanks. They stop at every farm and pick up every small quantity of milk from the small farmers.

Each truck has their so-called “route”, and each driver (self-employed) has their own route. Each route may have more than twenty small farmers on the itinerary. Every day the driver collects the milk and takes it to the cooling station to freeze it. Subsequently, the cooling station gets milk from several trucks, from different carriers. Then, after the freezing process, they put the milk in a bigger truck, with a loading capacity of more than fifty thousand liters and pass the milk to the industry. In sum, there are two main possibilities of adulteration, one when the small trucks take the milk to the cooling station or to the industry, and the other when big trucks make the transportation to the industry, usually known as "second route".

Because there was no legislation, no penalties or duties for shipping carriers, beyond the tie distances between the manufacturing companies to their suppliers, some transporters took advantage of this circumstance. The transporter that carried the milk between the small farmers and the industry was remunerated by volume of milk, that is, per liter transported to the industry. Thus, to raise the volume, the addition of water was used, same as other chemical products, to different proposals, such as fiscal frauds or frauds of quality.

Table 12 - Dairy Chain and its intermediates



Source: Designed by the author (2017).

Table 12 shows the dairy chain. In it, it is described all the steps of the milk industrialization process, based on the data collected. It is possible to notice the role of transport in the chain. The trucks in red represent the sensible points of the process, where most of the frauds has happened. However, it is important to mention that, according to the data gathered, the frauds also have happened in the transport, in the source (producers), as well as in the retailer

unit. The trucks in gray represent the ones that, usually, are contracted by the focal company after the milk is processed.

Therefore, due to the complexity of the dairy chain, especially in the state of Rio Grande do Sul, many stages are vulnerable to be affected by frauds. It is hard for companies to control all these tiers, and to be competitive at the same time. In the next part, it is presented how the frauds were detected.

#### **4.3.4 Possibilities of Detection of Frauds**

The law requires that milk has to be analyzed by the truck driver just before he gathers the whole amount of milk from the farmer. The driver must apply a quick test in a sample of the milk that will be collected. However, this test only analyses the level of acidity of the milk. The driver must put a substance in a tub that changes the coloring accordingly to the level of acidity. Then, this is supposed to be the first possibility of fraud detection.

The second analysis must occur in the cooling station. There, beyond the level of acidity, others items are supposed to be analyzed such as the greasy content, possibility of formaldehyde use, among others. This second test, in the cooling station, should be more judicious.

The third test occurs in the industry plant. It should be just before the disembarking of the milk in their warehouses, while the truck is stopped on the platform waiting to unload it. This test should be very sensible, if any result is out of the standards, the whole milk load should be rejected. However, in this case, the ones making the first test were the ones causing the frauds.

Besides that, according to Andrea Troller Pinto, coordinator of LEITECIA, the tests are hard to be applied. She explains that it is only possible to test something that is known that it could be in the milk. For instance, if it is inserted any unknown substance, it is not likely to be discovered, because it has to be a specific test for each substance that it is supposed to be in the milk, to that, it must be known what substances might be in the milk.

#### **4.4 INSTITUTIONS IN THE DAIRY CHAIN**

To compose and present the data in this section, that explores the influences of the main institutions in the chain, as well as, the relationship between a focal company to its suppliers, it was used the cited references, previously presented, in the literature review. Crossing the data between secondary data and the applied interviews, it was possible to notice that there are many institutional representatives, with distinct interests, that influence the dairy sector. It goes from

governmental institutions, responsible for regulations and inspections, to small associations that fight for their own survival interests.

Firstly, next to the secondary data analyze, aiming to better understand the scope of the situation experienced in the sector, this study started making an exploratory interview in a specialized institution that studies the milk produced in the state of Rio Grande do Sul. Moving forward, in reason of the regulation crisis, the interviews were focused on official authorities, such as state and federal institutions and so on.

Then, following, all the institutions are described and categorized according to their institutional roles: regulatory institutions, normative institutions and class institutions. Besides that, in this part, it is presented their positioning towards the frauds, the chain and what they agree and disagrees each other. It is important to make sure that, although it was interviewed the representatives of each institution, the answers may have the personal bias of the person interviewed.

#### **4.4.1 Institutions and its Roles**

##### **LABORATORY OF INSPECTION AND TECHNOLOGY OF MILK AND ITS DERIVATIVES, EGGS, AND HONEY OF THE FACULTY OF VETERINARY OF THE FEDERAL UNIVERSITY OF RIO GRANDE DO SUL (UFRGS) – LEITECIA (LABORATÓRIO DE INSPEÇÃO E TECNOLOGIA DE LEITE E DERIVADOS, OVOS E MEL LEITECIA DA FACULDADE DE VETERINÁRIA DA UFRGS - LEITECIA)**

This is a specialized milk laboratory of the faculty of veterinary of the Federal University of Rio Grande do Sul (UFRGS). LEITECIA comprises professors, researchers, graduate and postgraduate students that work in the laboratory of inspection and technology of milk and dairy products, eggs, and honey. Its main lines of research are milk quality and food microbiology. Its goals are to comprehend and develop the dairy, eggs and honey chains. The laboratory performs continuing education and technical advice in the areas of hygiene and sanitation. Also, besides stimulating the consumption of these products and its derivatives, LEITECIA supports the implementation of better industrial practices, processes controls, hazard analysis, development of new technologies and improvement of professionals that work in these sectors of activity (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL - UFRGS, 2016).

**BRAZILIAN MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY – MAPA (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA)**

In the dairy sector, MAPA is the most important normative and regulatory institution of the country. MAPA is responsible for the management of public policies to stimulate agriculture, development of agribusiness, regulation, and standardization of services related to the sector. MAPA has 11,000 servers spread across the country and has a permanent structure of 5 secretariats, 27 state superintendents and their respective units, a network of 6 labs, being that 2 are linked to the National Institute of Meteorology (INMET) and the Executive Committee of plan of Cocoa Farming (CEPLAC) (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA, 2017).

**SECRETARIAT OF AGRICULTURE, LIVESTOCK, AND AGRICULTURE OF THE STATE OF RIO GRANDE DO SUL – SEAPA/RS (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO DO ESTADO DO RIO GRANDE DO SUL – SEAPA/RS)**

This state agency, the second most important normative and regulatory institution in the state, has a specific area focused on the milk chain: The Milk Production Chain Sectorial Chamber of the State of Rio Grande do Sul. SEAPA/RS coordinates the activities of the chamber, where it discusses the sector, especially those subjects involving public power. Its main objective is the development and strengthening of the productive chain, creating action strategies and synchronizing all entities that act in favor of the milk chain, one of the main productive chains of the state of Rio Grande do Sul (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO – SEAPA/RS, 2016).

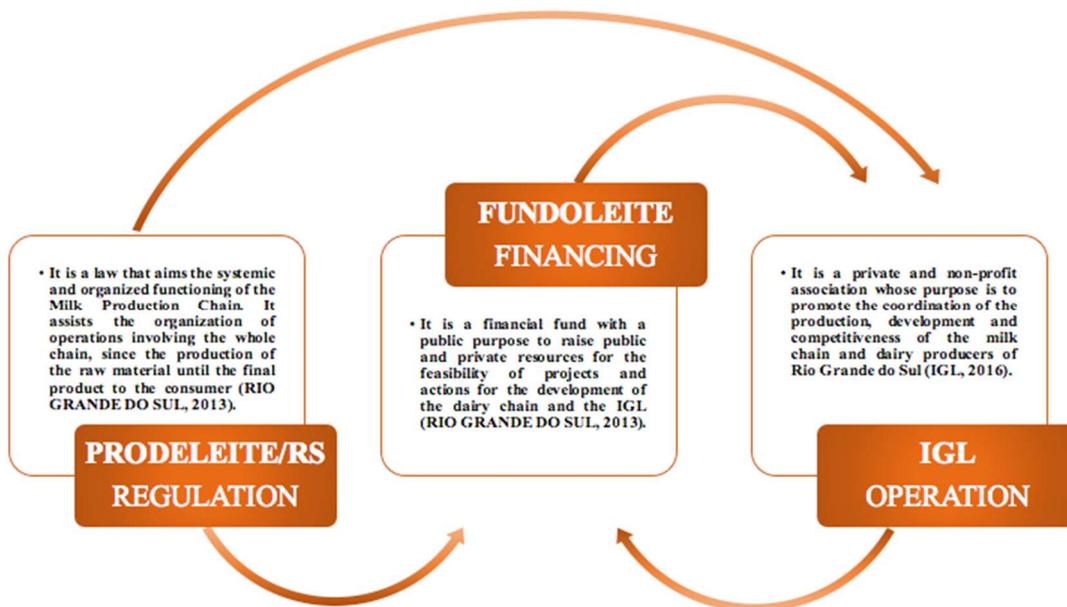
**GAUCHO INSTITUTE OF MILK – IGL (INSTITUTO GAÚCHO DO LEITE - IGL)**

The institute is a private and non-profit associative institution, composed of 35 legal entities with corporate representatives of producers, industry and direct and indirect administration agencies. Its function is to promote the coordination of production, development, and competitiveness of the dairy chain of the state of Rio Grande do Sul (INSTITUTO GAÚCHO DO LEITE - IGL, 2016).

IGL is an important institution in the state, it is the only authorized institution responsible for managing the general and specific objectives of FUNDOLEITE, a development fund for the dairy production chain of Rio Grande do Sul (Fundo de Desenvolvimento da Cadeia Produtiva do Leite do Rio Grande do Sul - FUNDOLEITE). In the state, all the milk companies

have to contribute a monthly installment that goes to FUNDOLEITE, which is a fund reserve established in accordance with the law of PRODELEITE. The Program for the development of the dairy chain – PRODELEITE (Programa de Desenvolvimento da Cadeia Produtiva do Leite - PRODELEITE) is a chain development program that establishes the regulation of the operations of the dairy production chain, covering the production of raw materials to the supply of the end product to the domestic and international markets (INSTITUTO GAÚCHO DO LEITE - IGL, 2016).

Table 13 - Structure operation of milk the production



Source: Adapted from Instituto Gaúcho do Leite - IGL (2016).

The table 14 illustrates the functioning structure of the milk production chain in the State of Rio Grande do Sul, named as Structure Operation (Trilogia da Estrutura de Funcionamento).

### **PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF RIO GRANDE DO SUL – MPRS (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS)**

MPRS is an essential institution to the jurisdictional function of the State, which is responsible for defending the legal order, the democratic regime, and the inaccessible social and individual interests. MPRS is responsible, before the judiciary, for the defense of the legal order and the interests of society and for the faithful observance of the constitution (of the laws). In addition, the institution is responsible for the collective defense of consumers. It acts in cases involving adulterated food, fuels and drugs, as well as misleading or abusive advertising, defects in products and services, abusive practices and clauses in electricity supply, telephone, water, collective transport, real estate contracts, private education, health plans, electronic

commerce and in other cases of threat or injury to the community (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS, 2016).

**ASSOCIATION OF SMALL DAIRY INDUSTRIES OF RIO GRANDE DO SUL - APIL (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL)**

This is an association composed of small dairies (and its derivate) and farms. To be a member of APIL, the dairy industries must produce daily quantities of milk fewer than 50,000 liters; must be legally registered as a company; and must be municipality, stately or federally certified to produce milk. The main purposes of APIL are to provide direct access to the current legislation, help members to have access to financial institutions, facilitate the participation of members in the market and provide operational training to members and their employees. Today APIL has 56 dairy companies, this corresponds roughly 65% of the cheese production in the state of Rio Grande do Sul. It is about one million liters of milk per day, produced by, around 20 thousand people that work for small and medium farmers (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL, 2017).

**SULINA ASSOCIATION OF CREDIT AND RURAL ASSISTANCE - EMATER/RS-ASCAR (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS-ASCAR)**

Emater/RS is a private company contracted by the state of Rio Grande do Sul to support the training of rural farmers and young people, as well as socially and financially assist these people. That is, Emater/RS is responsible for helping the professional development of the dairy chain and its workers. The institution has more than 2000 employees spread out over the state that assists 480 cities and 9,550 rural communities, especially rural workers that, for any reason, are away from the industry (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS, 2016).

**AGRICULTURAL FEDERATION OF RIO GRANDE DO SUL - FARSUL (FEDERAÇÃO DA AGRICULTURA DO RIO GRANDE DO SUL - FARSUL):**

Farsul is one of the oldest federations of the regional entities in Brazil. It is maintained by the contribution of the syndicates of rural producers and is directly related to the government of the State of Rio Grande do Sul. This institution supports the development of agribusiness and agriculture. Besides promoting rules, standards and training, its main function is making the political representation of the agricultural sector with representatives of the state

government (FEDERAÇÃO DA AGRICULTURA DO RIO GRANDE DO SUL - FARSUL, 2017).

### **UNION OF RURAL WORKERS OF TEUTONIA AND WESTPHALEN (SINDICATO DOS TRABALHADORES RURAIS DE TEUTONIA E WESTFÁLIA):**

This is a union institution constituted to legally represent the professional category of rural workers that act in one of the most important milk regions of the state of Rio Grande do Sul. Its main purpose is to work for the specific rights of rural workers and to the rights of family agriculture (FETAG, 2017).

### **GAUCHO ASSOCIATION OF THE DAIRY INDUSTRY - AGL (ASSOCIAÇÃO GAÚCHA DE LATICINISTAS E LATICÍNIOS - AGL)**

This is a non-profit entity, founded in 1979, directed to all members who participate directly or indirectly in the dairy chain. It promotes information about the latest news in the dairy area, offers discounts on events and professional excursions, promotes training, and provides market statistics and indexes about the milk sector. AGL has 409 members, they are all professionals and companies from the dairy sector, technicians, farmers, machinery and equipment manufacturing for dairy products, refrigerators or suppliers of dairy products, etc. All the main cooperatives of Rio Grande do Sul are members of AGL, except the Cooperativa Central Gaúcha (CCGL). AGL was truly the pioneer in a number of programs, for instance, the creation of the State Milk Council – CONSELEITE (Conselho Estadual do Leite - CONSELEITE), which helps to establish a perspective price of the milk based on the market and production (ASSOCIAÇÃO GAÚCHA DE LATICINISTAS E LATICÍNIOS – AGL, 2016).

Table 14 - Institutions explored in the research

TYPE OF INSTITUTION	LIST OF INSTITUTIONS INTERVIEWED	INTERVIEWEE POSITION
REGULATORY AND NORMATIVE ENTITY	BRAZILIAN MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY – MAPA (MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO - MAPA)	A)FEDERAL AGRICULTURAL INSPECTOR
	SECRETARIAT OF AGRICULTURE, LIVESTOCK, AND AGRICULTURE OF THE STATE OF RIO GRANDE DO SUL – SEAPA/RS (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO DO ESTADO DO RIO GRANDE DO SUL – SEAPA/RS)	A)TECHNICAL COORDINATOR OF MILK PRODUCTION CHAIN SECTORIAL CHAMBER OF THE STATE AND EXECUTIVE SECRETARY OF THE FUNDOLEITE

	PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF RIO GRANDE DO SUL – MPRS (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS)	A) PROSECUTOR OF THE PROMOTION OF SPECIALIZED CRIMINAL JUSTICE OF PORTO ALEGRE B)PROSECUTOR OF THE PROMOTION OF CONSUMER DEFENSE OF JUSTICE OF PORTO ALEGRE
SUPPORTING ENTITY	LABORATORY OF INSPECTION AND TECHNOLOGY OF MILK AND ITS DERIVATIVES, EGGS, AND HONEY OF THE FACULTY OF VETERINARY OF THE FEDERAL UNIVERSITY OF RIO GRANDE DO SUL (UFRGS) – LEITECIA (LABORATÓRIO DE INSPEÇÃO E TECNOLOGIA DE LEITE E DERIVADOS, OVOS E MEL LEITECIA DA FACULDADE DE VETERINÁRIA DA UFRGS - LEITECIA)	A)PROFESSOR AND COORDINATOR OF LEITECIA
	SULINA ASSOCIATION OF CREDIT AND RURAL ASSISTANCE - EMATER/RS-ASCAR (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS-ASCAR)	A)STATE TECHNICAL ASSISTANT IN THE AREA OF DAIRY CATTLE
	AGRICULTURAL FEDERATION OF RIO GRANDE DO SUL - FARSUL (FEDERAÇÃO DA AGRICULTURA DO RIO GRANDE DO SUL - FARSUL)	A) FINANCIAL CHIEF OFFICER AND COORDINATOR OF GRAINS AND MILK COMMISSION
SUPPORTING AND ASSOCIATIVE ENTITY	GAUCHO INSTITUTE OF MILK – IGL (INSTITUTO GAÚCHO DO LEITE - IGL)	A) EXECUTIVE DIRECTOR B) LEGAL AND PARLIAMENTARY ADVISOR
ASSOCIATIVE ENTITY	GAUCHO ASSOCIATION OF THE DAIRY INDUSTRY - AGL (ASSOCIAÇÃO GAÚCHA DE LATICINISTAS E LATICÍNIOS - AGL)	A)PRESIDENT
	ASSOCIATION OF SMALL DAIRY INDUSTRIES OF RIO GRANDE DO SUL - APIL (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL)	A) EXECUTIVE SECRETARY B)MEMBER OF BOARD OF DIRECTORS AND FORMER PRESIDENT
CLASS ENTITY	UNION OF RURAL WORKERS OF TEUTONIA AND WESTPHALEN (SINDICATO DOS TRABALHADORES RURAIS DE TEUTONIA E WESTFÁLIA)	A)PRESIDENT

Source: Designed by the author (2017).

Table 15 presents a summary table of all institutions explored during the data collection. Its types, termed as regulatory and normative entities, supporting entities, associative entities, and class entities, categorize the institutions. Additionally, the table shows the position performed by the interviewees.

#### 4.4.2 Institutions' Perceptions on Frauds

According to the interviews, all institutions, for sure, are against the frauds. However, interestingly, the interviewed B from APIL mentioned a conniving position. He revealed that for the domestic dairy industry it is not interesting to have water or chemicals in the milk,

because the milk cannot be fermented to produce cheese, desiccated milk drinks or Greek yogurt, for example. However, for him, as long as the fraud has nutritional value, there are no problems, like adding corn to cheese, peanuts or milk chocolate, for example. For him, the problem exists when one adds a chemical that can cause digestive damage to human beings.

Contrariwise, for the interviewed from LEITECIA, any substance put in the milk is considered a serious fraud and it is harmful to the consumer, even if it is water. For her, in Rio Grande do Sul, especially from 2013 to 2015, it happened the establishment of a criminal gang that had seized weapons and false invoices, inclusively. It occurred because milk is a very vulnerable raw material since it is the only material of animal origin that has no packaging. The meat, for example, goes to the slaughterhouse inside the ox and the animals are transported alive or the eggs goes inside the shell. Historically, since the 1980s, milk fraud linked to the producer is being studied. However, it changed the configuration of the milk business. In the past, the industry and the producer had more direct contact. Today there is the transporter in this environment, with remuneration, by the companies, for the volume of milk delivered. The milk carrier, in this case, is a milk buyer. If they fit 30 thousand liters in the truck, each delivery with 27 thousand liters, for example, the cost attached to the business increases. Therefore, in Rio Grande do Sul, this sets the issue of transporter fraud.

The interviewed from LEITECIA mentioned that the problem might happen at any ties of the supply chain. In 2007, in Minas Gerais, for example, there was a problem within the industry. In Rio Grande do Sul, also happened the defect within the industry motivated by the idle capacity of the companies. There was demand for milk and there was no total enough production in the companies. Milk is a seasonal product, because animals do not produce the same amount of milk throughout the year. Throughout the physiological state, between two births of the cattle, there is an oscillation in milk production, which does not allow companies to always work in full production, using on average only 70% of production capacity. From the point of view of resource use, the industry cannot waste milk, of course, except for spoiled milk. Therefore, due to idle capacity, there are companies that buy a milk that is not in the standard of quality and changes it into a consumable product. Often selling water in the form of milk or dairy products. That is, the industry can handle the quality of milk.

However, frauds are not solely practiced in these links of the chain. Either interviewed A from APIL as the interviewed B from IGL and the interviewed from AGL cited one important tie of frauds, which are not under investigations, is the last tie of the chain, the retailer. According to them the expire date are reprinted to sell old milk as it was fresh, as well as, retailers turn off the freezing electricity during the night to reduce the costs and it directly affect

the characteristics of the product, resulting in a fraud of quality. Although, in the interviewed point of view, in reason of the retailers' economic power they are never investigated. Corroborating to this, the interviewed from MAPA mentioned that frauds could occur in any tie of the supply chain, it includes the cooling station, the producers, and retailers, for example.

Despite that, the common sense among the interviewees is that the most vulnerable tie is the transport. According to the interviewed from MAPA, in Rio Grande do Sul, the cooling station system is very strong since practically only half of the establishments are refrigerated. Not only that, but the existence of many small producers, are some of the characteristics of the states of Rio Grande do Sul and Santa Catarina. For the interviewed from MAPA, in fact, the existence of refrigeration stations in Rio Grande do Sul is salutary because they are closer to the producers. Therefore, it is easier for the producer to deliver milk to that nearest location and for the company to collect milk from producers that are more distant. Nevertheless, in Rio Grande do Sul, according to the interviewed from SEAPA, to transport this milk from the producer to the cooling stations or to the industry there is the figure of the autonomous transporter.

The interviewed from SEAPA said this transporter, in many cases, has no link with the industry. Therefore, the milk producers do not know to which company they sold their milk. They only know that a transporter collected and paid for milk. In the middle of this path, there is the cooling station, which is responsible for cooling that milk and then selling it to some industry. For him, this is also a very fragile stage, because it is at this moment that frauds usually happen. This is because poorly assisted producers, who have difficulty having high-quality milk or have low volume production, do not always have collected their milk from the industry. These producers have a more fragile situation because, generally, their milk is not of very good quality.

The interviewed from SEAPA explained that when the transporter collects the milk, he usually makes two checks. The first is if this milk is acidic (sour milk is a milk that it has no industrial yield, it is a low-quality milk). This acidity is due to bacterial actions. Therefore, the transporter should not collect this milk. The second is to measure milk's temperature, which cannot be above 7 degrees Celsius. In this scenario, as some carriers have no link with any company, they collect this milk on their own. So, for example, if the milk rejected by a serious transporter of any industry, the fraudster transporter ends up collecting that milk. The position of the producer who, for example, supposedly would receive 1 Real per liter of milk, ends up not receiving it because his milk is out of the standards. In this case, the fraudulent transporter

offers half of the value, such as 50 cents, and the producer right away accepts it because his milk would be disposed of anyway. That is, the transporter, in fact, is a dealer, a business broker.

The interviewed from LEITECIA said the trucks that collect the milk from the small properties and transport it to the cooling stations are small trucks since the municipal roads do not have the capacity for big trucks. It is a complicated logistics system. The interviewed from MPRS mentioned that in this scenario, the figure of the transporter is of great importance since the industries do not do this transportation because they do not have a logistic preparation for this type of activity. To carry out this transportation, the industry would need to have trucks to fetch milk in the most remote regions of the state. The transporter works with trucks of six or seven thousand liters of load capacity - that perform "routes", in which they pass through a number of rural producers who are on their itinerary.

Thus, according to the interviewed from LEITECIA, the companies receive milk from different locations located within and often out of state. In this dynamics of the cooling station, small producers distribute to large companies, as multinationals, for example. This is a logistical possibility for large companies and cooperatives. For small and medium companies, this setting no longer applies. This is because, in general, small industries are very close to the farmer and often a closer relationship is established between the small business and the small producer. To overcome this situation, some companies have their own trucks and drivers, but this does not necessarily guarantee the non-occurrence of fraud.

Frauds are a historical problem in Brazil, but in the state of Rio Grande do Sul, the presence of the transporter facilitated the problem together with the lack of legislation, according to interviewed A from MPRS. The transporter took advantage of voids such as the lack of approximation between the producer and the cooling station or industry and absence of legislation, sanction and duties (there was no law or regulation before January 2016). This view is supported by both interviewed from APIL since they affirmed frauds occurred due to the little relationship between the industry and the producers. However, there was a very close relationship between the intermediary (transporter) and the producers, which did not exist between industry and producers.

The result of this, according to the interviewed from AGL is that frauds have drastically reduced consumption and hit the state's milk image. However, after the crisis, there was an industrial reorganization, especially in terms of researches for improvements and technology for the industrial production of dairy products. Whereas the point of view of the interviewed from FARSUL is that the chain was not affected with frauds, but rather improved, because the investigations brought a qualification to improve the inspection factors, including the new milk

law that rules the penalties. On the other hand, the interviewed from Union of Rural Workers of Teutônia and Westphalen (Sindicato Trabalhadores Rurais de Teutônia e Westfália) criticized it affirming that frauds increased the requirements that milk producers have to fulfill. This has removed many producers from the activity because the companies demand a lot, but, in general, collaborate little with them. Besides that, the interviewed from EMATER affirmed that, in the end, although the problems occurred in the intermediation between the producer and the industry, the producers paid much of the damage, as many factories went bankrupt, leaving producers unpaid.

Despite all this, the interviewed from EMATER mentioned that, at least, frauds left some positive outcomes, such as the creation of the milk law, since there was no regulation in the sector in the state before. Corroborating to this point of view, the interviewed from MAPA affirmed that there have always been frauds among the producer, transporter, in the refrigeration station, and inside the companies. In fact, many companies opted to buy adulterated milk because it was financially advantageous. However, positively, after the frauds, several companies have become stricter in their milk selection and most have re-bonded directly with the producer, outsourced the transportation service and are beginning to invest in payment for quality.

#### **4.4.3 Perceptions of the Institutions' Representatives Regarding the Regulation Void and the Dairy Chain**

Field research shows very clearly that regulation institutional voids impact negatively the dairy chain. In terms of regulation, it is evident that the lack of regulation was the main cause that let frauds happen. Not only that, but it was a crucial reason. The two main responsible institutions for creating the law, MAPA and SEAPA, admitted that before the frauds there was no regulation able to prevent the situation. The SEAPA admits that, before the law of the milk, there was no prior legal basis to prohibit the transporters to trade the milk. Despite the milk law, the MAPA affirmed that the legislation in the country is still deficient, as there is no way to legally inhibit, permanently, a fraudster from the milk chain.

Following this stream, the MPRS declared that transporters took advantage of a regulatory institutional void (interviewed used exactly this expression), the lack of legislation, penalties and obligations. The legislation does not intimidate the fraudster and is inconsistent and unpunished. As the administrative rules of the Ministry of Agriculture are extremely outdated (dating from 1952), improvements in regulation and control would be crucial.

These interviewees positions agree to the Rottig's (2016) ideas, which considers that legal inefficiencies may promote uncertainty, unpredictability, and suspicion to accomplish contracts, which increase the transaction costs for firms. It means that, even if a company aspire to have reliable procedures, it does mean that its suppliers will make things in accordance to it, as the law does not support the company. The regulation void was present in all the interviews of this research. All the interviewed people mentioned that it was the leading motivation of making frauds happen since there were no rules and/or punishments.

As referenced in the literature review, this type of lack, the absence of regulation, is very typical of developing countries. Khanna and Palepu (1997) mentioned that regulation voids are entirely different from emerging to developed countries. Governments, in developing economies, intercede considerably in companies' operations. Moreover, firms have to adapt themselves to predict the behavior and conduct of regulatory organizations. In emerging economies, the law usually is unreliable and subjective. This is the reason why bureaucrats, bribes, and corruption work very close to this type of void. The result of this mistreatment of the regulatory system is that it might penalize the economy with extra costs.

Concerning bribes and corruption, in the two interviews of APIL, both interviewed mentioned that the milk chain has too much political and economic interests coming from multinational<sup>2</sup> companies. According to one interviewee, two international companies that have operations in the state financially support electoral campaigns in Rio Grande do Sul. The result of this is that the financed politicians work exclusively in favor of these companies since they are lobby sustained. The interviewed mentioned that important persons in the dairy chain are supported by these two multinationals. The same topic was present in the other two interviews from IGL. The interviewed mentioned that these two multinational companies in colligation to a huge local company have too much power and are able to destroy the plans for a sustainable chain. The interviewed revealed that these tree companies do not pay for the local taxes, named FUNDOLEITE, that are supposed to promote the dairy chain, due to their power of influence in the state govern and its politicians.

According to the interviewed, these companies colligated to two other powerful institutions, acting entirely in favor of the big companies in detriment of local and small

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<sup>2</sup> In Brazil, there are several local companies operating in the dairy sector, however, multinationals are the big players. Currently, the top five global dairy companies, in order, are Dairy Partners of America (Joint Venture between Nestlé and Fonterra), Lactalis (including Parmalat), Danone, Fonterra and Dairy Farmers of America (CANADIAN DAIRY INFORMATION CENTRE, 2015). Dairy Farmers of America is the only group that do not have operations in Brazil, the others are the main players in the country. In 2014, Dairy Partners of America was the leader company in Brazil, having 21% of milk acquisition, followed by the multinational BRF, which had obtained 15% (UNITED STATES DEPARTMENT OF AGRICULTURE - USDA, 2015).

companies and suppliers. The EMATER representative interviewed similarly mentioned that the milk sector suffers due to the articulation of large companies and political disputes. Likewise, AGL affirms that power struggles and political interferences affect the local industry. STR Teutonia and Westfália also affirms that these economic interest and political situations interfere directly in the frauds. For SEAPA the sector is disunited, with excessive competition between the industries.

These interviewer's arguments match Rottig's (2016) arguments, which state that misguided regulations consist in failures that generally benefit to political ambitions in detriment of greater economic efficiency and ultimately impact destructively on the market. For Puffer, McCarthy and Boisot (2010) the lack of formal institutions, such as government and correlated institutions, bureaucracies, the courts and law execution institutions are considered institutional voids. Trienekens (2011) affirms that government legislation, regulations, and policies can perform as institutional voids because they can create trade barriers, imposing unfavorable taxes or reject infrastructural investments.

Then, linking the authors concepts to the content of interviews, it is possible to understand how the political situation and economic interests interfere in the functioning of the milk chain. International consolidate companies influencing in the political situation and politicians working exclusively in favor of these companies. One important analysis to make, that emerged in the interviews, is the interest of big companies to fight against local companies, not only because of market share, but especially because of the supply of raw material. Since the raw material was scarce, and was making the companies operate only up to 70% of its productive capacity, as perceived in the LEITECIA interview. Therefore, having fewer competitors, besides dominating the market, makes it feasible to have abundant raw material, as perceived in the APIL and IGL interviews.

This political and economic situation results in deficient institutions and it meets Rottig's (2016) ideas that the absence or weakness of institutions is a factor typically detected in developing countries, which is an usual characteristic of emerging economies. Going beyond, the institutional theory reveals that regulatory, social and cultural aspects have effects on the survival and legitimacy of firms (BRUTON; AHLSTROM; LI, 2010). The theory's concept leads to the assessment that, for a good functioning of the market, institutions have to be effective in normative, cognitive and regulative aspects. If one of these structures has not been satisfied, institutional voids emerge.

Moreover, another issue that appeared in the interview of SEAPA, is the logistic structure of the state of Rio Grande do Sul that affects the milk transporters. In the MPRS interview, it

showed that the infrastructure of the roads in Rio Grande do Sul permit only small trucks, of the maximum load of 7 thousand liters, to collect the milk. In the interview of COTREL (a cooling station - supplier), it is possible to verify that transporters may drive for kilometers in unpaved roads, in precarious conditions. It reflects directly on the quality of the milk, according to the interview of EMATER. Thus, this point reaches Chakrabarty's (2009) thoughts that, through an economic insight, state that institutional voids consist in the nonexistence of institutions installations, rules, and regulations that are essential for the functioning of an economy. The lack of installations in Rio Grande do Sul clearly affects the development of the chain, interferes in the quality, and makes it harder for even the govern to work on inspections.

Another lack of structure, according to interviewed A from MPRS regards the inefficiency of inspections, both federal and state, and legislation that does not intimidate the fraudster. MAPA and SEAPA, corroborating to this, mentioned that there are not enough people to inspect the milk<sup>3</sup>. Along with this, as the interviewed A from MPRS said that the legislation is flawed and not enough punitive.<sup>4</sup> Thus, the administrative rules of the Ministry of Agriculture are very out of date, which really agrees with the author's thoughts about institutional voids occurring in emerging markets.

#### **4.4.4 How Institutions Differ**

It is clear that institutions have many differences in the dairy chain. It results in a fragile system that, ultimately, makes it easier for the occurrence of disruptions, and facilitates regulation and enforcement issues. Institutions have too much influence and their conflicts only produce disharmony in the chain. Different interests, as political and economic, generates a detrimental dispute that makes a loss for the whole sector. All the institutions mentioned that the image of the milk produced in the state was affected, that the frauds affected in a substantial reduction in sales, but, even so, there is no collective intention to reconstruct the chain.

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<sup>3</sup> According to the interviewee of MAPA, the interviewee highlighted that, in meat activity, for example, there is always a daily public inspector present in the refrigerator to inspect any animal slaughter. Then he inspects all the animals that come to slaughter and the flesh itself. In the milk sector, there is only, necessarily, the technical responsible that is contracted by the industry itself to guarantee the process of this industry.

<sup>4</sup> According to the interviewee of MAPA, “a criminal structure was created, even with the carrying of weapons. People with false identity documents, who were not registered to the Ministry of Agriculture. False documents used with municipalities, environmental agencies and the Ministry of Agriculture. The interviewee of MAPA says it is a shame the inexistence of strong legislation in Brazil, something to allow the Ministry of Agriculture or Justice to remove a fraudster from the milk chain. Because, today, unfortunately, a company may be doomed, but if it wants to open another industry, it can. There is no way to inhibit this; it is legally unconstitutional to prevent it.”

On the contrary, for instance, based on data collected in the IGL interviews, it is possible to notice that it was tried to build a model for the development of the dairy chain, a model designed for including all links in the chain, based on examples from developed countries, however, due to political interferences, it did not work. This model was created because the weakest ties in the chain are usually little served. However, based on data collection, it is noticed that there is a political articulation, funded by large multinational companies, to dismantle developing projects of the chain.

According to interviewed A from IGL, because of the weather, potential labor, the topography of Rio Grande do Sul, it is not attractive for other countries and multinationals that the state develops its chain and creates local companies able to become multinationals in the future. The interviewed informed that three powerful institutions<sup>5</sup>, wishing to have power over the chain, finance electoral campaigns of politicians to attend to their desires and economic interests. Therefore, it is possible to notice that intuitions have positions in the chain, each one with its own arguments and points of view.

Institutions have diverging concerns in regards to the new law of the milk. IGL, for example, says that, even though this law was born at IGL, but changed later due to political influences, it is very punitive in the way it is now. It has severe mistakes, particularly in relation to fines: there is no penalty dosimetry or parameter. In this law, the penalties are provided without warning; it is directly applied high fines, with no chances for companies or farmers to adjust their possible unconformities. AGL, APIL and the Union of Rural Workers of Teutonia and Westphalen have the same opinion about it, differing from the rest of the institutions.

Therefore, intuitions differ in many aspects. The conflicts between companies, institutions, and suppliers are critical for the chain. Because, not only it suffers from the existence of institutional voids, but is also shows that the sector is not united, which consequently has many impacts, including hindrance in development and sustainability. To summarize, it was designed the following table 16.

Table 15 - Summary of the crosschecking of data by institution

LIST OF INSTITUTIONS INTERVIEWED	SUMMARY OF THE INTERVIEW
BRAZILIAN MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY - MAPA (MINISTÉRIO DA AGRICULTURA,	<ul style="list-style-type: none"> <li>• THE MILK INSPECTION ONLY OCCURS WITH PERIODIC SCHEDULING BY COMPLAINT, I.E., THERE ARE NO PERMANENT INSPECTIONS.</li> <li>• MAPA DOES NOT HAVE ENOUGH INSPECTORS TO SUPPORT THE DEMAND.</li> <li>• FRAUDS HAPPENS IN ALL THE TIES OF THE CHAIN.</li> </ul>

<sup>5</sup> Considering that, this is the personal interviewed position and in reason of ethical procedures, the names of the institutions are conveniently unrevealed.

<p>PECUÁRIA E ABASTECIMENTO - MAPA)</p>	<ul style="list-style-type: none"> <li>• BEFORE THE FRAUDS, THERE WAS NO RELATIONSHIP BETWEEN COMPANIES AND PRODUCERS.</li> <li>• AN ALLIANCE BETWEEN INSTITUTIONS IS ESSENTIAL TO COMBAT FRAUDS.</li> <li>• THERE WAS A DISPUTE BETWEEN COMPANIES FOR MILK (RAW MATERIAL). AFTER THE FRAUDS, COMPANIES HAVE BECOME STRICTER IN THEIR MILK SELECTION.</li> <li>• COMPANIES ARE OUTSOURCING THE TRANSPORTATION AND INVESTING IN PAYMENT FOR QUALITY.</li> <li>• THERE WAS NO LEGAL FRAMEWORK PRIOR TO THE MILK LAW TO PROHIBIT THE COMMERCE OF MILK BY THE TRANSPORTERS.</li> </ul>
<p>SECRETARIAT OF AGRICULTURE, LIVESTOCK, AND AGRICULTURE OF THE STATE OF RIO GRANDE DO SUL - SEAPA/RS (SECRETARIA DA AGRICULTURA, PECUÁRIA E IRRIGAÇÃO DO ESTADO DO RIO GRANDE DO SUL - SEAPA/RS)</p>	<ul style="list-style-type: none"> <li>• BEFORE THE FRAUDS, THERE WAS NEITHER REGULATION REGARDING MILK PRODUCTION, NOR A LINK BETWEEN INDUSTRY AND TRANSPORTER (LEGAL RESPONSIBILITY).</li> <li>• IT IS EASY TO FRAUD BECAUSE THE STATE HAS LITTLE CONTROL AND A PRECARIOUS LOGISTICAL STRUCTURE.</li> <li>• ALTHOUGH THE MILK LAW IS A CONSTRUCTION OF SEAPA, THERE ARE NOT ENOUGH PEOPLE TO WORK ON INSPECTIONS.</li> <li>• THE MILK INSPECTION IS ONLY MADE BY SAMPLING OR COMPLAINT.</li> <li>• THERE IS DISUNION AND COMPETITION IN THE MILK SECTOR, MAINLY BETWEEN THE INDUSTRIES FOR PRODUCERS.</li> <li>• THE PRICE OF MILK IS TOO LOW FOR THE PRODUCER.</li> <li>• INDUSTRIES ARE BEGINNING TO PAY FOR QUALITY, BUT NOT TO THE TRANSPORTER.</li> </ul>
<p>PUBLIC PROSECUTOR'S OFFICE OF THE STATE OF RIO GRANDE DO SUL - MPRS (MINISTÉRIO PÚBLICO DO ESTADO DO RIO GRANDE DO SUL - MPRS)</p>	<ul style="list-style-type: none"> <li>• FRAUDS ARE A HISTORICAL PROBLEM IN BRAZIL, BUT THE PRESENCE OF THE TRANSPORTER AND THE LACK OF LEGISLATION AGGRAVATED THE SITUATION.</li> <li>• THE TRANSPORTER TOOK ADVANTAGE OF VOIDS SUCH AS THE LACK OF APPROXIMATION BETWEEN THE PRODUCER AND THE COOLING STATION OR INDUSTRY AND ABSENCE OF LEGISLATION, SANCTION, AND DUTIES.</li> <li>• THERE IS INEFFICIENCY IN THE FEDERAL AND STATE INSPECTIONS.</li> <li>• THE ADMINISTRATIVE RULES OF MAPA ARE OUTDATED.</li> <li>• AFTER THE FRAUDS, THE BAD MILK BEGAN TO GO TO SMALL DAIRIES INDUSTRIES.</li> <li>• IN ORDER TO REDUCE FRAUDS, IMPROVEMENTS IN REGULATION AND SUPERVISION WOULD BE NECESSARY.</li> <li>• PREMIUM REMUNERATION FOR BETTER QUALITY MILK COULD BE HELPFUL</li> </ul>
<p>GAUCHO INSTITUTE OF MILK - IGL (INSTITUTO GAÚCHO DO LEITE - IGL)</p>	<ul style="list-style-type: none"> <li>• IGL HAS BUILT AN INTEGRATIVE MODEL FOR THE DEVELOPMENT OF THE DAIRY CHAIN.</li> <li>• THERE IS POLITICAL ARTICULATION, FUNDED BY LARGE MULTINATIONAL COMPANIES TO DISMANTLE THE CHAIN AND THE PROJECTS ESTABLISHED BY IGL.</li> <li>• AFTER THE FRAUDS, THE STATE'S MILK SUFFERED GREATLY IN TERMS OF ITS IMAGE.</li> <li>• COOPERATIVES HAVE A VERY CLOSE RELATIONSHIP TO SUPPLIERS, DIFFERENT FROM MULTINATIONALS THAT ONLY MAINTAIN A COMMERCIAL RELATIONSHIP.</li> <li>• THE POSITIVE POINT OF THE FRAUDS WAS THE CREATION OF THE MILK LAW. HOWEVER, THIS LAW IS INEFFICIENT AND EXTREMELY PUNITIVE, WHICH CAN REMOVE MANY PRODUCERS AND COMPANIES FROM THE ACTIVITY.</li> </ul>
<p>AGRICULTURAL FEDERATION OF RIO GRANDE DO SUL - FARSUL (FEDERAÇÃO DA AGRICULTURA DO RIO GRANDE DO SUL - FARSUL)</p>	<ul style="list-style-type: none"> <li>• TRAINING AND AVAILABILITY OF LABOR CREATE DIFFICULTIES FOR THE SECTOR.</li> <li>• THE CHAIN WAS NOT AFFECTED BUT IMPROVED WITH THE FRAUDS (IN TERMS OF ENFORCEMENT AND REGULATION).</li> <li>• THERE ARE LEGISLATIONS THAT CANNOT BE FULFILLED AND ENFORCED. IN THE STATE'S CASE, THERE IS A WRONG LEGISLATION IN TERMS OF QUALITY.</li> <li>• COOPERATIVES HAVE DIFFERENT POLICIES REGARDING SUPPLIERS, BUT THE LAW OF SUPPLY AND DEMAND IS IMPERATIVE.</li> <li>• THERE IS NO POLITICAL FRICTION IN THE CHAIN.</li> </ul>
<p>GAUCHO ASSOCIATION OF THE DAIRY INDUSTRY - AGL (ASSOCIAÇÃO GAÚCHA</p>	<ul style="list-style-type: none"> <li>• THERE ARE POWER STRUGGLES AND POLITICAL INTERFERENCES THAT INTERFERE IN THE MILK INDUSTRY.</li> <li>• LEGISLATION IS EXTREMELY OUTDATED AND INSPECTIONS ARE INEFFICIENT.</li> </ul>

DE LATICINISTAS E LATICÍNIOS - AGL)	<ul style="list-style-type: none"> <li>• LARGE COMPANIES DO NOT HAVE CLOSE RELATIONS WITH SUPPLIERS, UNLIKE COOPERATIVES.</li> <li>• FRAUDS HAVE DRASTICALLY REDUCED CONSUMPTION AND AFFECTED THE STATE'S MILK IMAGE.</li> <li>• AFTER THE CRISIS, THERE WAS AN INDUSTRIAL REORGANIZATION IN TERMS IN RESEARCH FOR IMPROVEMENTS AND TECHNOLOGY.</li> <li>• THE NEW MILK LAW SERVES ONLY TO PENALIZE THOSE WHO ARE MARGINALIZED IN THE QUALITY PROCESS.</li> </ul>
ASSOCIATION OF SMALL DAIRY INDUSTRIES OF RIO GRANDE DO SUL - APIL (ASSOCIAÇÃO DAS PEQUENAS INDÚSTRIAS DE LATICÍNIOS DO RIO GRANDE DO SUL - APIL)	<ul style="list-style-type: none"> <li>• FRAUDS OCCURRED DUE TO THE PRECARIOUS RELATIONSHIP BETWEEN THE INDUSTRY AND THE PRODUCERS.</li> <li>• THERE WAS A VERY CLOSE RELATIONSHIP BETWEEN THE INTERMEDIARY (TRANSPORTER) AND THE PRODUCERS.</li> <li>• THERE ARE MANY POLITICAL AND LEGISLATIVE ISSUES THAT HAVE INTERFERED AND CAUSED THE FRAUDS.</li> <li>• THERE ARE INTERFERENCES FROM MULTINATIONALS WITH POLITICAL LOBBYING AT THE EXPENSE OF LOCAL INDUSTRIES.</li> <li>• LEGISLATION IS EXTREMELY OUTDATED AND PUNITIVE.</li> </ul>
UNION OF RURAL WORKERS OF TEUTONIA AND WESTPHALEN (SINDICATO DOS TRABALHADORES RURAIS DE TEUTONIA E WESTFÁLIA)	<ul style="list-style-type: none"> <li>• FRAUDS INCREASED THE REQUIREMENTS THAT THE MILK PRODUCERS MUST FULFILL.</li> <li>• AFTER THE FRAUDS, MANY PRODUCERS LEFT THE ACTIVITY.</li> <li>• COOPERATIVES HAVE A GREATER PROXIMITY TO THE PRODUCERS AND PAY PRICES FOR QUALITY, WHICH FACILITATES THE MAINTENANCE OF RAW MATERIAL QUALITY.</li> <li>• MANY POLITICAL AND LEGISLATIVE ISSUES HAVE INTERFERED IN THE FRAUDS.</li> <li>• LEGISLATION IS EXTREMELY OUTDATED AND PUNITIVE.</li> </ul>
LABORATORY OF INSPECTION AND TECHNOLOGY OF MILK AND ITS DERIVATIVES, EGGS, AND HONEY OF THE FACULTY OF VETERINARY OF THE FEDERAL UNIVERSITY OF RIO GRANDE DO SUL (UFRGS) – LEITECIA (LABORATÓRIO DE INSPEÇÃO E TECNOLOGIA DE LEITE E DERIVADOS, OVOS E MEL LEITECIA DA FACULDADE DE VETERINÁRIA DA UFRGS - LEITECIA)	<ul style="list-style-type: none"> <li>• THERE ARE DIFFERENCES IN REGARDS TO TECHNICAL AND SOCIAL ASSISTANCE BETWEEN LARGE INDUSTRIES AND COOPERATIVES.</li> <li>• THE MILK PRODUCER IS USUALLY ONLY COMMERCIALY LINKED TO A LARGE COMPANY AND HAS A CLOSER RELATIONSHIP WITH THE TRANSPORTER.</li> <li>• FRAUDS CAN OCCUR IN ALL THE TIES OF THE CHAIN.</li> <li>• RIO GRANDE DO SUL HAS THE PECULIARITY OF HAVING INDEPENDENT TRANSPORTERS AND COOLING STATIONS.</li> <li>• IT IS VERY EASY TO GENERATE A DEFECT IN MILK, JUST AS IT IS VERY EASY FOR THE FRAUD TO NOT BE DETECTED.</li> <li>• THERE ARE MANY FAILURES IN QUALITY TESTING FOR SUBSTANCE IDENTIFICATION, AND MONITORING BY GOVERNMENT FUNCTIONS AS INSPECTIONS.</li> </ul>
SULINA ASSOCIATION OF CREDIT AND RURAL ASSISTANCE - EMATER/RS-ASCAR (ASSOCIAÇÃO SULINA DE CRÉDITO E ASSISTÊNCIA RURAL - EMATER/RS-ASCAR)	<ul style="list-style-type: none"> <li>• THE MOST IMPORTANT LINK IN THE CHAIN THAT GUARANTEES THE QUALITY OF THE MILK IS THE PRODUCER.</li> <li>• AN INDUSTRY MUST INVEST IN ITS SUPPLIERS.</li> <li>• IN THE BUSINESS RELATIONSHIP BETWEEN COMPANY AND PRODUCER, THERE IS NO COMMITMENT TO THE SOCIAL PART, ONLY WITH THE VOLUME OF MILK THAT THE PRODUCER DELIVERS.</li> <li>• FRAUDS OCCURRED IN THE INTERMEDIATION BETWEEN THE PRODUCER AND THE INDUSTRY, BUT THE PRODUCERS PAID THE DAMAGE.</li> <li>• POSITIVELY, AFTER FRAUDS, THE MILK LAW WAS CREATED (THE PREVIOUS LEGISLATION WAS FLAWED).</li> <li>• THE STATE'S MILK HAS SUFFERED A LOSS IN ITS IMAGE. IN ADDITION, THE MILK SECTOR SUFFERS FROM THE ARTICULATION BETWEEN LARGE COMPANIES AND POLITICAL ISSUES.</li> </ul>

Source: Designed by the author (2017).

Therefore, recapitulating for better understanding, in table 16, it was presented a summary of the data collected from institutions. In the table, it is described the level of influence of each institution in the dairy chain, based on the own assessment of the author of this thesis. As a

result, having this institutional part complete, as this research studies the relationship between a dairy company with its suppliers in this environment of regulatory institutional voids, the next section explores more about the relationship between the case of this study that is the Cooperativa Languiru with its suppliers.

#### 4.5 HISTORY AND DESCRIPTION OF COOPERATIVA LANGUIRU

Languiru is a joint agricultural cooperative company that was conceived on November 13, 1955, by a group of 174 small farmers who, motivated by the difficulties of commercializing the surplus products of their properties, teamed up to found an agricultural cooperative in the municipality of Teutônia. The cooperative's activities began on June 1, 1956, inside a small warehouse that supplied primary necessities and agricultural inputs. In return, the establishment received the production of its members.

In order to obtain better results in its pig's sales, the cooperative rented a swine and cattle slaughterhouse on January 1, 1957. Located in Linha Schmidt, the structure received major investments in the following decades. As a way of meeting its associates' needs, in the same year, the cooperative built the first headquarters of its feed mill. This investment was made in the Languiru's District.

In 1963, with the expansion of its milk production, the cooperative started to build its dairy industry. Therefore, Languiru's dairy industry began its activities in 1964, being the first company in Brazil to pack milk in plastic sachet bags. At this time, Languiru also began the dissemination of its Mimi brand, which would become very famous, mainly in Porto Alegre.

Over the following years, Languiru has continued to expand its businesses and paved the way for incorporations in the 1970s. In 1975 the joint Cooperativa Mista União Ltda., from Estrela, was incorporated and, a year later, its structure received the facilities of the feed mill factory. Until the end of the 1970s, Languiru would also incorporate Cooperativa São João, from Bom Retiro do Sul, and the three following cooperatives from Teutônia: Linha Pontes Filho, Linha Geraldo, and Linha Wink.

In 1976, a consumer section was inaugurated, formed by Languiru supermarket and the forage sector, in the Languiru's district. Inside the same building, the agriculture and livestock department – a department made up of agricultural technicians, veterinarians and agronomist engineers – began to provide technical assistance services to the producers. In 1979, the cooperative transferred its cattle slaughter process to Bom Retiro do Sul and transformed the

slaughterhouse in Westfália into a poultry slaughterhouse. In the same year, Languiru acquired control of Frigosul, in Canoas, transferring the slaughter of cattle to that place.

In 1982 Languiru joined Cooperativa Central Gaúcha de Leite. As a result, it deactivated its own dairy industry and removed the Mimi brand from the market. In the 90's, the cooperative began to build its piglets' production unit – which currently consists of four farms – as well as to construct a modern incubator, both of these projects located in the municipality of Teutônia.

A joint venture between Languiru and an Italian company (Semfter), investing in the construction of a new sausage industry, was established in the late 1990s. Located in Bom Retiro do Sul, the industrial plant took over the processing of pork meat. In 2002 Languiru withdrew from this venture and entered into a strategic alliance with Alibem Alimentos from Santo Ângelo, which went on to acquire the pigs produced by the members.

In 2002, Languiru underwent a process of structural and functional reformulation. The cooperative sought administrative professionalization through the implementation of austerity measures and downsizing in all sectors. This process allowed the cooperative to re-enter the dairy market in early 2003 with the re-launch of the Mimi brand. The success of sales enabled the construction of a new dairy industry. Inaugurated during the celebrations of Languiru's 50th anniversary, on November 13, 2005, the modern unit stood out for the pioneering launch of some products and the awards it received.

The year of 2006 was marked by excellent results for the cooperative. In the same year, there were several investments in the area of milk and in the dairy industry, as well as the completion of a modern room of cuts next to the poultry processing plant and the opening of a new sales center in the region of the Serra Gaúcha. In 2008, the cooperative invested in the return of the industrialization of sausages in its poultry processing plant in Westfália. In 2009, a series of inaugurations took place: projecting its expansion in the swine farming business, the cooperative inaugurated another piglets' production unit in Bom Retiro do Sul. In addition to that, in order to offer a more comfortable environment for its customers, the cooperative also inaugurated a new building of the Languiru supermarket in Teutônia. Furthermore, in the municipality of Cruzeiro do Sul, an Agrocenter Languiru store was inaugurated, establishing a new concept in the sales of tools, machines, and bazaars.

In 2010, another Agrocenter Languiru store was opened, and the cooperative began the construction of a swine processing plant. Moreover, in response to a claim from its members, the cooperative inaugurated a Languiru Supermarket in Bom Retiro do Sul in 2011. In 2012, Languiru's members witnessed the highest turnover in Languiru's history: occupying the position of the third largest agricultural cooperative in the Rio Grande do Sul, Languiru

achieved a turnover of R\$ 582 million. In the same year, the cooperative inaugurated the pork processing plant in Poço das Antas, a R\$ 60 million worth investment that today generates more than 650 jobs.

In September 2013, with the aim of expanding its machinery, equipment and bazaar stores, another Agrocenter Languiru store was opened in Teutônia. In 2014, the cooperative entered a new segment in order to continue to diversify its business and to meet the demands of its members, inaugurating the fuel station of the Languiru' District. A year later, in February 2015, the cooperative inaugurated another fuel station, this time in the city of Westfália. In March, members had the highest volume of business ever recorded in the cooperative's history: R\$ 970 million.

In April 2015, the cooperative inaugurated its new Administrative Headquarters, which comprehends administrative sectors and advisory services, hiring 90 employees. In 2016, facing new needs of the market, Languiru inaugurated its distribution center, located in Teutônia, which serves a large part of the state of Rio Grande do Sul in the distribution of Languiru products.

The Cooperativa Languiru celebrated its 60 years' anniversary since its foundation as the third largest agricultural cooperative in the state of Rio Grande do Sul, as well as, a reference in national and international agribusiness. Languiru is located among the 60 largest companies in Rio Grande do Sul and among the 140 largest companies in the southern region of Brazil. The socioeconomic importance of the cooperative is undeniable: its membership is comprised of more than 5.5 thousand members, whose rural properties are located in more than 70 municipalities in the Valleys of Taquari, Caí, Rio Pardo and Serra Gaúcha region (mountain region). Additionally, its farms, as well as its industrial, commercial and administrative units, employ around two thousand and nine hundred employees in eleven cities of Rio Grande do Sul.

With more than 400 products in its portfolio, Languiru commerces meats, processed products, milk and dairy products in 23 states. Likewise, Languiru rations are sold throughout the Rio Grande do Sul. Poultry and pork meats reach more than 40 countries, especially in the Middle East, Africa, and Asia, which helped the cooperative to reach its record of sales, R\$ 1 billion, in 2016.

Table 16 - Chronological summary of the main events of Languiru

Year	Event
1955	Conceived by a group of 174 small farmers in Teutônia.
1956	Activities began.
1957	Rented a swine and cattle slaughterhouse.

1963	Started to build its dairy industry.
1964	Dairy industry began its activities and dissemination of its Mimi brand.
1975	Languiru joint Cooperativa Mista União, incorporated Cooperativa São João, Cooperativa Linha Pontes Filho, Cooperativa Linha Geraldo and Cooperativa Linha Wink.
1976	Inaugurated the first supermarket.
1979	Acquired Frigosul, in Canoas.
1982	Joined Cooperativa Central Gaúcha de Leite, deactivating its own dairy industry and removed the Mimi brand from the market
1990	Build its piglets' production in Teutônia.
1999	A joint venture with Semfter
2002	Structural and functional reformulation. Administrative professionalization through the implementation of austerity measures and downsizing in all sectors.
2003	Re-enter the dairy market and re-launch of the Mimi brand.
2005	50th anniversary - pioneering launch of some products and received awards.
2006	Investments in the dairy industry and a new sales center in the region of the serra gaúcha.
2008	Invested in the return of the industrialization of sausages in its poultry processing plant in Westfália.
2009	Inaugurated another piglets' production unit in Bom Retiro do Sul. New building of the supermarket in Teutônia and an agrocenter store inaugurated.
2010	Another agrocenter store opened and began the construction of a swine processing plant.
2011	Inaugurated a supermarket in Bom Retiro do Sul.
2012	Highest turnover (R\$ 582 million) in Languiru's history: third largest agricultural cooperative in Rio Grande do Sul. Inaugurated the pork processing plant in Poço das Antas (R\$ 60 million worth investment).
2013	Opened agrocenter store in Teutônia.
2014	First fuel station at Languiru' district.
2015	Inaugurated new administrative headquarters and distribution center in Teutônia.
2016	Record of sales, R\$ 1 billion, in 2016.

Source: Designed by the author (2017).

After bringing this summary, where the main events and the history of the company were described by year, the next subdivision features the main practices performed by the company with its suppliers. Crossing the data between the company and its suppliers, it is explored the main points and actions employed by Languiru that make closer the relationship between both actors. Among the elements, it is explored how the company efficiently selects and monitors the suppliers, but, at the same time, cooperates with them.

#### 4.5.1 Languiru and its Suppliers

This section is based on the data collected in the interviews with the Vice President of the Cooperativa Languiru, with the company's dairy operations manager, with the buyer responsible and with the company's suppliers. In addition, in order to elaborate this section, the author of this thesis employed his own observations based on the experiences of having personally visited the headquarters of the cooperative – where it was possible to understand its daily dairy operations - as well as having personally visited the suppliers, their establishments, and their farms.

Languiru is currently the third largest cooperative in the state of Rio Grande do Sul, having 2,874 employees and 6,100 associates present in 73 municipalities. Considering the associates' employees, the cooperative has more than 40,000 people directly or indirectly linked

to its production. The company has a much diversified industrial distribution, operating mainly in the “Vale do Taquari” region, the “Caí” region, the “Rio Pardo” region and the “Paranhama” Valley. Notwithstanding its large presence in the state, 85% of Languiru's total milk, chicken and pork production comes from within a 20 kilometers’ range and the suppliers are located, at most, at 65 kilometers from the company's headquarters. This local logistics strategy favors Languiru’s milk quality. Currently, for instance, there are companies that take the milk to a cooling station and process the milk within three days after the collection, since they are far from the collection site. This process interferes directly in the quality of the raw material since milk is a living micro organic matter. In Languiru, however, milk comes straight to processing, without any intermediary such as cooling stations, because the producers are all located very close<sup>6</sup>. Therefore, in addition to increasing the product quality, Languiru’s logistics reduce the chances of frauds.

The company has a policy of always acquiring the raw material from the producers and industrializing it in its own industries in order to add value to the product. Currently, Languiru owns dairy products in Teutônia (headquarters), factories in Estrela, a poultry processing plant in Westphalen and pork processing plant in Poço das Antas. This demonstrates the cooperative’s concern with its regional development in order to be present where the associates are located. For this reason, the company has farms, supermarkets, and industries, all concentrated in nearby municipalities, which helps to promote the regional development. This is a typical characteristic of the cooperative system.

Among those municipalities with Languiru’s productive activity, there are several where the purchasing power and income per capita of the rural environment is greater than the urban environment, something rare in today's society. This makes the Languiru’s associates extremely loyal, who feel as the owners of the cooperative, which strengthens the company and promotes its growth. For example, even though Brazil was going through a crisis period, in 2016, Languiru was growing at an average of 17% per month, with a forecast of billing 1,250 billion Reais.

Regarding Languiru’s milk production, there is an average production of 470 thousand liters per day, reaching 500 thousand liters per day during peak periods, which usually occur in the month of September<sup>7</sup>. The company's product layout is diverse; however, the long-life milk

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<sup>6</sup> Every day, there are 470 thousand liters of milk that leave the producers’ properties and go straight to the processing at Languiru plant, which works 24 hours a day.

<sup>7</sup> On the other hand, the lowest point for the milk production usually happens in the month of April.

is, due to its favorable price, currently the cooperative's main product, ranging from the following varieties: integral, semi-skimmed and zero lactose.

In relation to milk supply, in order to be a supplier of milk to Languiru, it is necessary to be associated; therefore, for the industrialization process, only the milk from the associated producers is collected. The Languiru associate producer receives technical, agronomic and veterinary assistance from the cooperative. In this context, the producer has at his disposal, directly from the cooperative, the possibility of buying the supplies he needs for his property in order to produce or for his private use. At these points of sale, the company seeks to offer affordable prices and quality products, whereas the producer helps to elaborate the price so that the quality is higher.

The dairy chain is extremely complex and several issues influence it. For instance, currently, a large percentage of the price of milk is in the retail sector. That is why Languiru seeks, as a cooperative, to acquire the raw product from the producer, to industrialize it and to sell it, i.e., to avoid intermediates in the productive chain as much as possible. After all, whoever buys the product is the one that has the highest profit margin<sup>8</sup>, which, consequently, makes the margin of the producer quite low. In this context, the retailer always seeks to pay the lowest price, not prioritizing the quality of the product and sometimes buying from companies with a dubious quality product. Currently, a liter of milk is sold in retail for approximately R\$ 4.00; nevertheless, in order to produce this milk, there is an average cost of approximately R\$ 1.60 regarding the producer, plus around R\$ 0.18 regarding its industrialization, and plus the cost of packaging, taxes, and logistics, which correspond for nearly \$ 0.70 cents. This results in approximately R\$ 2.50 and the remainder consists in the margin of retailers, i.e., on average, 50% of the price of milk is established by retailers.

In addition, the precarious care of the retailer in the handling of the milk together with the roads in bad conditions and without proper pavements, interfere in the milk quality, as these factors damage the packing boxes of the milk that are prepared without being impacted. If it has an impact, the product may become sour due to the agitation of the milk lactobacilli. Essentially, logistics are a big challenge for the dairy chain because, not only the roads are chaotic and with an intense flow of vehicles, but also supermarkets are more focused on the quantity than on the quality of the product.

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<sup>8</sup> According to Languiru's dairy operations manager, retailers control the price of the milk according to the market needs, which makes them extremely powerful. A liter of milk goes into retail for approximately 50% less than the amount the consumers pay and the producer directly feels the impact of this practice.

Besides the above-mentioned problems, there are difficulties in the legislation that regulates the milk. The legislation is from 1953 and, at that time, the defined cattle breeds practically did not even exist<sup>9</sup> whereas today, there are defined breeds, such as the Dutch and Jersey, among others. In this respect, there is a conflict of laws in the composition of milk, for instance, high-yielding Dutch cows (average of 30 liters per day per cow) on a hot day, as it originates in the Netherlands, where there is colder weather, seek to stay more in the shade. Then, the animal can be thirsty, and, even though there is a source of water only 30 meters away, because of the heat, they stay in the shade. Thus, before milking, the animal drinks a lot of water. When a cow is milked, most of this milk forms on time; one part comes from the udder and the other forms at the moment. This is a natural process that inevitably generates water in milk, which, by legislative standards, is considered as a fraud. Another example is the producer who feeds the animal based on silage and feed and, for this reason, runs the risk of having the presence of alcohol in the milk.

Another major problem is regarding drug shortages. In the past, the government, mainly in the area of antibiotics, has approved medicines. Producers and veterinarians often rely on the package information to treat an animal that has an infection. Usually, the package insert of the remedy informs the grace period of seven days for the animal to expel the effects of the antibiotic from the body. Nowadays, however, it is no longer possible to follow this recommendation, because antibiotics will probably be found in the milk of the cow that was medicated since the tests to detect any product inside the milk have improved a lot, but the legislation has not been adapted. Although correct, this is a serious situation, because there is a confusion for the producer, as he or she cannot rely on the packaging information of the medicines, which follow a legal orientation. To ensure a product within quality standards, Languiru protects itself from this problem by doing a test one day before the milk is loaded on the producer's property. Thus, this milk does not pass into the industry and the producer does not run the risk of being considered a milk fraudster.

Currently, there are universities starting to study this problem and there is literature about it, however, the legislation remains obsolete. In other countries, as genetic researches evolve, there are continuous updates of legislation. In Brazil, conversely, there are changes in the production and industrialization (in 1953, for instance, an animal generated around 20 liters of milk per day, while today it generates up to 100 liters of milk per day) but these changes are

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<sup>9</sup> At that time, the legislation did not have a defined breed of cattle, perhaps azebuada or creole, that produced a different type of composition of the milk from the one produced nowadays.

not reflected in the legislation. Therefore, these scientific principles must be mastered and legislation adapted to the type of animal and the chemical composition of the milk currently produced in the country. Essentially, legislation must be adapted to comprehend the new genetic and nutritional realities.

Besides these regulatory problems, the government negatively interferes in the chain, allowing the importation of milk powder. These imports, when they occur, stop the production of milk powder and the demand for UHT production, the price falls and everyone loses, especially the producer. Regarding this aspect, Languiru – even with difficulties due to imports or, when the market demand is low – because its producers are associated, collects and benefits their milk in those harsh times. Multinational industries, in these times of low demand for milk, end up not buying milk from producers because they have few producers supplying directly to them (around 60% of production). The rest of the milk purchased by this business model is the so-called Spot milk, which is the milk bought and sold by other cooperative partners as if it were an outsourcing of production.

In order to overcome the above-mentioned adversities and the main causes of fraud in the state, Languiru has always worked strongly with the supplier. The company works hard to keep the producer producing in the rural activity by applying more stable prices, even if it implies that the cooperative will take losses. For instance, currently the company has great losses in the chicken and in the pork industries because of its efforts in keeping the farmer producing. If the company transferred the losses of difficult times to the producer, whether in milk, chicken, pork or other activities, in three or four months, several producers would be out of production and out of the agricultural activity. In this sense, the cooperative has an important role, because the associate is the owner of the company.

Languiru offers to the producer agreements with banks, in which the producer can buy cows, steers, coolers, milking machines through more compatible terms according to his production. It is a direct process via Languiru, in which Languiru is the guarantor of the contract. In addition, the cooperative has a fund where the producer can finance milking machines, cows, inputs, fertilizers, seeds, urea, fertilizers, and detergents, i.e., everything needed for the milk production. The company has several benefits to producers (63 benefits in total): there is assistance in medicines with up to 15% discounts; in soil analysis, the producer pays only half; the producer can buy everything in his account with the cooperative. Not only this, but also this approximation with the producer has had an impact on the quality of the milk produced by the company. In the last five years, there has been an evolution in the quality processes of Languiru and a lot of work has been done on the quality of milk. Currently, 98%

of the milk is cooled in bulk, the company makes payments for quality<sup>10</sup> and respects the health issue, observing the issue of bacteria and somatic milk cells.

In addition, the company has several programs to fix the producer in rural areas, as the rural exodus is a concern in the milk sector. There are policies to encourage young people starting their professional activities to establish themselves as milk producers<sup>11</sup>. There is a mutual collaboration, a direct daily dialogue with the producers, at any time, with meetings to adjust collaboration practices and to verify the needs of both parties. One of the results of this for the producer, as mentioned before, is that the rural worker earns equal income to urban workers.

Moreover, the company has a Good Farm Practices (*Boas Práticas de Fazenda - BPF*) program, in which an audit performed by Gênesis do Brasil – the same certifying company of all Nestlé field actions – is carried out within the rural properties. This is a benchmarking that Languiru has done in partnership with Nestlé from 2010 to 2015, with their authorization. Presently, there are 120 properties certified in this program. The result is that the producer has better raw material, which also possesses better quality. In this program, all the controls of medicines in spreadsheets in the property are verified, the water is analyzed to verify the origin of the water that is used to the cleaning of the milking and the cooling tank, the sanity, vaccination, and identification of the animals for the residue of antibiotics in milk. In addition, in this program, the producer is encouraged to mix cows of the Jerseys breed with the Dutch breed, which has resulted, in the last five years, in a genetic improvement of the cattle of the producers of the company. The mixture of the two breeds results in a larger milk volume and strong solids. In addition to this program, a pass field was made along with Sebrae to guide producers to overcome difficulties in their work routine.

In Brazil, there are approximately two thousand cooperatives, with properties with averages of 50 hectares and with a participation in cooperative revenues of approximately

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<sup>10</sup> Regarding payment for quality, this creates good outcomes for the producer, for the company and for the consumer. This makes the producer pick on the activity to gain this value. This milk goes to the industry with better quality because it must be with adequate temperature, with tests of tuberculosis, brucellosis and sanitary issue all made. Today, no other company, with the exception of Nestlé, pays as well for quality as Languiru. Languiru has been working with payment for quality since the 1980s, but today, almost 23% of the price of milk paid to the producer is related to the milk quality. In the current context, where the average price of milk is R\$ 1.60, 23% paid for quality represents an extra revenue of R\$ 0.37 cents, per liter of milk, to the producer. The payment is based on the parameters of the existing legislation: the more a producer can offer a milk above the minimum standards required by law, the greater the payment. This is a fairer format, different from paying for milk by volume, because it values quality.

<sup>11</sup> These policies have given results and the age group that was 58 years old, is already at 47. That is, Languiru invests in technology, financing the producers to acquire equipment, bulk coolers, acquisition of tractors and milking machines robotized. In addition to financing directly, Languiru is able to intermediate some financing with other institutions for the producer as well.

29,700.00 Reais per year per property. In Languiru, the average of the properties is 10 hectares and each Languiru associate participates with 386,600.00 Reais in the revenue of the cooperative, i.e., 13.46 times more than the national average. This is largely due to these policies practiced by the company.

In addition to this Good Farm Practices (*Boas Práticas de Fazenda - BPF*) work, the cooperative also provides courses, technical assistance, veterinarians and encourages the producers to enter other sectors of activity explored by the cooperative, such as pork and poultry. Currently, 90% of the company's associates have two segments among milk, pork or poultry. In addition, the company offers free visits to dairy technology fairs in other states so that interested producers can learn about possible production improvements. This all results in more efficient producers and more young people interested in producing milk, although this is a difficult activity to be performed.

In terms of quality, the company has 36 professionals, including technicians, agronomists, and veterinarians working daily with the producer, who follow the process directly to maintain the product quality. They are responsible for monitoring the quality of the product, with periodical technical visits to producers. Daily, there are 10 professionals connected to the milk producer. In addition, through laboratories similar to the official government ones, more than 4,500 analyses are done daily within the company to detect how the quality of the milk is.

The farmer is also monitored daily for cow health by technical assistance. Still, the transporter, an associate to Languiru, tests the milk to see if it can or cannot carry the milk. Therefore, there is a first quality analysis on the producer's property and, after that, a sample is collected that goes to the laboratory daily before the truck is unloaded in the company. All the samples are analyzed at the time, to know from which producer is the milk, i.e., before unloading the truck, a whole milk analysis is made, and then released by the quality department, so that no milk outside the quality standards and outside the requirements of the legislation enters the factory.

Although Languri is a cooperative, there are rigidity and penalties for suppliers who do not meet the company's quality rules. The producer who has the milk detected with a substance, within a year, receives two warnings and in the third notice, it is eliminated from the supply, but this rarely happens. In relation to transport, the transporter is a supplier associated with the cooperative and simply does the transport of milk: a freight service. It does not collect milk from a producer who is not authorized by the technical assistance and is not associated with the cooperative. The transporter is not responsible for purchasing milk from the cooperative and does not give an opinion on the quality of the milk, as this is the responsibility of the quality

department. There is a very strict policy to be associated with the transportation of the company: if the transporter does not meet the requirements of the quality department, it is withdrawn from the service provision. The company is quite strict with its suppliers.

In order to be selected as a Languiru supplier, first, environmental licenses (from major suppliers) are required. A producer and a carrier must be authorized by the technical sector to act as a supplier. A producer must have a cooler in bulk; he cannot be restricted by credit with SERASA, among other criteria. The selected carrier must also respect the credit restriction issue and must be experienced with cargo transportation, with a history in the market, especially in the milk business. The company prioritizes transporters where activity has been passed from parent to child.

The transportation logistics of the finished product is outsourced. At this stage, it is easier to control the transport and it is less likely to encounter a problem with the product. Already in the raw material transport, part of it is all outsourced companies; partners who have worked for more than seven years with the cooperative. There are contracts with TACs, where responsibilities are required for civil matters. However, despite the contract, there is a very close relationship, based on guidance and collaboration between Languiru and the transporters, a relationship in which everyone is known by the names and where they reside, as they all cooperate and live in the same community.

A major change in Languiru's logistical process is that, in the past, transportation was paid for the quantity of milk brought into the industry. Currently, this process is changing, with investments in automatic milk tracing, according to which it will be possible to verify the conditions of the milk and from which route the raw material was being collected. Thus, this enables the process to change and it allows for payments per mileage driven by the conveyor. In this context, the monitoring in relation to the conveyor is constant, direct and daily with the checklist of quality technicians. The carrier must be in uniform, wearing closed pants, cap, beard trimmed so that there is no failure to receive the milk. If a carrier does an incorrect analysis (mandatory during collection) and the milk presents nonconformities, and even then, it carries that milk, it is responsible for paying for that milk that will inevitably be condemned by the quality laboratory of Languiru.

There is constant care with the transporter: every six months it is applied a course of recycling, with the application of evidence, prepared and executed by Sebrae on the transport of milk. There are evaluations on investment such as a conveyor, conduct, proper use of equipment and vehicle, how to proceed during collections and how to proceed when milk is out of quality and legislative standards. Twelve companies provide the transport service to

Languiru, with 47 vehicles, some since 1945. The relationship is so close that the transporter often informs Languiru about the inadequate practices of some producers, for example.

When selecting a supplier, the company has a policy based on three points: quality, legislation and financial. On top of the producer, an analysis is made of his history to see if he did not get involved in frauds or if he constantly moves from company to the one who supplies the milk. There is a standard procedure where a quality technician visits to verify the conditions of the producer and helps him to meet the requirements of the cooperative so that he can supply the milk. To select a supplier of inputs and services, for example, Languiru first visits the possible supplier and requires a quality technical report that is evaluated internally. Languiru also requires the supplier to inform the source of the material to be supplied, and what is the social and environmental involvement of the supplier's company. In the case of failure to comply with the agreement, the supply partnership is interrupted.

The result is that, as far as fraud investigations are concerned, there was no mention of Languiru. The frauds had no influence on the company's processes, since they always worked on quality issues consistently. For a company like Languiru – an exporting company to more than 40 countries – having a fraud problem would be a disaster because it would affect other company activities like selling poultry and pork. In relation to the frauds, one aspect that had a positive impact was that the competitors had to adapt themselves to the legislation, which generated an increase in the competitiveness for Languiru. Before, the company lost competitiveness and producers by excessively taking care of the quality. Producers used to switch Languiru for other companies because they were less demanded elsewhere. This is a complex scenario and it was very difficult to maintain the entire structure of a dairy and compete with other fraudulent companies and producers. For instance, the milk denied in Languiru was accepted in other industries. In Languiru, if milk is condemned, it is discarded and the cost of that milk is charged to the producer or to the carrier responsible for the damage. However, when a raw material is rejected by the quality sector, when it is only a matter of solids being non-standard and not an occurrence of fraud, it is directed to animal feed production, another cooperative activity. When discarding occurs because of antibiotics, for example, this milk goes to a contracting supplier for composting, to leave no residue on the soil or any other animal that can ingest that food.

Currently, after the frauds, in order to prevent their occurrence, there is an ethical agreement between the Piá, Santa Clara, Dália and Languiru cooperatives to disclose information about the conduct of suppliers. At this point, there is a collaboration with information exchange. Thus, whenever one of the companies suffers a serious problem with a

supplier, it discloses the information to others and to the legal authorities. This occurs both to inform the conduct of suppliers of inputs and services, as well as to producers.

Because of the frauds, despite all the company's incentives, in recent times, there has been a reduction in the number of milk supplying properties for Languiru, falling from 1800 to 1500 properties. Although the company has this differentiated work that presents positive results for the entire region of Tarquari Valley and its rural area, fraud has caused many producers to withdraw from the activity, since the sector is experiencing an insecurity, with very high requirements, but with small financial feedback. Likewise, the production costs take many producers out of the activity. The payment of milk alone does not allow the producer to make large investments, and their return occurs in the long run if the producer is financially organized. Unfortunately, this implies in the difficulty of the industries to work in a differentiated way, which also implies directly in the quality of the product. Even so, it is necessary to look for management alternatives as Languiru has been doing to overcome the regulatory, structural and politico-economic adversities of the country.

Finally, in order to cross the data between the company and suppliers, bellow, table 18, shows the content collected between Languiru's suppliers. It features their position about the frauds and the chain, besides aspects of the relation between the company and them.

Table 17 - Summary of the crosschecking of data between suppliers information

Supplier	Type of supplier	Directly connected to Languiru	Position about the frauds	Position about the chain	Position about the relation to Languiru
Languiru associate	Milk producer	Yes	<p>There are still a lot of milk problems (several companies avoiding and evading taxes).</p> <p>With fraud investigations, companies will have to decrease their spending.</p> <p>There are greedy industries that put fat, water and soda and spoil the price of milk for producers.</p> <p>The milk he delivers is practically an A milk.</p> <p>Quality milk is generated when the animal is well fed and healthy.</p> <p>The producer delivers cold milk, with quality, but the industry sells poorly to retailers.</p> <p>The producer has never been valued.</p>	<p>The trend is that there will be no smaller and medium producers.</p> <p>Producers are migrating to other rural activities.</p> <p>Very high costs and investments to produce pasture, milking, labor, animals and modern machinery (a cow costs 8 thousand Reais and equipment up to 200 thousand Reais required by the companies).</p> <p>Milk will stay in the hands of few big companies.</p> <p>It is hard to produce milk. The industries must think of the producer or will no longer have a producer or, indeed, an industry.</p> <p>A product must be created to replace milk.</p> <p>The government should establish a minimum price for milk (minimum of 1.50 Reais for the producer to have a positive balance).</p>	<p>They have technical assistance (monthly a technician visits the property or when requested by the producer).</p> <p>Very friendly relationship with technicians.</p> <p>The price is never good, but the company pays what it can (Producer received in the month of the interview 1.74 Reais per liter of milk sold).</p> <p>There is a lot of demand for quality, which sometimes causes damage to the producer.</p> <p>Very peaceful relationship with cooperative.</p> <p>The cooperative helps with health and school for the family of producers.</p> <p>The cooperative helps with financial aid for producers who have children.</p> <p>The cooperative helps with the financing of machinery.</p> <p>Discounts on buying medicines for the family.</p> <p>Assistance in buying school materials.</p> <p>In order to grant the benefits, the cooperative requires attestation of school attendance of the children of the producers.</p> <p>At the beginning of each year, the company makes an extra payment.</p> <p>The company finances inputs for production.</p>

				<p>A producer survives because he has no salary.</p> <p>A cow lasts only 3 years.</p>	<p>Good farm practice requires a lot of producers in terms of hygiene, cleanliness, organization, marking of livestock, animal health, if the animal lives in the dry and dry, feed with fertilizers.</p> <p>There is a manual with checklist to meet these requirements.</p> <p>This serves as an extra payment in milk (2 cents in the litter).</p> <p>The cooperative vehemently monitors (cannot falter or lose this certificate).</p> <p>If in one year a producer does not meet the requirements he is penalized by the cooperative and withdrawn from the supply. But there is the technician's visit to guide the producer and suit.</p> <p>Every day, when the milk is loaded, the cooperative takes samples for laboratory analysis (Samples analyzed by Languiru laboratory and University Center Univates, a laboratory authorized by MAPA).</p> <p>Relation with the transporter is peaceful and reliable.</p> <p>It did not change anything after the frauds, the company Languiru demanded enough quality from the producers, always provided for the Languiru.</p> <p>In order to be a supplier of Languiru, a bulk cooler, environmental license, registration with MAPA and certification of cattle and tuberculosis and brucellosis tests are required for the animals, first delivery of at least 100 liters and automatic milking machine.</p> <p>Producer cannot have credit restrictions with SERASA.</p> <p>The cooperative lends money to producers.</p> <p>If the milk is in accordance to the quality of the cooperative, the milk that has been loaded is lost and arched by the producer (Fact that has already occurred with the interviewee).</p> <p>Producer supplied chicken and started supplying milk to Languiru.</p> <p>There are meetings between the associate and the cooperative.</p> <p>There are courses, a producer advisor, and quality lectures.</p>
Reinigend química does Brasil Ltda.	Supplier of inputs	Yes	<p>There are not enough inspectors.</p> <p>Languiru has a systematic work where they accompany item by item and milk that goes in for processing (made analyzes to see if it is within the quality standards).</p> <p>Some companies still do not meet the requirements.</p> <p>Other states have frauds as well, but are not finalized (based on experiences with clients in the states of Santa Catarina and Paraná of the interviewee).</p> <p>The positive fact of fraud is the qualification of the raw material.</p> <p>Milk from the state was penalized in terms of image and sales.</p>	<p>The legislation is adequate and is the same for the whole country, but there is no standardization of supervision (differs between inspectors).</p> <p>The legislation is flexible and ends up creating complicating situations for companies.</p> <p>State milk is discriminated against and prevented from marketing in other states.</p> <p>It is working to qualify producer who supplies milk to industry.</p>	<p>Languiru has many requirements for its suppliers.</p> <p>They analyze the products that enter the company, from the raw material (milk) to cleaning materials.</p> <p>Analyze the efficiency of the inputs (hygiene and cleaning products pass through microbiological laboratory analysis in the company).</p> <p>The relationship is direct with the quality department and there is information exchange.</p> <p>The relationship of the cooperative is narrow.</p> <p>There are quotation and price negotiation of the inputs. It is chosen the product that has quality and lower price. Nevertheless, Languiru accepts price readjustments with ease.</p> <p>There were no changes in supply processes for Languiru due to the frauds.</p> <p>When one becomes a supplier of Languiru, there are recurrent but non-formal visits.</p> <p>The relationship is not only commercial but also a very close friendship relationship.</p> <p>The company requires Anvisa's certificates, safety data sheets, and information on inputs.</p> <p>Monitoring occurs (searches that are questioned, for example, if avenue in which the supplier acts is paved).</p> <p>When selecting a supplier, Languiru makes a formal visit.</p>

					There are reports describing Languiru's requirements regarding inputs.  There is a collaboration to qualify the producer (provide quality inputs to the producer).
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Source: Designed by the author (2017).

Thus, crosschecking the data between suppliers with the information from Languiru, this study proposes that in an environment of institutional voids, it is required a singular approach from companies with their suppliers. The relationship between companies and suppliers must be managed close enough to enable firms to provide a product according to their quality standards. Instead of having a limited commercial relation, firms must be closer to their suppliers from the selection to the monitoring.

Gavronski et al. (2011) in a work oriented to both greener process management and environmental collaboration with suppliers suggest three levels of analysis in a relation with suppliers: supplier selection, supplier monitoring, and supplier collaboration. Therefore, besides having a proper selection, it has to exist a collaboration between companies and suppliers, besides a strict monitoring. This way, adapting from the Gavronski et al. (2011) work, table 19 shows a summary of the three dimensions practiced by Languiru.

Table 18 - Languiru's practices with supplier - selection, monitoring and collaboration

Selection	Monitoring	Collaboration
<p>Suppliers must be associated to Languiru.</p> <p>The carrier is a supplier associated with the cooperative and simply does the transport of milk, i.e., a freight service.</p> <p>To be selected as a supplier, environmental licenses (from major suppliers), registration with MAPA, certification of cattle, as well as tuberculosis and brucellosis tests for the animals are required for producers.</p> <p>The company requires from its suppliers Anvisa's certificates, safety data sheets and information on inputs.</p> <p>To be selected as a supplier, producers and carriers must be authorized by the technical sector.</p> <p>Producers and carriers cannot have credit restrictions.</p> <p>Carriers must be experienced with cargo transportation (with a history in the market, especially in the milk business).</p> <p>When selecting a supplier, the company has a policy based on three criteria: quality, legislation and financial.</p> <p>There is an analysis regarding the supplier's background (verifying if the producer was involved in frauds or if he constantly moves from companies from which he supplies the milk).</p> <p>There is a standard procedure where a quality technician visits the producer's property to verify its conditions and to help him to meet the requirements to be a supplier.</p>	<p>The milk comes straight to processing, i.e., there are no intermediaries, such as cooling stations.</p> <p>All operational plants are concentrated in the same region and the suppliers are from close locations.</p> <p>When one becomes a supplier for Languiru, there are recurrent but non-formal visits.</p> <p>Some tests occur one day before the milk is loaded on the producer's property. Thus, irregular milk does not enter the industry and the producer does not run the risk of being considered a fraudster.</p> <p>There is a Good Farm Practices (Boas Práticas de Fazenda - BPF) program, in which all the controls of medicines in spreadsheets in the property are verified. The water is analyzed to verify the origin of the water that is used to the cleaning of the milking and the cooling tank, the sanity, vaccination, and identification of the animals for the residue of antibiotics in milk. This program requires a lot from producers in terms of hygiene, cleanliness, organization and animal health.</p> <p>There are 36 professionals, including technicians, agronomists, and veterinarians daily monitoring the producers.</p> <p>Languiru's laboratories make more than 4,500 analyses every day to detect substances in the milk.</p> <p>The producer is monitored daily regarding cattle health by technical assistants. Even with this monitoring process, the carrier – an associate to Languiru – always tests the milk to analyze if he can or cannot carry it.</p>	<p>Languiru invests in the region where it has operations (purchasing power and income per capita of the rural environment is greater than the urban environment).</p> <p>A Languiru associate producer receives technical, agronomic and veterinary assistance from the cooperative.</p> <p>Associates feel they are the owners of the cooperative, which strengthens the company and promotes its growth.</p> <p>The company prioritizes transporters where the activity has been passed from parent to child.</p> <p>The producer may buy the supplies he needs directly from the cooperative (the company offers affordable prices and quality products and the producer helps to elaborate the prices).</p> <p>Only the milk from associated producers is collected.</p> <p>Languiru seeks, as a cooperative, to acquire the raw product from the producer, to industrialize it and to sell it, avoiding intermediates in the productive chain as much as possible.</p> <p>Even with difficulties due to imports or, when the market demand is low, Languiru collects milk from its associates.</p> <p>The company works hard to apply more stable prices, even when this implies in the cooperative taking losses. This happens because the associate is the owner of the company.</p>

<p>Languiru first visits the possible supplier and requires a quality technical report that is evaluated internally, requires the supplier to inform the source of the material to be supplied and what the social and environmental involvement of the supplier is. In the case of failure to comply with the agreement, the supply partnership is interrupted.</p> <p>To prevent frauds, there is an ethical agreement between Pia, Santa Clara, Dália and Languiru cooperatives to disclose information regarding the conduct of suppliers.</p>	<p>They cooperative analyzes the products that enter the industry, from the raw material (milk) to cleaning materials (hygiene and cleaning products pass through microbiological laboratory analysis in the company).</p> <p>The producer who has its milk detected with an inappropriate substance, within a year, receives two warnings and, in the third notice, it is eliminated from the supply. However, there is the technician's visit to guide the producer.</p> <p>There is a manual with checklists to meet the quality requirements.</p> <p>There is a very strict policy to be associated with the transportation of the company. For instance, the transporter must be in uniform, wearing closed pants, cap and beard trimmed. If the transporter does not meet the requirements of the quality department, it is withdrawn from the service provision.</p> <p>The transportation logistics of the finished product is outsourced (easier to control the transport). Regarding the raw material transport, part of it is made by outsourced companies: partners who have worked for more than seven years with the cooperative.</p> <p>If a transporter does an incorrect analysis and carries an irregular milk, he is responsible for paying for that.</p> <p>Every six months, a recycling course is applied to the transporters.</p> <p>Before the frauds, the company lost its competitiveness and producers by excessively monitoring the quality.</p> <p>If the milk is not in accordance with the quality requirements, the milk that has been loaded is lost and at the producer's expenses.</p> <p>Every day, when the milk is loaded, the cooperative takes samples for laboratory analysis (samples are analyzed by Languiru laboratory and University Center Univates, a laboratory authorized by MAPA).</p> <p>There is a great demand for quality, which sometimes causes damages to the producers.</p>	<p>Languiru offers agreements with banks to the producers, in which the producer can buy supplies in more compatible terms according to his production.</p> <p>The cooperative has a fund where the producer can finance milking machines, cows, inputs, fertilizers, seeds, urea, fertilizers, and detergents, i.e., everything needed for milk production.</p> <p>Languiru has several benefits to producers (63 benefits in total), for instance: there is assistance in medicines with up to 15% discounts and assistance in buying school materials (the cooperative requires attestation of school attendance of the children of the producers).</p> <p>Languiru has programs to keep the producer in rural areas, as the rural exodus is a concern in the milk sector. There are policies to encourage young people starting their professional activities to establish themselves as milk producers.</p> <p>There is a mutual collaboration with the producers, with meetings to adjust practices and to verify the needs of both parties and a Good Farm Practices (Boas Práticas de Fazenda - BPF) program.</p> <p>Languiru provides courses, technical assistance, veterinarians and encourages the producers to enter other sectors of activity explored by the cooperative. Also, in soil analysis, the producer pays only half.</p> <p>There is a very close relationship, based on guidance and collaboration between Languiru and the transporters: all of them cooperate and live in the same community.</p> <p>Languiru provides technical assistance (monthly a technician visits the property or when requested by the producer).</p> <p>Producers reported a friendly and peaceful relationship with technicians and with the cooperative in general.</p> <p>At the beginning of each year, the company makes an extra payment.</p> <p>The company finances inputs for production. This serves as an extra payment in milk (2 cents in the litter).</p>
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Source: Designed by the author (2017).

So, analyzing the information gathered both from the company as from its suppliers, it becomes clear that there is a strict selection and monitoring applied by the company. Nevertheless, the practices of collaboration with suppliers result in a very close relationship between them. This relationship is essential to ensure the quality of the raw material in this environment of the regulatory institutional void.

Lastly, it is important to mention that, to have a better grasp on the practices from other companies and the whole context, it was applied 4 more interviews in a cooling station and milk farmers. These interviews are not described here because they are not related to Languiru. However, it was an enriching opportunity to have a better idea of the situation of the chain, the legislation, and the frauds, since this cooling station was the target of investigations. This cooling station had to be closed for a while, paid fines because of its conduct and the president

was removed from the company since he was arrested because of the frauds. This company used to serve many other companies in the state, including a multinational. Therefore, it was convenient to have an idea of differentiation between the processes from a company that was investigated in the frauds, to another one that was not involved in this matter, such as the case of Languiru.

## 5 FINAL CONSIDERATIONS

This study was conducted under a supply chain approach, in which a regulation institutional void is surpassed through the relation between a focal company with its suppliers. For that, this thesis introduced and conceptualized multidisciplinary literature terms such as institutional voids, relationship management and emerging markets. This thesis also empirically analyzed how to deal with disruptions caused by the lack of institutions. The objective of this thesis was to describe the relationship between a dairy company with its suppliers in an environment of regulatory institutional voids. Given the complexity nature of this phenomenon, the concept was split into two parts: institutional configuration, and the relationship between the dairy company with its suppliers.

To assist the main objective of this study, the dairy chain configuration of the state of Rio Grande do Sul was described; the role of the main institutions and their perceptions on milk frauds were described; and it was identified a dairy company's best practices towards its suppliers. Besides using secondary data and observations, semi-structured interviews were applied to empirically explore the objectives of this qualitative and exploratory study.

Results showed that there is too much negative influence of institutions on the chain, political and economic interests affect directly the development of the sector. Consequently, most ties of the chain suffer with this situation. Personal interests are a priority, instead of working towards minimizing the existent regulatory institutional voids that affect the chain. Regarding this void, instead of creating a new state regulation specific for that, regulations remain superficial, not covering all the points needed to avoid frauds in the sector. Due to its nature, milk is a product propitious for adulterations, because it is hard to detected extra substances in it, thus, heavier institutional efforts should be done. However, the rules that regulate the sector, as well as, the criminal laws are indulgent and do not inhibit criminal action.

Hence, these results suggest that there are many complex factors influencing in this sector. Despite this complex environment, there are some ways to deal with this situation. The results allow the conclusion that relationship management is a method able to brake these barriers. The case study of this research, Cooperativa Languiru, works very close with suppliers, selecting, collaborating and monitoring them efficiently. At the same time, despite being meticulous with suppliers, to achieve its standard of quality, the company maintains good practices with them. This behaviour is well illustrated with a premium price paid for quality, investments for young people keep working in countryside area, family concerns such as school for kids and medical and financial assistance, among others.

Possibly because this is a cooperative company, the relationship between the company with suppliers surpass the commercial relation. The results demonstrate that it has been a successful position, since the company is on the rise and did not have any mention on the frauds investigations. Therefore, based on this analysis, considering the whole scenario, this study contributed in two different perspectives, presenting relevance both for the business practice, as well as for the academic area.

## 5.1 IMPLICATIONS FOR PRACTICE

Businesses, not only cooperatives, but general companies, as well as institutions and policymakers can use this analysis. Since the study brought an understanding of how a company may deal with issues that occur in the chain that experienced in many political and institutional situations. This study has as a contribution to the business practice the understanding of the dairy chain's structure established in the state of Rio Grande do Sul. It identifies political and economic interference that affect the whole chain.

Many institutions with different interests generate a depraved environment that hinder the development and sustainability of the dairy chain in the state, ultimately supporting the existence of the institutional voids. Thus, policymakers and institutions may use this research to improve their public policies and actions aiming to reduce their negative impacts on the dairy chain, which may help to develop this sector, to suppress the regulatory issues, to stimulate higher investment, and to make it more sustainable.

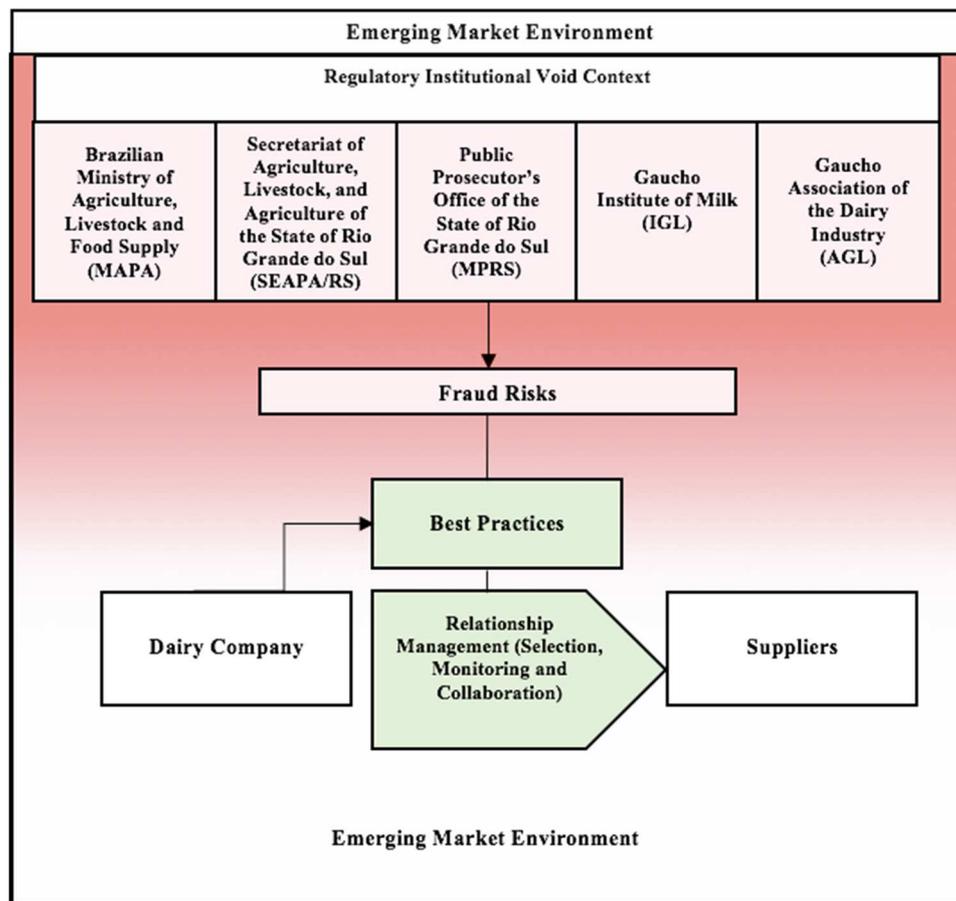
Likewise, regarding managerial contributions, this research may assist companies and their managers in understanding the importance of strategically dealing with the challenges caused by regulatory institutional voids in the supply chain. Thus, improving the relationship with suppliers, and investing in them as a proficient managerial tool to deal with supply chain inefficiencies.

Other companies and sectors could also be benefited by working closer to their suppliers. Companies should strive for developing a professional relationship since the selection to the monitoring of suppliers, and working in collaboration through all stages. Applying practices such as financing the life and professional needs of the suppliers, assisting their families to feel inserted in the community and, specially, paying a premium price may assist companies to deal better in this kind of context and situation.

## 5.2 IMPLICATIONS FOR THEORY

Based on the on the analyses of this research, table 20 represents the research framework proposed for this study, emphasizing the close supplier relationship, with best practices, decreasing the risk of frauds in an regulatory institutional void environment, typically found in emerging markets.

Table 19 - Research framework



Source: Designed by the author (2017).

The main academic contribution of this study features the elaboration of the research framework, in table 19, that points the institutional interferences in the supply chain, and, as a consequence, a company using managerial tools to deal with this situation. There are no previous studies proposing these elements of the study. the literature is still missing studies that explore the institutional voids in the supply chain together, and rare are the analyses that approach how institutional voids affect supply chains (PARMIGIANI; RIVERA-SANTOS, 2015).

However, in a supply chain, where there are experienced institutional situations, it is indispensable to develop the management artifacts to surpass the weakness of certain institutions. The absence or weakness of certain institutions are elements typically identified in developing countries (ROTTING, 2016), thus, this research's framework proposes that a company, operating in emerging markets, may deal with situations of institutional voids, caused in its supply chain, through the relationship with its suppliers.

In a context of an emerging market, two are the levels that compose this analysis, a macro level comprised of institutions, and a micro level comprised by a company relation with its suppliers. The macro level of analysis considers the environmental elements, institutional situations, which affect the operations in a supply chain. It focuses on the role, participation and interferences of regulatory and normative institutions, as well as, supporting and associative entities in the dairy chain of Rio Grande do Sul. Whereas the micro level of analysis, proposes the relation between the dairy company with suppliers in this regulatory institutional void context.

### 5.3 AN INTERNATIONAL INSTITUTIONAL VOID CASE AND THE RESULTS OF FRAUDS TO THE COMPANIES AND THE DAIRY CHAIN OF RIO GRANDE DO SUL

This issue faced in the dairy chain of Rio Grande do Sul is not an isolated case, the international scenario has a well-known fraud case involving a giant multinational company in the dairy industry that unfolded in 2008, in China. The fraud that took scandal proportions had focused on the Joint Venture Fonterra-Sanlu IJV corporate, comprised by the New Zealand dairy giant Fonterra and Sanlu, the largest Chinese milk powder organization. In that case, a list of institutional voids contributed to the frauds, among others, evidence of moral and cognitive legitimacy shortfalls (PAVLOVICH; SINHA; RODRIGUES, 2016). Additionally, Fonterra judged local regulations, that are lower than international standards, as legitimate, displaying typical inexperience of multinationals entering in emerging markets (KUMAR; DAS, 2007), (PAVLOVICH; SINHA; RODRIGUES, 2016).

The melamine adulteration poisoned more than 290,000 people (most of them infant children) and killed at least 6 babies; besides the emotional trauma faced by children that might develop future health complications. The Chinese government imposed severe penalties on people and companies involved in mixing the industrial chemical in dairy products and selling the contaminated product to dairy companies. Besides millionaire fines, two people were sentenced to life imprisonment and other two to death by the Chinese courts. In the 47-suspected

cases, 142 persons were investigated, 60 persons were arrested, and 06 ministerial or municipal officials were dismissed or resigned, including the Director General of China's General Administration of Quality Supervision, Inspection and Quarantine, Li Chiangjiang (XIU; KLEIN, 2010).

To the industry, the financial losses were catastrophic. The consequences were a daily operational costs increase of at least 30% to small farmers, local companies went bankrupted, and it is estimated over than US\$3 billion of direct losses to the whole sector. Over 200 families filed suit demanding higher preparation and long-term treatment for their children. Sanlu, the large dairy company in China was declared bankrupt in December 2008, having its assets sold for roughly 40% of their worth before the company's insolvency. Fonterra lost all its investment of US\$153 million made in 2005, in which it had acquired 43% of the Sanlu Group, and had to bear with US\$7.3 million fined by the Chinese government, which resulted in bankrupt (XIU; KLEIN, 2010).

Hence, the Chinese case is very similar to the crises experienced in the dairy industry of Rio Grande do Sul, both are developing countries with institutional voids that affected their industries and its supply chains. According to the collected data, so far, in Brazil, 178 persons were legally charged, 62 were arrested and 17 convicted. The Revenue Agency of the State of Rio Grande do Sul in Brazil has calculated around US\$ 7 millions of tax evasion until 2015 July due to the frauds. However, after the case became known, many companies have declared bankruptcy. Districts attorney office has made conduct adjustment agreement of over US\$ 3 million for specific companies to keep their operations.

Therefore, in reason of the frauds, companies have been changing their way of dealing with suppliers. Few companies have started to use their own trucks, but, as the routes are too long (some over 500 Kilometers) and small farmer suppliers are spread out, they still have to use outsourced transport firms to collect the milk. Before frauds, companies used to pay for the volume of milk they receive from the shipping companies, however, after investigations, some have started to pay the transport according to the distance traveled by outsourced shipping firms.

The changes had some consequences to the companies. The owners of the routes, shipping outsourced firms, in some cases refused to accept this new kind of arrangement, which resulted in firms losing many important small producers. However, the outsourced shipping companies that accepted the new agreement had to start using a Global Positioning System (GPS) that tracks and informs if the truck is in the right route, if it is on time, the cargo temperature, the amount of milk collected, and further information that may affect the quality of the product.

Moreover, after the frauds, firms had to provide more resources and training to their suppliers. Due to the bill number 14.835 (milk law), this relation between companies is becoming closer, since, according to this law, companies now are considered civil and criminal co-responsible for any matter that happens at any stage of the chain, which was not the case before. Consequently, firms have to become closer to all stages of production, increasing inspections, and penalties on suppliers' fraudulent behavior.

Before frauds, although some companies already had their quality standards, they used to tolerate some products that did not meet all indexes of quality. However, after investigations, these companies had to start investing more in equipment to prevent frauds, and applying new kinds of tests for better monitoring and selection of suppliers. Additionally, some businesses have started to apply better prices to their suppliers. Pursuing a better quality of the milk, they had started to apply premium prices according to rates of quality. This conduct is relevant because costs of production really affect small producers in the dairy chain, so much so that it is a general concern in regards to rural exodus. Hence, though low price levels are still applied in the dairy industry, this method has encouraged small producers to keep going with milk production.

Therefore, the collected data and the consequences of the frauds for the chain reinforces the purpose of this study that an institutional void environment requires a singular approach from companies to their suppliers. The relation between firms and their suppliers must be managed close enough that enables firms to provide a product according to international quality standards. Instead of having a limited commercial relation, organizations must be closer to their suppliers since selection to monitoring.

#### 5.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Originally, the object of study of this research was supposed to be a company that had effectively been involved in the milk fraud investigations. However, due to difficulties in accessing these companies' data and finding reliable interviewee sources, a different model – a company that had experienced the same environment but that was not affected by the frauds – had to be chosen. Therefore, although the initial planning could not be followed due to a lack of information regarding companies under investigation, this research still contributes to an understanding of the dairy chain's management processes as it analyzes the model of a company with good practices in the management of its suppliers.

Even so, few suppliers directly related to Languiru were interviewed to confront realities, which could mislead the analyses. It happened because of the turbulence experienced in the sector. However, to avoid it, alternatively, many different actors of the supply chain were interviewed. There was an attempt to interview transport suppliers, but, due to the situation that was going on the sector, none of the transporters wanted to participate directly in this research.

It was a very complicated political moment in Brazil, many of the interviewed people tried to give their version and political views, especially, in the interviews where institutions were reluctant to be interviewed. For instance, SINDILAT, a very important institution, inclusively mentioned in other interviews, opted to not manifest its point of view to this research. Although, undoubtedly, the most serious limitation is that the dairy chain was passing by a very turbulent period, which was never experienced before in the sector. Many of the interviewed people were being investigated, prosecuted, and risking arrest during the investigations.

In terms of future research, a qualitative study based on a single case composed this research methodological choice. The distinguishing element of this approach is to make theoretical analyses instead of a statistical overview. Under the situation experienced in the dairy chain of Rio Grande do Sul, this method properly fit to reach the objectives of this study. However, for future validation and adjustments to the theoretical framework purpose, further studies could be reasonable. More studies would permit a deeper understanding of this theme, which remains until now poorly explored.

Future studies would be able to reapply this research in different industries and countries, and could add much to the topic. Using the same research framework in the same context of developing countries, but in different chains could contribute to the validation of it. As a suggestion, for instance, in Brazil, the meat sector suffers very similar problems, and it could benefit from in-depth research into this subject. As lately noticed on the news, bribes, corruption, political and economic influences and institutional voids affect directly this sector, one of the most important of Brazil. In addition, to have a broader view, the study could be applied to multiple cases, allowing different perspectives to show how to deal with situations in the supply chain, experienced by the companies in the institutional voids contexts.

Furthermore, as mentioned in this study, the concept of the institutional void is much wider than regulation issues. This way, further research could also focus on distinct kinds of institutional voids, different from the regulatory one. In the case of Brazil, as a recommendation, it could be studied the case of Embraer, an aeronautical manufacturing, inserted in a high technology sector, which is a consolidate and successful company that has most of its operations

in an emerging context, that experience several other types of institutional voids. The relation of the company to its suppliers could improve this research framework, since it is a very different chain, with different demands.

Moreover, a comparison between two different contexts would be valuable. Compare how companies acting in developing and emerging countries vary in terms of relation with its suppliers. This also could allow a deep view of how an institutional void context (developing countries) differ to the developed ones (developed markets). It would allow to have better analyzes of how a chain works from a developed country in contrast to a chain in a developing country.

A suitable comparison, in this case, for instance, could compare the context of Brazil to Canada. One country (Brazil) having its institutional voids that affect the dairy chain, whereas, Canada has an extremely regulated chain, aiming to be sustainable. Therefore, it is possible to compare the impacts of an environment without institutional voids to another one with that experiences such institutional voids. Not only a qualitative could be applied, but also a quantitative empirical research could statistically explore the impacts of this two different context in the chains, as well.

## 5.5 CONCLUSION

The origin of the problem in the dairy chain clearly lies in the inspection of animal products. The outdated legislation regulating the issue is from the 1950s and provides rules that create a breeding ground for fraud and corruption. In this context, it is the government's duty to provide a minimum quality of the product's inspection and control. Although milk does not necessarily have to achieve the highest excellence parameters, a minimum quality standard is required for its consumption, which is what the current legislation is supposed to provide. However, regulations are flawed and there are not enough inspectors to meet the demand and inspect all the milk produced in the state.

Frequently, regulations – not only the laws that regulate the sector, but also the laws that regulate criminal matters – leave out many important rules and do not cover situations that would be fundamental in avoiding problems in the milk chain. Moreover, such regulations require beyond what producers and companies can provide, such as purity indexes and milk fats. Regarding the lack of inspectors, it is possible to argue that, if there were enough professionals in charge of supervising the milk produced in the state – and if the regulation ensured that all milk had the minimum health requirements – quality differences (in relation to

purity and percentage of fat, for instance) and, consequently, price differences, could be chosen by the consumer. Therefore, a consistent and updated milk regulation, as well as the means to observe and comply with such laws, is needed for an efficient functioning of the chain.

Nonetheless, in addition to a problematic regulation, in practice, it is frequently possible to observe some public servants that work in the service of certain companies and institutions, rather than working in the service of the public administration. This represents a challenging aspect in the relationship between the public administration and the society. In this case, instead of being a problem regarding Criminal Law, a tremendous difficulty lies in Administrative Law.

The current scenario allows corruption, greed, as well as economic and political interests of certain entities, typical of developing countries. There is a political system, with multiple interests, that directly and negatively influences the development of the milk chain. The result is that the entire chain suffers losses, both in terms of the image of the product sold, and in the number of sales of the product produced in the state. After all, it was clear that particular interests are placed before the sustainable development of the dairy chain.

To conclude, this is a very distinct sector and the supplier of the milk is the most important link in terms of quality. For this reason, it can be argued that a close and friendly, but at the same time professional relationship, serves as an alternative for companies to surpass difficulties in the dairy chain. Indeed, working on a solution for the above-mentioned problems is essential, as milk is one of the only raw materials that no industry can improve on it: it must possess quality standards since the first tie of the chain.

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## APPENDIX A – RESEARCH PROTOCOL

<b>Research protocol - Master's thesis</b>	
<b>Research question</b>	How a company manages its relationships with suppliers in an environment with a regulatory institutional void?
<b>Main objective</b>	To describe the relationship between a dairy company and its suppliers in an environment of regulatory institutional voids.
<b>Unit of analysis</b>	This study has as unit of analysis the dairy company relations with its suppliers. For that, the institutional context was explored to understand this relation.
<b>Examined actors</b>	The analysis studied three participants of the dairy chain: a dairy processing company (focal actor), its suppliers and institutions.
<b>Sources of evidence</b>	Interviews, observations, analysis of documents, books, websites and reports.
<b>Period, location and institution of data collection</b>	The data collection occurred in the state of Rio Grande do Sul, Brazil, between the months of June to August 2016. Besides companies and its suppliers, governmental, normative, regulatory, class, supporting and associative institutions were examined.
<b>Operating procedure</b>	All interviews were scheduled in advance and had an estimated length of 1 hour. The interviews were recorded and later transcribed. All the interviews were conducted in person by the researcher to have a better understanding of the case.
<b>Researcher role</b>	The researcher introduced himself, explaining the purpose of the study and requested formally the consent and permission to record the interviews. The researcher presented the interview script to the interviewee and let them to talk openly about the topics. To ensure that all questions were addressed, a checklist was applied.

Source: Designed by the author (2017).

### Questions translated to English

Institutions	Company	Suppliers
<p>1) How is the milk chain in Rio Grande do Sul configured?</p> <p>2) Who are the main actors of the chain? Which institutions regulate/interfere in it?</p> <p>3) How does the industrialization process work?</p> <p>4) What is the role of your institution and what differentiates it from the others?</p> <p>5) How does the milk inspection occur? Is there any other body that regulates/inspects the product?</p> <p>6) How is your institution's relationship with companies and other institutions?</p> <p>7) Is there any link in the chain that is more exposed to the possibility of adulteration of the product? If yes, which one?</p> <p>8) How do the frauds occur and what were its motives?</p> <p>10) How can your institution and other public bodies eliminate/reduce the risk of frauds?</p> <p>11) What are the main difficulties faced by the milk chain?</p> <p>12) Are there any differences between the processes of local companies, cooperatives and multinational enterprises?</p> <p>13) In order to avoid frauds, are companies responding positively to this contingency in relation to other agents in the chain? How and what strategies are used?</p> <p>14) How do dairy companies relate to their suppliers? Have you noticed changes in this relationship due to the frauds that occurred?</p> <p>15) Snowball sampling: Would you have any indication regarding other important actors in the process that should be heard?</p>	<p><b>General Questions Regarding the Chain</b></p> <p>1) How is the milk chain structured and who are its main actors?</p> <p>2) What are the main difficulties faced in the milk chain?</p> <p>3) Are there political and economic interests that affect the chain?</p> <p>4) Is the existing legislation adequate? Does Languiru play a role that should be done by government institutions?</p> <p>5) What is the impact of the new legislation (Law No. 14,835 from 06/01/2016)? Do you believe that it will be positive? Will it influence the competitiveness of the company?</p> <p>6) How does Languiru manage the product quality? Regarding the last five years, was there any evolution in the company's processes concerning the milk quality?</p> <p><b>Collaboration</b></p> <p>7) Considering that the company follows a cooperative model, how does the mutual understanding of quality responsibilities occur? Is there a common planning?</p> <p>8) How do the common decisions occur? Could you talk about the evolution of this practice since it was adopted? What changes occurred?</p> <p>9) What is the impact of common planning with producers and transporters?</p> <p>10) How are the prices established? Is there a differentiated payment? Are there special practices with your producers and transporters?</p> <p><b>Monitoring</b></p> <p>11) How is the monitoring of producers and transporters to maintain the quality standards established by the company and by the institutions that govern the sector?</p> <p>12) How was the monitoring prior to the investigations and how does it occur today?</p> <p>13) Are there visits by specialists for periodic evaluation? What are the evaluation criteria?</p> <p>14) Are requests made for suppliers to provide licenses and permits?</p> <p>15) Are there penalties if the milk is out of quality standards? What happens if a supplier does not continually meet the company standards? What do producers usually do with the milk rejected by Languiru?</p> <p><b>Selection</b></p> <p>16) How is the selection of producers and transporters? What has changed after the investigations?</p>	<p>1) What are the main difficulties to carry out the activity?</p> <p>2) How being an associate of the cooperative?</p> <p>3) How is your relationship with the company?</p> <p>4) Is there anything from the cooperative that you dislike?</p> <p>5) Have you always provided to Languiru or have you worked for another company before?</p> <p>6) How are the prices paid by the company?</p> <p>7) Is there any penalty if the product is out of the standard of quality? If so, how does it work?</p> <p>8) How is the quality planning, is there a common planning?</p> <p>9) How does Languiru monitor the quality issue to see if it fits the desired standards?</p> <p>10) In the last five years, has there been an evolution in Languiru's quality processes? Has the company ever made new demands?</p> <p>11) How is the assistance from the company? Do their staff help you? How frequently, approximately, do they visit your property?</p> <p>12) How was the selection process to start working with Languiru? Has the company made any requirements, any formal requirements, such as a permit, a registration or any special license?</p> <p>13) How does the Farm Good Practices program work? Is there a guidebook to follow?</p> <p>14) Does the company help with financing, health care, medicines, family education? If so, how does it work?</p> <p>15) How does Languiru require you to commit to their quality standards?</p>

	<p>17) Are there licensing and permitting requirements for transporters and producers to supply milk to the company?</p> <p>18) How do the formal requirements work? Is it required that potential suppliers formally undertake a commitment to meet the established standards?</p> <p>19) Do experts make prior audits to adequate potential suppliers to company standards?</p> <p>20) How does the company require the potential supplier to commit to quality goals?</p> <p>21) Snowball sampling: Would you have any indication regarding other important actors in the process that should be heard?</p>	
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### Questions in Brazilian Portuguese

<b>Instituições</b>	<b>Empresa</b>	<b>Fornecedores</b>
<p>1) Como é configurada a cadeia do leite do RS?</p> <p>2) Quais são os principais atores da cadeia e instituições que a regulam/interferem?</p> <p>3) Como funciona o processo de industrialização?</p> <p>4) Qual é o papel da sua instituição e no que difere das demais?</p> <p>5) Como ocorre a inspeção do leite? Existe algum outro órgão que regulamenta/inspeciona o produto?</p> <p>6) Como é a relação da sua instituição com as empresas e demais instituições?</p> <p>7) Algum elo da cadeia está mais exposto à possibilidade de adulteração do produto? Qual?</p> <p>8) Como ocorrem e quais os motivos você aponta para a existência das fraudes?</p> <p>10) Como sua instituição e outros organismos públicos podem reduzir/minimizar o risco de fraude?</p> <p>11) Quais são as principais dificuldades enfrentadas pela cadeia do leite?</p> <p>12) Há diferenças entre os processos de empresas locais, cooperativas e multinacionais?</p> <p>13) Para evitar fraudes, há empresas que respondem positivamente à esta contingência em relação aos outros agentes da cadeia? Como e quais estratégias utilizadas?</p> <p>14) Como os laticínios se relacionam com seus fornecedores? Tem percebido mudanças na forma de relacionamento em função das fraudes ocorridas?</p> <p>15) Snowball sampling: Teria alguma indicação sobre outros importantes atores no processo que podem ser ouvidos?</p>	<p>Questões Gerais Sobre a Cadeia</p> <p>1) Como a cadeia do leite está estruturada, quem são os principais atores?</p> <p>2) Quais são as principais dificuldades enfrentadas?</p> <p>3) Há interesses políticos e econômicos que afetam a cadeia?</p> <p>4) A legislação existente é adequada? A Languiru desempenha um papel que deveria ser feito por instituições governamentais?</p> <p>5) Qual o impacto da nova legislação (lei 14.835 de 06/01/2016)? Você acredita que será positiva ou poderá influenciar na competitividade da empresa?</p> <p>6) Como a Languiru faz a gestão da qualidade do produto? Pensando nos últimos cinco anos, houve alguma evolução nos processos da empresa em relação à qualidade do leite?</p> <p>Colaboração</p> <p>7) Considerando que a empresa segue um modelo cooperativo, como ocorre o entendimento mútuo em relação às responsabilidades de qualidade? Há um planejamento em conjunto?</p> <p>8) Como ocorrem as decisões conjuntas? Poderia falar sobre a evolução desta prática, desde quando foi adotada?</p> <p>9) Qual o impacto da realização de um planejamento em conjunto com produtores e transportadores?</p> <p>10) Como são estabelecidos os preços, existe um pagamento diferenciado? Existem práticas especiais junto aos seus produtores e transportadores?</p> <p>Monitoramento</p> <p>11) Como ocorre o monitoramento de produtores e transportadores para sejam mantidas as normas de qualidade</p>	<p>1) Quais são as principais dificuldades para exercer a atividade?</p> <p>2) Como funciona essa questão de ser um associado à cooperativa?</p> <p>3) Como é sua relação com a empresa?</p> <p>4) Existe algo da cooperativa que não agrade?</p> <p>5) Sempre forneceu para a Languiru ou já trabalhou para outra empresa antes?</p> <p>6) Como funciona a questão dos preços pagos pela empresa?</p> <p>7) Existe alguma penalidade caso o produto esteja fora do padrão de qualidade? Se sim, como funciona?</p> <p>8) Como ocorre em relação a qualidade, há um planejamento conjunto?</p> <p>9) Como a Languiru monitora a questão da qualidade para observar se está nos padrões desejados?</p> <p>10) Nos últimos cinco anos houve uma evolução nos processos da Languiru em relação à qualidade? A empresa chegou a fazer novas exigências?</p> <p>11) Como é que funciona a questão da assistência? O pessoal ajuda bastante? Em quanto tempo, mais ou menos, eles visitam?</p> <p>12) Como funcionou o processo de seleção para começar a trabalhar com Languiru? A empresa fez alguma exigência, algum requisito formal, uma permissão, um registro ou alguma licença especial?</p> <p>13) Como funciona o programa das boas práticas de fazenda? Há um manual de regras a ser seguido?</p> <p>14) A empresa ajuda no sentido de financiamentos, assistência de saúde, medicamentos, educação para a família? Se sim, como funciona?</p>

	<p>estabelecidas pela empresa e pelas instituições que regem o setor?</p> <p>12) Como ocorria antes das investigações e como ocorre atualmente?</p> <p>13) Ocorrem visitas por especialistas para avaliação periódica? Quais os critérios de avaliação?</p> <p>14) São feitas solicitações para os fornecedores providenciarem licenças e permissões?</p> <p>15) Existem penalidades caso o leite esteja fora dos padrões de qualidade? O que ocorre se um fornecedor continuamente não atender aos padrões da empresa? O que geralmente os produtores fazem com o leite rejeitado pela Languiru?</p> <p>Seleção</p> <p>16) Como ocorre a seleção dos fornecedores? O que modificou após as investigações?</p> <p>17) Há exigências de licenças e permissões para que transportadores e produtores forneçam leite para a empresa?</p> <p>18) Como funcionam os requisitos formais? É requerido que os potenciais fornecedores formalmente se comprometam em satisfazer as normas estabelecidas?</p> <p>19) Especialistas fazem auditorias prévias para adequar os potenciais fornecedores aos padrões da empresa?</p> <p>20) Como a empresa exige que o potencial fornecedor se comprometa com as metas de qualidade?</p> <p>21) Snowball sampling: Teria alguma indicação sobre outros atores importantes no processo que podem ser ouvidos?</p>	<p>15) Como que a Languiru exige que vocês se comprometam com as metas de qualidade?</p>
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Source: Designed by the author (2016).