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10 YEARS LATER: A STUDY ABOUT SERRA GAUCHA'S WINE CLUSTER INTERNATIONALIZATION PATH

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Dissertação de mestrado apresentada ao Programa de Pós-graduação em Administração da Escola de Administração da Universidade Federal do Rio Grande do Sul como requisito parcial à obtenção do grau de Mestre em Administração.

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ABSTRACT

The Serra Gaucha cluster is responsible for 90% of the Brazilian wine production and employs around a hundred thousand people directly. Brazil has a significant potential to explore foreign markets as it ranks as the 15th largest wine exporter in the world. The present study seeks to analyze the internationalization path of this relevant cluster in the last ten years, from 2009 to 2019. To do so, secondary sources, in-depth interviews and survey-based data was used. More specifically, a group of seventeen wineries were studied in exploratory longitudinal approach. From these group, ten wineries remained exporting in 2019. All of the ten are part of Wines of Brazil, an Integrated Sector program, and seven increased efforts to participate in international wine competitions with support from the Brazilian association of enology (ABE). Through these data, it is concluded that cluster institutions are important for the development of the internationalization strategy of the cluster during the last decade.

Keywords: Clusters; Internationalization; Resource-based view; Serra Gaucha; Wine.

RESUMO

O cluster da Serra Gaúcha é responsável por 90% da produção brasileira de vinho e emprega cerca de cem mil pessoas diretamente. O Brasil tem um potencial a ser explorado nos mercados estrangeiros, visto que é o 15º maior exportador de vinho do mundo. O presente estudo busca observar a jornada de internacionalização desse relevante cluster nos últimos dez anos, de 2009 a 2019. Para isso, foram utilizadas fontes secundárias, entrevistas em profundidade e questionários para basear essa pesquisa. Mais especificamente, um grupo de dezessete vinícolas foi estudado em uma abordagem longitudinal. Desse grupo, dez vinícolas continuaram exportando em 2019. Todas as dez fazem parte do *Wines of Brazil*, um programa entre diversas instituições governamentais, e sete das dez aumentaram suas participações em competições internacionais de vinho com o apoio da Associação Brasileira de Enologia (ABE). Com esses dados, conclui-se que as instituições do cluster são importantes para o desenvolvimento da estratégia de internacionalização do cluster durante a última década.

Palavras-chave: Internacionalização; Clusters; Resource-based view; Serra Gaúcha; Vinho.

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1 INTRODUCTION

Among the many industries that comprise Brazil's economy, there is the wine industry. The production of wine in the country dates back to colonization period around 1500's. Production of wine starts increasing and showing some characteristics of the industry that exists now on the late 1800's. From this period on, the industry goes through different periods that challenges and forces firms, which are mostly originally family firms, to evolve and increase quality.

The main wine region of Brazil is the Serra Gaucha region. Located on the deep south of the country in the northeast part of the state of Rio Grande do Sul, the region produces around 90% of the domestic wines (IBRAVIN, 2019). With a strong cultural Italian influence due to migratory influx during the period of 1880 to 1930, grape production and wine consumption became a staple of the region generating strong socio-cultural embeddedness.

During the 70's there was an increase in the presence of multinational wineries because the importing process was essentially blocked by the government. After the market opening of the economy in the 90's, these companies, except Moet Chandon, left the country. Grape producers had to find a way to use their production and started producing their own wine. This changed the dynamic of the Serra Gaucha cluster because many grape producers started producing wine.

Since the market opening, the domestic production competes with international brands. Imported wines account for more than 60% of the internal consumption. To compete, the local wineries, besides developing production and processing technologies, invested in the consolidation of the image of the Brazilian product in the world market. This pushes firms to follow an internationalization path. This internationalization process takes many forms but the most challenging is exporting the domestic wine.

Wine exporters from the Serra Gaucha clusters found barriers to export especially when compared to more traditional countries like France and Italy. To help this process – enabling and adapting products and processes aiming at exports - Wines of Brazil program was created. This is an Integrated Sector Project is coordinated by the Brazilian Wine Institute - Ibravin, with the support of the Agency Export and Investment Promotion Company - Apex Brazil and other institutional partners.

Additionally, Brazil's, economy is ample and diverse making it possible for firms to survive and generate results operating only on the domestic market. Moreover, for the business to flourish in such a complex country takes effort and time. Therefore, it is less common for

companies to have the structural capacity to absorb the task of internationalizing.

According to researchers, such as Molina-Morales (2001), Fahy (2002) and Albors-Garrigós (2007) firms that are part of an agglomeration in form of a cluster might reduce some of these difficulties. When analyzed through resource-based view the clusters develop resources that are collective and are available for all actors involved. When analyzed through a network perspective the interaction among the participants of the cluster generate a unique pool of knowledge, both technological and market related, for example. So, these are the main perspectives of this study.

As the last few years were important for the Serra Gaucha cluster as it created more common resources such as associations and certification of controlled origin. The year of 2014 was especially remarkable due to the world cup and changes in the economic scenario. Considering this, this longitudinal study explores a ten-year period contemplating five years before and after the year of 2014. To explore this period, Zen (2010) is amply used as a starting point for this research. So, the main research problem is: what was the internationalization path of the Serra Gaucha cluster from 2009 to 2019?

1.1 OBJECTIVES

The objectives were defined as general and specific, and the achievement of these objectives is critical for the reach of that.

1.1.1 General Objectives

This study aims to describe the internationalization strategy of the Serra Gaucha cluster during the last ten years.

1.1.2 Specific Objectives

The specific objectives of this research are to:

- Analyze the internationalization decisions of the cluster.
- Describe the main occurrences during the ten years tracked in this study.
- Examine the influences in internationalization along the period explored.

1.2 JUSTIFICATION

Although Brazilian wine exports increased in the last year, the country is still lagging compared to its Latin American counterparts, as it ranks as the 15th exporter worldwide. Close countries like Argentina and Chile rank at 10th and 4th respectively (OIV, 2019). Contrary to its counterparts, Brazil's image is not normally associated to wines and most vines have ages varying from ten to thirty years which relatively young. Thus, there is an imminent need for research to support the growth of this industry's reputation and consequently its export.

For some years, local wineries produced table wine. These wines were intrinsically of lower quality compared to fine wines. This did not contribute for the region's reputation (ZABOT, 2014). As the national wineries struggle to gain share on the expanding national market and internationalization can have a positive effect on reputation, this study is also important for the understanding of possible opportunities of reputational development in the domestic market.

As stated before, Serra Gaucha cluster is the main wine cluster in Brazil and responsible for almost 90% of the country's production (IBRAVIN, 2019) and the first region to have a certification of origin granted in Brazil. This study broadens the empirical basis on the internationalization process of Brazilian wineries especially when considering its longitudinal aspect. Ten years is a relevant time frame seeing that the cluster started to become what currently is around ninety years ago.

The cluster is mainly constituted by small and medium family firms. It has 20,000 producing families, about a thousand wineries and approximately a hundred thousand people employed directly (IBRAVIN, 2018). Therefore, it is justifiable that, in a manner that converges with the cluster literature, contributions to clusters are also contributions to society.

2 LITERATURE REVIEW

On this part of the research the main literature will be presented as a support for comprehension of the new data documented through this research. First, it delimited the cluster concept in all its complexity. Second, previous researches are shown to display the benefits of cluster configurations. Third, resource-based view is described as a form of organizing the analysis of resources. Fourth, theories describing the life cycle of clusters. Fifth, and last, internationalization concepts are presented.

2.1 CLUSTER DEFINITION

As this research is focused on a specific cluster, it is necessary to clarify what is a cluster by academical definition. The origins of the cluster concept is closely related to the idea of Industrial district coined by Marshall (1890). The author studied industrial companies' agglomerations in the same locality that formed due to the availability of resources such as specialized suppliers, human resources, information and knowledge. These agglomerations were named industrial districts by the author and created a path of study that later became the base of the cluster concept. Some of the characteristics used to define an industrial agglomeration are present in most definitions of clusters.

In recent years, the study of clusters gained importance as the relevance of the local dimension increased especially when considering the advent of globalization. As a result, an ample range of studies aimed at similar topics to agglomeration in a broader way. Researches that focused on, for example, agglomeration economies, industrial districts, *milieux* and local production systems. The evolution of the cluster concept was impacted by the myriad of definitions and became permeable. Consequently, the meaning of cluster will depend on each school of thought and context in which it was developed (CRUZ; TEIXEIRA, 2010).

The first definitions of clusters were directed at group of firms from different stages of the production process (SCHMITZ, 1995). Closely, related to the definition of industrial districts, Porter (1998) defined clusters as geographical concentrations of industrial firms that are related, cooperate and compete, generating competitive advantages through interaction. From these broad definitions, other characterizations were created along the years.

A development to the early characterizations, some authors added the notion of cluster as spatial configurations in which collective learning processes are reinforced through constant

and frequent interaction opportunities between firms along horizontal and vertical links (CAPELLO; FAGGIAN, 2005; MASKELL, 2001). On a similar manner, clusters can be analyzed thorough an economic and social approach on the prerogative that relationships and interactions - through economic activities, products, technologies and knowledge sharing - between economic agents of a specific geographic region occur in order to deliver superior services to the market (MOROSINI, 2004). Moreover, clusters can be seen as a community of firms engaged in related activities and people with a homogeneous culture (MOLINA-MORALES, 2001). According to Molina-Morales (2001), more important than agglomeration of firms is the community of people that is formed, because it is through it that trust relationships are established and opportunism can be reduced.

Along this line, according to Giuliani (2005), theoretical descriptions started considering that not only the institutions influence a certain area. The local culture, comprising the historical and technological trajectories, are an important influence for the development regions. Thus, it is noticed that the cluster is not only an agglomeration of firms, but also a social entity, that is constituted by countless interactions. Institutions such as development, research and education-related, such as universities, research centers and technical schools interact with each other as well as with firms (MENZEL; FORNAHL, 2010). These kinds of institutions are the foundation for the creation of innovation and human capital networks. They are also the units of the cluster as is impossible to separate them (MASKELL, 2001; MENZEL; FORNAHL, 2010). Along this research line, the external limit of the cluster is defined by firms and institutions related to a particular field and value chain (MENZEL; FORNAHL, 2010).

Concluding, amid so many schools of thought and scholars involved over time, there is not a standard and amply accepted definition of cluster in academia. In this work, the cluster is understood as a type of geographic agglomeration of firms belonging to a unique value chain. Also, the firms are physically close and have a social network that binds them together with related intuitions. The impact of the local culture is also a relevant aspect for the analysis of the cluster in this research.

2.2 BENEFITS OF THE CLUSTER

Now that cluster were defined and delimited, this next chapter explores why this kind of configurations are beneficial for the part involved. For Hervas-Oliver et al. (2015), there were many approaches and disciplines dedicated to studying clusters and all emphasized the influence of locality on performance. The literature remains fragmented in different disciplines,

theoretical chains and under various names, which has made the views different, but generally complementary to the creation and maintenance of competitive advantages (FENSTERSEIFER, 2009). Accordingly, among the many definitions of cluster one thing is common between studies: clusters are a form of geographic agglomeration capable of bringing positive externalities to the firms involved (PORTER, 2000; MOLINA-MORALES, 2001; PUGAS; FERNANDES, 2014).

Similarly, Erber (2008) states that clusters gain specific competitive advantages as a result of collective efficiency. These benefits can materialize as, for example, lower transaction costs, cost sharing, infrastructure (TSAI; TSAI, 2010) and access to skilled workers (LAI et al. 2014). All the advantages cited before, contribute to the expansion and strengthening of the clusters. Therefore, it is stated that firms in clusters outperform those that are not part of a cluster.

Additionally, the cluster generates complementarities that may be market related as this type of configuration can help create a local reputation for a particular segment, such as certain wine regions in France and Italy (PORTER,2000). It was also found that the positive performance of some members of the cluster can boost that of others and the coordination of everyone's activities can optimize collective productivity (MOLINA-MORALES, 2001; SCHMITZ, 1999). In light of this discovery, another role within the cluster becomes relevant: the governance of the actors. As defined by Fensterseifer and Rastoin (2013), governance refers to non-market modes of coordination of economic activities. It may be public, private or a hybrid (public-private) governance.

Another important competitive advantage of the cluster is favorable conditions for knowledge creation and transfer. In agreement with the studies of Molina-Morales (2001), the cluster trajectory over time generates specific resources that creates competitive advantage for the firms that comprise the agglomeration. In addition, they share homogeneous sociocultural identity and trust relationships (SCHMITZ, 1995) developing access to tacit knowledge which is more easily transacted (MASKELL; MALMBERG, 1999).

Organizational learning considers that firms have a learning path or path dependence, which results from a process of knowledge accumulation over time by the firm (DOSI, 1997). According to Martin and Sunley (2006), path dependence refers to trajectories of technological change, economic and institutional structures of a locality. The regional aspect is also an influencing variable in the trajectory of agglomerations (MENZEL; FORNAHL, 2010). Thus, each locality has a distinguishing path dependence (MARTIN; SUNLEY, 2006), demonstrating that the regions have their own characteristics that influence and results in the clusters unique

characteristics and levels of cognition (GIULIANI; BELL, 2005; MASKELL, 2001).

This creates a greater possibility of learning and knowledge exchange (MASKELL, 2001; MORRISON, 2008; LAI et al., 2014). The learning path of the local production arrangements promotes innovation capacity, such as development of new technology or processes, based on interactive and localized learning (BALESTRIN; VARGAS, 2004).

Specifically, the transfer of knowledge and information is a key issue for the competitiveness of this type of agglomeration (TALLMAN et al., 2004). The common knowledge of the cluster is a tacit knowledge, which depends on the trajectory of the cluster, that presents a causal ambiguity and is not transferable between clusters (HÉRVAS-OLIVER; ALBORS-GARRIGÓS, 2007). Knowledge is generated through an accumulation process, becoming a source of advantage for the cluster (TALLMAN, et al., 2004). Hence, another important part of to process that makes this knowledge a competitive advantage is how easily avalaible it is for the members of the cluster and their capacity of absorbing it (BELL, 2005). The firm plays a very important role in knowledge absorption, because everything depends on its capacity to transform knowledge into new outputs, such as products, processes and organizational models (MAEHLER et al., 2011).

Broadly, knowledge acquisition capacity is of importance for competitive strategies in the domestic market and also valuable for the development of operations in foreign markets (GUNAWAN; ROSE, 2014). Researchers also discovered that the process of internationalization and the exploitation of knowledge for this activity can occur more easily within the cluster (MEYER; SKAK, 2002; CHETTY; WILSON, 2003; SEPPO, 2007). Meaning that being in a cluster helps in a global competitive market (SIQUEIRA; TELLES, 2008) for both firms in developed countries and in developing countries (GIULIANI; PIETROBELLI; RABELLOTTI, 2005).

Furthermore, the path of knowledge acquisition depends not only on internal cluster interactions but also external interactions (GIULIANI, 2005). There are connections between companies, relationships with customers and with agents outside the cluster, such as government and other institutions. Networks allow access to nearby support industries (BELL, 2005) and it is through the exchange between firms in terms of expertise and subcontracting that both efficiency and collective capabilities are developed (MOLINA-MORALES, 2001). Moreover, the interactions with associations and universities matures the activities performed by the firms of the cluster. The support of both education and research, through specialists, associations and universities, generates complementarities essential for firm and cluster competitiveness (PORTER, 1998).

Even though all these benefits have been documented, given the issue of heterogeneous performance, it is stated in the literature that not all companies benefit simply from being in clusters. Although geographic agglomeration is relevant, its influence on firms varies asymmetrically (HERVÁS-OLIVER; ALBORS-GARRIGÓS, 2016). The explanation may be related to some particular characteristics of each cluster and also to the firms involved. This is because it must be considered that competition goes beyond products, services and markets, but also considers subjective aspects, not so explicit but quite complex, as the strategic resources needed for future actions and positioning (FENSTERSEIFER, 2009).

2.3 CLUSTER THROUGH A RESOURCE BASED VIEW

As the field of study developed along the years, researches involving clusters, focused on specific perspectives like knowledge-based theories. Which for this research is a key aspect, therefore, in this chapter the theoretical framework will be explored further.

Resource-based view, in short RBV, is a model that proposes resources as key to superior firm performance. These resources have three common attributes: value, rarity and imitation cost. Lastly, the firm has to be organized enough to capture the value of these resources (ROTHAERMEL, 2012). In brief, these kind resources become inputs of the production process which, if used together in an articulated manner, become a competitive advantage (IRELAND; HOSKISSON; HITT, 2011).

In a resource-based view, resources can be viewed by its tangibility characteristics being divided in two categories: tangible and intangible. The first, refers to physical things such as land, buildings, machinery, equipment and capital. The second, is all the things that are not concrete but still can be owned by the firm, for an example, brand reputation, trademarks and intellectual property. The first is available on the market to be purchased the latter is not. Thus, intangible assets are created by firms in an effort over time and tend to be a more unique competitive advantage (FAHY, 2002).

This framework of viewing the firms' competitiveness through resources can be applied also to clusters (MOLINA-MORALES, 2001). The cluster can be seen as an economic agent that occurs due to the synergies between the actors that form it (MOROSINI, 2004). So, the individual enhancement of firms, the connections between firms, as well as, among firms and cluster institutions improve the cluster's unique features and capabilities. All these cluster aspects create a unique set of resources. The analysis of this cluster specific circumstance can be done tracing a parallel with the RVB framework for firms due the previously cited

similarities (HÉRVAS-OLIVER; ALBORS-GARRIGÓS, 2007).

By using RVBs framework applied to clusters and specifically classifying resources in a tangibility perspective, Wernerfelt (1984) Grant (1991); Barney (1991) Bonaccorsi (1992), Molina-Morales (2001), Fahy (2002), Hervás-Oliver; Albors-Garrigós (2007) and Zen (2010) apud Galuk (2017) developed a table describing cluster specific resources as seen below.

Table 1 – Cluster Resources

Resources		Description					
	Financial	Credit Access Government Incentives and Benefits Financial strength of companies in the region					
TANGIBLE	Physical / operational	Geographic location Production infrastructure Logistics and Distribution					
Technological		Existence of technological research institutes Access to technical assistance, consulting and technology guidance Sharing technical resources (labs and test centers) Existence of technology-specific training centers for the region Standardization and Quality Technical Committees					
BLE	Market Related	Reputation (from country, region and / or cluster) Market development Quality certification					
INTANGIBLE Human Related		Access to specialized production personnel Access to specialized management and strategy personnel Culture of the region (cultural aspects, entrepreneurship and competition between companies)					

Internal Management	Horizontal and vertical cooperation Governance of the actors Social networks Internal Knowledge Acquisition Knowledge exploration and cluster strategy generation
External Relations	Horizontal and vertical cooperation Acquisition of external knowledge Search for opportunities and partnerships Connections with institutions and clusters within and outside the region

Source: Based on Galuk (2017).

To conclude, in addition, when analyzing clusters, it is possible to divide in two distinct resource classes: singular resources and cluster resources. The first, refers to firm-specific resources, underpinned by its strategy and resulting in heterogeneous firm performance when in a cluster. The second, is a consequence of their environmental spillovers and are shared among cluster firms, serving as elements of inter-cluster competitiveness and impacting firms' internationalization process (ZEN, 2010).

2.4 CLUSTER LIFE CYCLE

Moreover, the changes the cluster goes through over time can be viewed in stages of development. Analyzing it through this perspective creates a framework for researchers to organize studies. Granting that there are researchers who view this framework as restrictive and disagree on seeing the development of the cluster through a life cycle perspective, Martin and Sulley (2011, p. 38) state the that "cluster evolution has to be seen not simply in terms of the development of the cluster in isolation, but in the context of its co-evolution with the (global) industry of which it is itself apart, and other similar clusters elsewhere with which it is in competition".

Yet, many researchers defend that the life cycle perspective considers a myriad of quantitative and qualitative aspects in each stage. As for example there are collective actions taken (such as collective participation in fairs and events, partnerships and joint investments in research and development) within the cluster (MENZEL; FORNAHL, 2010); relationships of trust, competitiveness and cooperation between firms (MALAKAUSKAITE; NAVICKAS,

2011; FORNAHL; HASSINK; MENZEL, 2015); heterogeneity of knowledge (MENZEL; FORNHAL, 2010; BELUSSI; SEDITA, 2009); propensity of companies to innovate (AUDRETSCH; FELDMAN, 1996); number of companies and employees (MENZEL; FORNAHL, 2010; BELUSSI; SEDITA, 2009); and role of institutions in the cluster (INGSTRUP; DAMGAARD, 2011). All of these aspects can be studied in comparison with other cluster and some even with the market in general.

Given that the lifecycle can be an important guiding framework for researches related to cluster, it is important to understand how the stages are divided in the most disseminated framework. Menzel and Fornhal (2010), divide it in four stages: emergence, growth, sustainment and decline. In the third stage, to avoid decline, firms can adapt – maintaining its market position -, renew – expanding its market position -, or transform – modifying its business model.

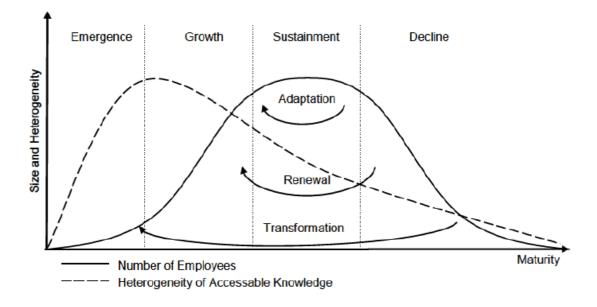


Figure 1 – Cluster Life Cycle

Source: Menzel and Fornahl (2010).

So, in this work the framework will be understood through a wholesome perspective aggregating multiple researcher views on the characteristics for each phase defined on Menzel and Formhal (2010). These views are gathered on the figure three created by Galuk (2017).

Table 2 – Characteristics of Cluster Lifecycle Stages

Cluster Life Cycle Phase	Characteristics	Authors
Emergence	Startups, spin-offs, few technologically differentiated companies; minimum absorptive capacity of firms; supportive public policies; need for scientific background and skills.	Menzel e Fornahl (2010); Presutti, Boari e Majocchi (2013)
Growth	Increase in number and size of firms; increased specialization; meaningful interaction and learning, innovation; new institutions emerge; better developed institutions; more homogeneous knowledge base; better architected knowledge system; development of innovation and supplier networks; skilled labor, local infrastructure; access to more sophisticated markets and consumers.	Menzel e Fornahl (2010); Presutti, Boari e Majocchi (2013); Tödtling, Sinozic e Auer (2016)
Sustainment	Network of denser firms; unique technological trajectory; prone to a lock-in process because renewability is more exhaustive.	Menzel e Fornahl (2010); Tödtling, Sinozic e Auer (2016)
Decline	Decreases the number of firms and employees, bankruptcies occur; strong focus on a narrow path; closed networks prevent cluster adaptability; negative feelings about the cluster.	Menzel e Fornahl (2010)

Source: Based on Galuk (2017).

2.5 INTERNATIONALIZATION STRATEGY IN CLUSTERS

According to internationalization theory, there many ways to analyze this process. There are two main research lines on this topic: economic and behavioral approach. (ANDERSSON, 2000; RUZZIER; HISRICH; ANTONCIC, 2006). Regarding the first, the most known theories

are Dunning's Eclectic Theory, the International Product Life Cycle Model, and the Transaction Cost Approach. As for the second, the widely disseminated theories are Ahroni's Decision Making Model, the Uppsala Model, and the Innovation-Related Internationalization Models.

This research considers as one of the frameworks of analysis the behavioral approach, specifically the Uppsala Model, in order to explain clusters' internationalization strategies (JOHANSON; VAHLNE, 1977; JOHANSON; VAHLNE, 1990). It was chosen so because an ample part of the research about clusters is related to interactions and relationships between companies and knowledge exchange. Thus, internationalization theories that relate networks become crucial.

The Uppsala Model views the business environment as a network and explains how small and medium enterprises internationalize. As shown in figure four, the model is divided in two macro divisions that interact divide in four steps, two in each separate block – state and change. In the first block, state, the first step is market knowledge that as it gets higher decreases the perception of uncertainty leading to, in the second block, commitment decisions that change the current activities of the firm. This change in activities leads, back to the first block, to market commitment, which is, for example, the investment in resources to support the international activity (JOHANSON; VAHLNE, 1977; JOHANSON; VAHLNE, 1990; JOHANSON; VAHLNE, 2009). An important aspect was added to this theory in 2013, when, specifically, the perspective of networks was taken in consideration. It is stated by the authors that opportunity development arises from interactions and learning through experience and building commitment between the parties (JOHANSON; VAHLNE, 2013)

Market knowledge

Market commitment
Commitment decisions

Current activities

Figure 2 – Uppsala Model

Source: Johanson and Vahlne (2009).

Furthermore, specific for clusters, Kowalski (2014) states that internationalization concerns two levels. First, the Micro, the firm level and, second, the Meso, the cluster level. In the latter, he sees the actions of the cluster as a way to establish international cooperation. Melo (2011) specifies that, during internationalization, the firms go through a reconfiguration process due to actions taken by it. In this view, the resources are dynamic assets that allow the actors involved to carry out new strategic actions. Additionally, when analyzing internationalization in a resource-based view perspective it can be seen as a mean of obtaining new resources and facilitate the development of new capabilities given that the performance of firms is divergent, due to the heterogeneity of their resources (SANTOS, BARANDAS, MARTINS, 2015).

More broadly, Ricart et al. (2004) argued that there are four levels in cluster internationalization: the supranational (Meta), the national (Macro), the cluster (Meso), the sectorial (Micro) and the firm. They all may be sources of resources for an international strategy throughout the stages of the cluster life cycle. When considering the ability of the cluster of using the resources avalaible on each level, Erber (2008) states that in an evolutionary and dynamic context, competitiveness depends on assets and routines defined in the governance strategies of the actors in the cluster.

Summarizing, this study aims at studying the Serra Gaucha journey in the last ten years through a life cycle framework completed by resource-based view. To analyze further the

internationalization path, behavioral approach will be used, specifically, Uppsala Model.

2.6 PRIOR RESEARCH

This research is a follow up study from Zen's (2010) "A Influência dos Recursos na Internacionalização de Empresas inseridas em Clusters: uma pesquisa no setor vitivinícola no Brasil e na França". The main focus of the study was to analyze the effects of existing resources related to wine clusters related to the internationalization process in the wine industry. The aspects explored related to internationalization were motivations, entry mode, market selection and the influence of cluster resources.

The theoretical framework of was based on central concepts of resource-based view, geographic agglomerations, and the internationalization of firms. Zen (2010) analyzed previous researches on the regarding the relation between the internationalization of cluster firms and the influence of resources in this process. The outcome was a lack of convergence among the authors studied -

Until the time of the research, in 2010, no consensus on the impact of geographic agglomerations in internationalization, and more specifically in the performance of exporting firms, was reached. So, the Zen (2010) infers that the benefit was not only related to belonging to a cluster but about the characteristics of the cluster, that is, firm-shared resources in the cluster. Thus, the work assumed that 'belonging to clusters' facilitated access to resources that influence the internationalization process, and this is applied as premise for this research too.

To explore the research objective, Zen (2010) applied quantitative and qualitative methods. The author conducted interviews with specialists and did multiple case studies. For the quantitative part of the work, regarding the Serra Gaucha cluster, eighteen wineries were investigated. The data collected about the cluster is the first component of this longitudinal study.

Zen's (2010) conclusions regarding specifically the internationalization process of the Serra Gaucha cluster are guiding for this research. The findings were manly related to internationalization decisions and motivations.

The first conclusion was that the resources shared within the geographical cluster may influence the internationalization process of wineries. Notably, the resource 'horizontal cooperation relationships' predominated in the Brazilian case. The second discovery was, that for the creation of a collective internationalization strategy for the firms, cluster governance played an important role in the development and implementation of this strategy. The third

observation was that wineries gained international experience, broadened the geographical scope of their activities but tended to remain exporting only through agents. The fourth result was that technical knowledge, availability of financial capital and equipment and machinery were perceived as the most important firm specific resources in the process of internationalization. The fifth conclusion was that the most important motivations were the programs and policies that encouraged internationalization.

This observation is congruent with Dana and Winstone, (2008) research that define this as one of the characteristics of regions in the initial phase of internationalization. Zen's (2010) research data showed directly that the Brazilian wine sector was in an early stage of internationalization in 2009. Ten out of the eighteen wineries had been active in the international market for the, at most, six years and sold their wines to, at most, three countries.

Zen (2010) assed the satisfaction level of the wineries regarding exports over the three years prior to 2009. Even though considered low compared to other countries, 6% ate the time, the wineries perceived it as a positive evolution. The second most important motivation for internationalization was sales growth and wine producers stated that that they were satisfied with as the evolution of exporting sales.

Another observation related to Brazil being at an early phase of internationalization was related to the cluster related resources considered most important for internationalization by Brazilian wineries. The three resources were: terroir, reputation of a specific terroir and tourism-related infrastructure. This is closely related to the fact that Brazil did not have a consolidated reputation as wine producer and there was not an inter-cluster competition. During this time, the cluster was in the process of creating a regional identity by requesting the certification of origin and developing a wine tourism infrastructure.

3 THE GLOBAL WINE INDUSTRY

This chapter aims to present the global wine industry to further develop the discussion on wine trade and export. First, some key historical events will be shown. Second, the main ways of characterizing wines will be described. Third, recent market data will be explored.

3.1 HISTORY

Wine is a commonly consumed alcoholic beverage in most parts of the world and produced in every continent. Most scholars place the birth of wine cultivation in an area between eastern Turkey, western Iran and the Caucasus Mountains (Georgia, Armenia and Azerbaijan) when the Neolithic around 6000 BC revolution happened, and humans abandoned nomadic habits and began farming. Initially wine had a significant dietary importance (MCGOVERN et al., 2017).

As the civilization develops, wine becomes of social religious importance. Due to this placement wine survived difficult times. For example, after the Barbarian between 375 AD and 538 AD invasions and the fall of the Roman Empire, viticulture survived because of religious orders. Much of the countryside was abandoned, but specially the Benedictine and Cistercian monks, located at Citeaux Abbey in the region of Burgundy, continued to grow vines at monasteries, producing wine for liturgical celebrations and personal consumption (ESTREICHER, 2006).

Not only historical events were turn points for the development of the wine history, but also technological innovations. At the beginning of the 1600's, glass making became more efficient and cheaper. Parallelly, corkscrews were created and popularized. Development like these new techniques, allowed better storage, giving rise to the production of reserve wines. In France, for example, originated the differentiation between *vins de garde*, ones that could be stored for longer, and *vins de primeur*, wines for consumption in the short term.

From the beginning of the 18th century was the moment that the international market of wine starts to show relevant growth. In the second half of the nineteenth century, French chemist Louis Pasteur demonstrated the action of yeast and its central role in fermentation, laying the foundations for modern oenology (GAUTIER, 2009).

One of the historical events that majorly affected the wine market as it is known happened on the end of the nineteenth century in Europe. *Phylloxera* and *perenospora*, known as powdery mildew, spread across the vines which led to the destruction or serious damage of

almost all vineyards. The *phylloxera* originated in America and affected the roots of the vines and causing its rapid death. The solution to this situation was to graft the European vines on the rootstock of American vines, which were immune to the parasite. This process was expensive and helped select producers consequently increasing the wine quality. Therefore, there was a significant reduction in viticulture areas, smaller producers due to the high cost of fighting the plague, increased production in less traditional areas that were less affected by contamination and increased need for regulations to guarantee the origin and quality of the wines (ZEN, 2010).

Actions like the one from grand Duke of Tuscany Cosimo III de' Medici, in 1716, for the Chianti, Pomino and Carmignano regions and the one from Emperor Napoleon III, in 1855, for the region of Bordeaux, paved the way for what is known now as the AOC *Appellation d'origine contrôlée*, established in the 1950's, and DOC *Denominazione d'origine controllata*, in the 1960's.

3.2 CLASSIFICATIONS

Many factors influence wine characteristics and quality like the terroir, enological techniques and the grape variety. All these characteristics allowed for various ways of classifying wine. For the sake of this study, three of the many possibilities will be briefly explained.

The first, as broader way to classify wine the product can be divided in four main categories based on style. These are: still, sparkling, fortified, also called dessert wine, and table wine. The last will not be considered in this study since it is normally made in a less complex manner therefore affecting the quality and becoming a less exportable wine.

The second, is characterizing is by *appellation*, abbreviation of *appellation* (*d'origine*) *contrôlée*, from the French, which is relate designation of origin, that means, where the wine comes from. Countries have specific ways of classifying their regions and productions. For example, the USA uses AVA, American Viticultural Areas, France uses, AOP, *Appellation d'Origine Protégée* and Italy uses DOC, *Denominazione di Origine Controllata*.

In an effort to create a standardize classification between member countries, not only for wines but all food and agricultural production, the European Union, in 2014, created a common classification framework on regulation 664, which is the evolution of previous systems, with two main categories: Protected Geographical Indication (PGI) and Protected Designation of Origin (PDO). For wines, they mean respectively, regarding the first, that the grapes have to come exclusively from the geographical area where the wine is made and,

regarding to the second, at least 85% of the grapes used have to come exclusively from the geographical area where the wine is actually made (GRAGNANI, 2013).

The third, way is by variety. There are thousands of winemaking grape varieties grown throughout the world and the number of grapes will only expand due to crosses and cloning. The first, is mixing two or more varieties to create a hybrid variety. The second, is to intensively select plant seedlings to create a more resistant vine to survive a specific condition. In this case, what comes to happen is that at first the name is the varietal and the location but as time passes the first part is completely forgotten. Additionally, this way of classification is bit confusing for the consumer because some grapes have different names depending on the country of origin of the wine, For example: Zinfandel (USA), Primitivo (Italy), Tribidrag (Croatia) or Crljenak Kastelanski (Montenegro) (STEVENSON, 1998).

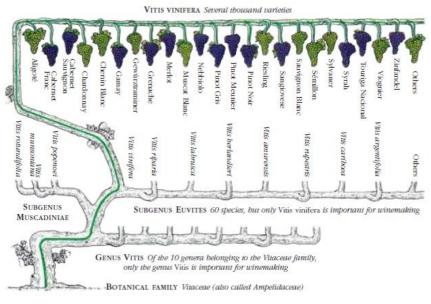


Figure 3 – Grape Varieties

Source: Stevenson (1998).

Another important factor about this classification is that varieties can be mixed to create blends but not always it will be displayed on the label. The portion that can be mixed differs from region to region, in the European Union is up to 15% and in the US is 25%.

Additionally, to conclude, there are two characteristics largely taken in consideration by premium wine consumers: terroir and vintage. *Terroir* is a French word with no literal translation to other languages that expresses a complex combination of the influence of the physical and human environment to produce a food product (BLUME, 2008). It combines not only the characteristics of the soil and climate, but also the human factors such as culture,

productive technology and tradition. It is a more subjective way of classification than the other three presented before.

The latter, the vintage, is essentially the year of the harvest. It is a common way for wine consumers to try to recognize especially good wines, but it is not reliable since regulations change depending on the country where the wine is made allowing a portion of the wine to made with wines deriving from other harvests. Vintages considered by the market as high quality are sought after by wine collectors because as the years passes their prices rise.

3.3 IN NUMBERS

According to Euromonitor International (2018), in 2018, the global wine market reached 325.9 billion dollars. The global wine market in terms of market share is granularized especially when compared to other liquor markets like Beer and spirits. The top three global players together account for only 6.3% of the volume of wine sold in the world. For the beer segment, for example, the first player, Anheuser-Busch InBev NV, accounts for 26.1% of the market.

Table 3 – Global Market Share by Conglomerate

Company Name	Country		013)14)15		016)17		018
		Ranking	Volume										
E&J Gallo Winery Inc	USA	1	2,8	1	3,0	1	3,0	1	3,1	1	3,10	1	3,2
Constellation Brands Inc	USA	2	1,9	2	1,9	2	1,9	2	2,1	2	1,70	2	1,7
Accolade Wines Ltd	Australia	4	1,5	4	1,5	3	1,5	3	1,6	3	1,60	3	1,6
Wine Group Inc, The	USA	3	1,5	3	1,5	4	1,4	4	1,3	4	1,30	4	1,3
Castel Groupe	French	6	1,1	6	1,2	6	1,2	5	1,2	5	1,20	5	1,2
Treasury Wine Estates Ltd	Australia	5	1,3	5	1,3	5	1,3	6	1,2	6	1,20	6	1,2
Viña Concha y Toro SA	Chile	8	0,9	7	1,0	7	1,1	7	1,1	7	1,10	7	1,1
Distell Group Ltd	South Africa	13	0,7	12	0,8	11	0,8	9	0,9	9	0,90	8	0,9
Pernod Ricard Groupe	France	9	0,9	9	0,9	10	0,9	10	0,9	8	0,90	9	0,9
Oetker-Gruppe	Germany	11	0,8	11	0,8	12	0,8	12	0,8	12	0,80	10	0,9

Source: Euromonitor International (2018).

Currently the main conglomerates of the wine market are E&J Galo, Constellation

Brands and Accolade. A commonality between them is that they are all from the new world, USA and Australia respectively. All have vines in more than one region and have a varied portfolio, selling from bag in box to premium wines.

Newer forms of packaging are becoming increasingly popular, especially in the USA, in lower age groups as they're more affordable and have more approachable branding to it. The top selling wine in 2018, according to Euromonitor International (2018), was Franzia, a variety of whites and reds in bag in box package from E&J Galo. The brand positions itself as a popular, young and accessible wine.

Examining from a country perspective, the main wine exporters in the world are Spain, Italy, France, Chile and Australia. France has the highest value added to its export, selling, on average, each liter of wine for 0,64 euros, almost seven times more than the highest exporting country in volume, Spain (OIV, 2019).

Table 4 – Main Exporters

	2018				
Country	Volume (in million Liters)	Value (in million Euros)	Price per Liter		
Spain	21.000	2.916	0,14		
Italy	19.700	5.952	0,30		
France	14.100	9.083	0,64		
Chile	9.300	1.773	0,19		
Australia	8.600	1.773	0,21		

Source: OIV (2019).

The main destinations for wine exports are Germany, United Kingdom, the United States of America, China and France. The country that pays the most per liter is the United States, as it pays on average 0,46 euros per liter of imported wine (OIV, 2019).

Table 5 – Main Importers

	2018					
Country	Volume (in million Liters)	Value (in million Euros)	Price per Liter			
Germany	14.500	2.619	0,18			
United Kingdom	13.200	3.510	0,27			
USA	11.500	5.245	0,46			
China	6.900	2.415	0,35			
France	6.200	861	0,14			

Source: OIV (2019).

The countries with the highest consumption per capita are Portugal, France, Italy, Switzerland and Belgium. Portugal is the only country in the world that breaks the 60 liters per person barrier (OIV, 2019).

Table 6 – Consumption per Capita

C4	2018	
Country	Ranking	Volume (in Liters)
Portugal	1	62,1
France	2	50,2
Italy	3	43,6
Switzerland	4	37,8
Belgium	5	31,5
Australia	6	31,5
Austria	7	31,3
Romania	8	29,9
Hungary	9	29,3
Sweden	10	28,6

Source: OIV (2019).

4 RESEARCH METHODOLOGY

This chapter explains the research strategy used in this study. This research is based on secondary sources and semi-structured interviews in order to describe the cluster and analyze the internationalization path. The concepts of data collection and analysis are presented in order to achieve the general objective and the specific objectives determined previously.

4.1 RESEARCH STRATEGY

As this study is complex and, at the time of this research, there is few publications targeting the international expansion of Brazilian wineries throughout the years, it is more fitting not to appoint any hypothesis and or chose a method that is not aimed at discovering in a more flexible way the components of this cluster situation. Therefore, this research used the following the scientific method: an exploratory longitudinal research.

Thus, this study compared the cluster's situation at the time of the first data collection and now. The aim was to build a picture of what happened along the years that have passed. The first component of the longitudinal study was conducted in 2009.

Additionally, according to Goode and Hatt (2007) when carrying out a research there is always two approaches that can be chosen following the scientific method: quantitative and qualitative. But Bulmer (1984), argues the limitations of dealing with qualitative and as alternative options, since according to the research objectives they can be worked as complementary. In agreement to this view this research utilized both elements in complementary way.

For this work, both primary and secondary data were collected. The use of interviews or in-depth analysis of historical documents as examines a wide range of information that result in a detailed analysis of the events or objects analyzed (KING; KEOHANE; VERBA, 1994).

Following Gil (1991), the information was collected in such systemic and precise way that will be available as base for further studies

4.2 DATA COLLECTION

Data for this research was collected through documentary research and semi-structured interviews with wineries owners, export managers and chief enologists. Secondary data sources were explored to supply information about the cluster between the two data collections. The

main data secondary data sources were government and cluster institutions.

Much of the quantitative data from 2019 is referring to a year to date period, as, at the time of this study, the year had not finished. All the data that was affected by this cut is clearly indicated during the analysis of results.

To conduct the longitudinal study, data resources from Zen (2010), a research amply used to support this study, were applied as a basis of comparison. The former research collected interviews in seventeen wineries of the cluster. The current study interviewed fourteen of the original seventeen.

Table 7 – List of wineries interviewed by the research group in 2019 in comparison to the first study in 2009

Wineries	2009	2019
Aurora	X	X
Boscato	X	X
Casa Valduga	X	X
Cordelier	X	
Courmayeur	X	X
Don Laurindo	X	X
Geisse	X	X
Irmãos Molon	X	X
Lidio Carraro	X	X
Marco Luigi	X	
Mena Kaho	X	
Miolo	X	X
Mioranza	X	X
Perini	X	X
Peterlongo	X	X
Pizzato	X	X
Salton	X	X
Total	17	14

Source: Author

The chosen questionnaire for 2019 data collection can be found on Appendix. This questionnaire is part of a broader study of the cluster. Six questions remain the same as in the questionnaire applied in 2009. These questions regard winery characteristics such as location, number of employees, production strategy, denomination of origin certification use and quantity of exports.

The questionnaire was used as a support for the semi-structured interviews. The interviews were recorded and documented in an organized manner.

The interviews were carried between September 2018 and March 2019 physically at the

wineries by members of the *Grupo de Pesquisa em Estratégia*, *Internacionalização e Inovação da Escola de Administração UFRGS* (GPEI), a research group comprised by students and professors. The author of this research was part of the research group and participated in the data collection. Additionally, the author of the first component of this longitudinal study, Zen (2010), was one of the founders of this research group and too participated in this data collection.

4.3 DATA ANALYSIS

For the analysis of the data collected in the cluster the selected method was conceptual content analysis. In this method the text is coded into manageable content categories as a process of selective reduction (KRIPPENDORFF, 1980). By reducing the text to categories, it was possible to focus the analysis and code for specific words or patterns that helped to unravel the research question.

For the analysis of the quantitative data descriptive statistics was chosen. Descriptive statistics seeks to summarize and organize the data so they can be easily understood. Unlike inferential statistics, descriptive statistics at aims at describing the data, but do not attempt to make inferences (TROCHIM, 2001) which is not the objective of this study. Range, mean, standard deviation and percentages were the concepts utilized through data organized on Excel.

So, the analysis fit the purpose of crafting explanations about the situation through an analysis of the relation of the facts surrounding the phenomenon of internationalization. As a result of this method of analysis, new research questions and hypothesis can be created.

5 RESULTS ANALYSIS

This chapter is structures in five main topics. On the first, a historical view of the cluster will be shown structured according to the life cycle framework. On the second, some data about the consumption – global and domestic – will be exhibited. On the third, some relevant Brazilian macroeconomy factors will be presented so the country's situation in which the cluster is inserted becomes clear. On the fourth, Brazil's general wine export will be explored, emphasizing the exports from the cluster that this analysis is focused on. On the fifth, and last, the Serra Gaucha cluster will be analyzed using previous research on the cluster and secondary data.

5.1 SERRA GAUCHA CLUSTER

Brazil is covered in 79,000 hectares of vineyards, there are more than 1,000 wineries, 90 percent of which are small family wineries, and is the fifth biggest producer in Latin America. Although, only 150 produce fine wine, which is the focus of this work. Brazilian wine industry is dispersed like the global market. Cooperativa Vinícola Aurora is the market leader in 2018 with a total volume sales share of 9% according to Euromonitor International (2019).



Figure 4 – Brazilian Wine Regions

Source: Ibravin (2018).

Rio Grande do Sul, is home to five of Brazil's six major wine regions five sub appellations: Vale dos Vinhedos, Pinto Bandeira, Altos Montes, Farroupilha, and Monte Belo. In regional terms the municipality of Bento Gonçalves accounts for most of the fine wine production. The planting density of the cluster is between 1,600 and 3,300 plants per hectare and the trellis or pergola (horizontal) conduction system predominates, providing production of 10 to 30 tons per hectare, according to the cultivar and crop climate conditions (IBRAVIN, 2017).

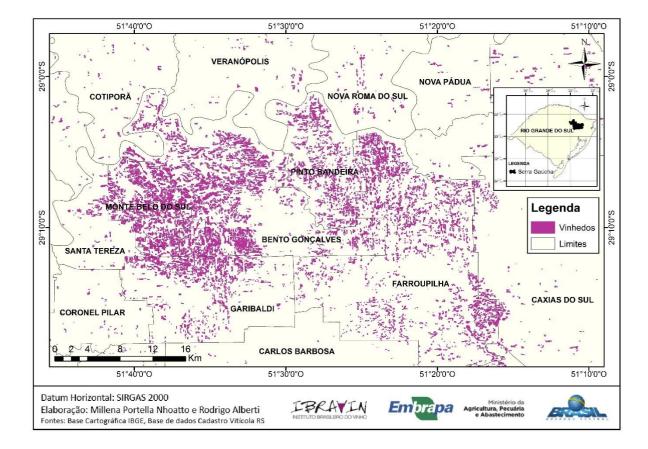


Figure 5 – Serra Gaucha Cluster

Source: Embrapa (2000).

Brazil's wine history goes back to colonization. In 1532, the Portuguese brought the first vines to stimulate the production in the region. Most of these vines where planted in lands that were not favorable. The first vine that were planted in the south of Brazil, a more favorable region, happened in 1626 due to the arrival of the Jesuitical priests and their need for wine in religious celebrations. In 1840, *Vitis Labrusca* and *Vitis Bourquina*, grapes of American origin therefore more resistant to plagues were planted in various regions of the state of Rio Grande do Sul.

The large influx of Italian immigrants to the state beginning in 1875 was crucial for the wine culture development. Here starts the **first phase**, **emergence**, of the cluster life cycle, even though at this moment the agglomeration did not offer any competitive advantage yet. The cluster was formed mainly by small family productions that saw wine as a part of their dietary habits.

As previously stated, the *terroir* refers also too the people and traditions of the region, so the impact of this flow of immigrants is invaluable for the region and marks everything related to wine in the region since the people brought from their home country, Italy, the

technical knowledge of wine making and culture of wine consumption increasing the productivity and the economical relevance (GIULIANI, 2005).

With the creation of cooperatives, in 1929, starts the **second phase of the cluster: the first growth**. The main cooperatives that were created in this period were: Companhia Vinícola Rio-Grandense, in 1929, Coperativa Vinícola Garibaldi and Cooperativa Vinícola Aurora both in 1931. The last two remain as cooperatives and are significant players on the market. The first, ended all its operations 1997.

The first growth life cycle phase lasted until 1970 and is very relevant for the structuring of the cluster because it was during these years that movements of governance and organization started. Associations and organizations - Sindivinho, in 1948, Fecovinho, in 1952, and UVIBRA, in 1967 - that are present until this day were created. Also, in 1959 the educational institution, Escola de Enologia was created showing that actors external to the cluster, in this case the government, were recognizing the potential of the cluster.

The **third phase, the first renewal** was marked by the entrance of multinational companies and the cultivation of the *Vitis Vinifera*. The first international company, then French Georges Aubert winery, transferred its operation to Garibaldi interested in the high quality of the vines of the region for the production of sparkling white wines. The company was responsible for the introduction of the Charmat method in steel tanks in the country and the beginning of a cycle where the global market started taking interest in the country.

In the 70's foreign companies interested peaked. This encouraged the expansion of grape cultivation areas in addition to new techniques in the vineyards and wineries, like the one mentioned before. The national production grew more than ten times its volume from 1970 to 1990 (DAL PIZZOL; DE SOUSA, 2014). During this phase, in 1973, Moet Chandon created their own vineyard and site in the state of Rio Grande do Sul in a greenfield operation. Up until the 1980s, Brazil operated under a closed economy and officially became an open economy in the 90's. Before the opening of the economy there was little competition in the domestic market, but the gradual opening forced the local producers to increase quality.

The opening of the market marks the fourth phase of the cluster, the second renewal. During this period, many of the multinationals that started their production in Brazil left as it became easier to export their products produced in foreign countries. The only one that stayed was Moet & Chandon. This mass exit immediately caused a serious crisis in the Brazilian viticulture market, leaving the producers of the cluster without major buyers of grapes.

Several of these small and medium-sized grape producers had to find a way of surviving and using their production. The consequence was the emergence of wineries with purpose of

producing fine wines to compete with imported wines. This transformed the resources of the cluster because to improve the quality of their wines they improved their children's education by sending them to study oenology in Brazil and abroad. (FERREIRA et al., 2016).

From 1995, Escola de Enologia, that was founded in the second phase of the cluster, started offering a college course in Technology in Viticulture and Oenology, being a pioneer in the country. In the same year, ABE, the Brazilian association of enology created in 1976, started centralizing and sending samples to the contests. Until this day, more than three thousand wines have been sent to international competitions highlighting the potential of the national viniculture. As a result, Brazil became a member of the OIV (Office International de la Vigne et du Vin) a body that sets the international standards for wine production. Compliance with the OIV results in a higher quality standard for local wines (LUPPE et al., 2009).

As time passed, viticulture expanded to new regions of Brazil, like the Vale do Sao Francisco, in the northeast of the country. Due to this expansion, the regions started developing their own identities culminating in the first denomination of origin in 2002 given to the Vale dos Vinhedos. In Brazil, the denomination of origin is determined by the law: Lei de Propriedade Intelectual, n°9.279, de 14 de maio de 1996. In 2012, the denomination of origin, Vale dos Vinhedos, was recognized globally.

Created also in 2002, Wines of Brasil is an IBRAVIN (Brazilian Wine Institute) Integrated Sector Program supported by APEX (Brazilian Trade and Investment Promotion Agency). It also has the support of institutions such as the Brazilian Tourism Institute (Embratur), Ministry of Agriculture, Livestock and Supply (MAPA), Ministry of Foreign Affairs (MRE) and Department of Development and Investment Promotion of Rio Grande do Sul Investment (SDPI). The program that promotes the participation in international events with reduced costs for members of the network, as well as participation in training on the export process and access to information about the international market.

The programs support wineries is of fundamental importance and is built on business intelligence pillars and strategical studies according to each market: it offers opportunities such as participation in the largest wine fairs in the world, such as Prowein Düsseldorf, Vinexpo NY and CFDF China. Wines of Brasil also focuses on strengthening the image of Brazilian wines, through programs such as Projeto Imagem – focusing on journalists, experts and opinion influencers - and supportive actions in the target countries in order to disseminate the added value that these wines have. (IBRAVIN, 2019).

5.2 THE LAST TEN YEARS: FROM 2009 TO 2019

To understand the internationalization of the cluster in the last ten years, from 2009 to

2019, it is relevant to understand the context that outlined the period. In the next part of this analysis an overview of the Brazilian economy will be presented, followed by an outline of the wine consumption trends and the wine trade movements. This context leads to the analysis of the wineries within the cluster that were studied in 2009 and 2019.

5.2.1 Brazil's Economy

Many factors impact the internationalization process including macroeconomy factors. The last ten years in Brazil were not stable. Regarding the period of this research, the first few years, from 2009 to 2014 were marked by an economical growth. In 2009, the Gross Domestic Product growth rate almost reached 10%. From 2014 onward, the country struggles between diminished, close to zero or negative growth. In 2014, is the first time in the period analyzed, that the GDP shows a shrinkage. In recent years, from 2017 on, the economy shows discreet signs of a slow recovery with GPD growth rates ranging from 0% to at most 2%. As can be seen in figure twelve, that shows the Gross Domestic Product variation

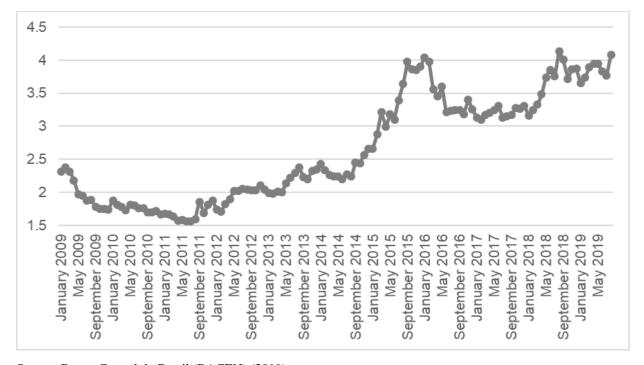


Graphic 1 – Brazil's Gross Domestic Product (GDP) % YR

Source: Insituto Brasileiro de Geografia e Estatística (IBGE) (2019).

Another important macroeconomy factor for trade is the domestic currency value compared to strong currencies normally for used for trade operations. As seen on figure thirteen, in the initial period analyzed in this research, the Real maintained a strong position. During the first five years of this research, the local currency was being converted between 1,50 and 2,50

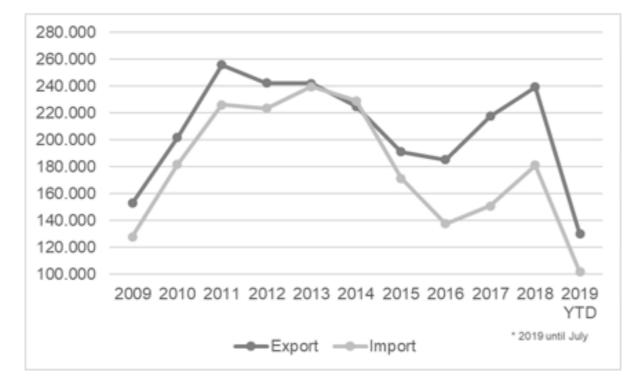
for each dollar. As soon as the economy showed downturns, the currency becomes devalued and starts being converted between 3,00 and 4,50 per each dollar.



Graphic 2 – USD/BRL Currency Historical Data

Source: Banco Central do Brasil (BACEN) (2019).

Given the economical fluctuations, the trade balance too suffered oscillations. In the initial period, from 2009 to 2013, it showed a strong upward trend. From 2014 to 2017, as the economy suffered the volume of the trade scale started a descending trend. Last year, 2018, the trade balance started showing signs of recovery, but maintaining a significant difference import and export values, as can be seen on figure fourteen. The values for 2019, show only data until the month of May.



Graphic 3 – Brazil's Trade Balance (in Millions USD)

Source: Ministério da Indústria, Comércio e Serviços (MDIC) (2019).

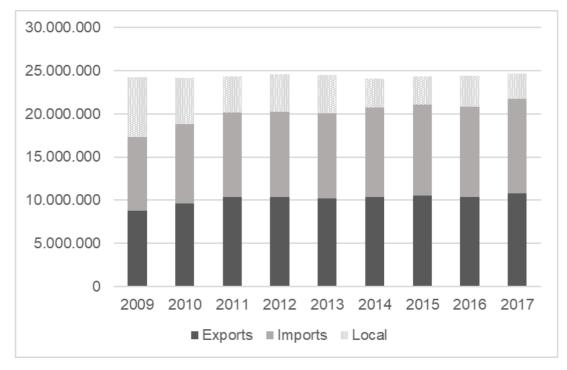
Even though the trade balance shows a dive on imports from 2014 to 2016, the domestic wine market did not follow this trend. On the lowest importing year of this analysis, 2016, wine imports volume increased 19% (OIV, 2018). So, the local market in this period requested additional efforts of the Brazilian wineries because they had to mobilize resources to navigate the economic distresses and the increased international competition.

5.2.2 Wine Consumption

The global wine production is either consumed locally or exported. Wine consumption can be formed by locally produced or imported wines. As wines characteristics are intrinsically connected to the *terroir*, as reviewed beforehand, even countries that have a large production, such as France and Italy, import wine. This happens because consumers have the tendency of seeking diversity and new experiences (KOTLER; KELLER, 2011).

During the period from 2009 and 2017, analyzing the data from the International Organization of Vine and Wine (2018), there is as reduction in local consumption until 2014 and, as consequence, an increase in trade operations. From 2014 on, the proportion of local and imported wine consumption remained stable. Additionally, from this data, it is possible to state

that the global wine consumption did not show a significant variation.



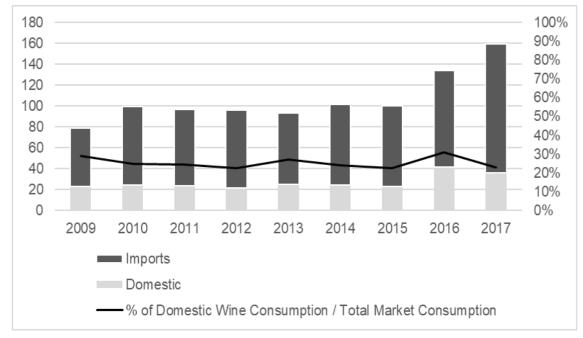
Graphic 4 – Global Wine Consumption (in thousand liters)

Source: International Organization of Vine and Wine (OIV) (2018).

Contrary to the global stable demand for wine, Brazil's wine consumption increased in the recent years. In 2016, the surge in consumption volume was approximately 33% and, in 2017, around 20%. These percentages amount to a difference of 59 thousand liters between 2015 and 2017 (IBRAVIN, 2017).

Although the domestic market is expanding, international players are monitoring and exploring the opportunity. Imports from 2015 to 2016 increased approximately 19%. From 2016 to 2017, imports rose about 33%. This amounted to a difference in volume of import from 2015 to 2017 of around 45,5 thousand liters.

Domestic producers, were able capture some of the market growth between 2015 and 2016, increasing approximately 83% in sales. In 2017, sales had a slight decrease of around 13%. Overall, domestic wines have a market penetration between 20% and 30% during the period of 2009 to 2017. This shows the difficulty of local producers of capturing the growing domestic demand.



Graphic 5 – Brazilian Wine Consumption (in thousand Liters)

Source: Compilation of Data from Instituto Brasileiro do Vinho (IBRAVIN) (2018).

In the last ten years, Brazilian wineries faced a scenario where they were not able to significantly capture the growing local demand. Analyzing the production output during this period (Graphic 5). it is possible to affirm that this lack of market growth was not due to insufficient supply. Thus, these data show that some of the local consumers are not as keen on domestic wines as they are on imported wines.

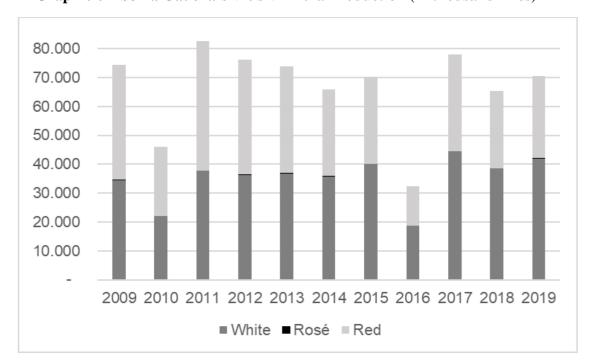
5.2.3 Wine Export

Wine exports do not depend only on economic factors, but also in production capacity. As it is an agricultural production the dependence on natural factors such as climate is imminent and high. Also, wines are analyzed by vintages. The vintages are also affected by the climate and the terroir.

The domestic production in terms of volume is approximately equally distributed between sparkling and still wine. The cluster is highly recognized by its production of sparkling as some researchers have shown that a combination of soil and climatic factors makes the Serra Gaucha region "one of the best in the world" (SLUSZZ; PADILHA, 2008) for the production of grapes for making sparkling wines, especially Riesling Italico, Chardonnay and Pinot noir (ZANUS; TONIETTO, 2006; TONIETTO; CARBONEAU, 1999). This perception of high quality of the sparkling wine can be seen on the price difference when exporting. Sparkling

wines sell on average at 4,88 dollars per liter and still at 2,25 dollars per liter (IBRAVIN, 2018).

Regarding grape production, the cluster produced on average, during the last ten years, around 67 million kilos of *vitis vinifera*. The years when the production was significantly lower were 2016, with a production of 32 million kilos, and 2010, with a production of 46 million kilos. The production is mostly constituted of red and white grapes. The output is approximately split equally between the two. Rosé grape production, on average, was of little significance, around two hundred thousand kilos.

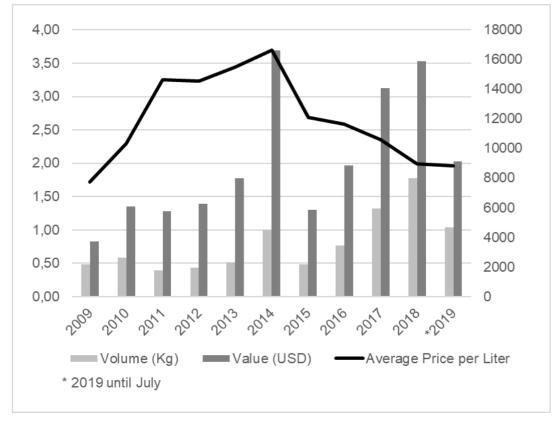


Graphic 6 – Serra Gaucha's Vitis Vinifera Production (in thousand kilos)

Source: Instituto Brasileiro do Vinho (IBRAVIN) (2019).

Regarding the period of this research, 2009 to 2019, Brazil's wine export increased both in total volume and in total value. Value reached its peak in 2014 summing about 16 million dollars. As for volume, it peaked in 2018 totaling almost 8 million liters. From 2009 to 2014, average price per liter increased starting at 1,72 to dollars 3,70 dollars, a surge of around 115%.

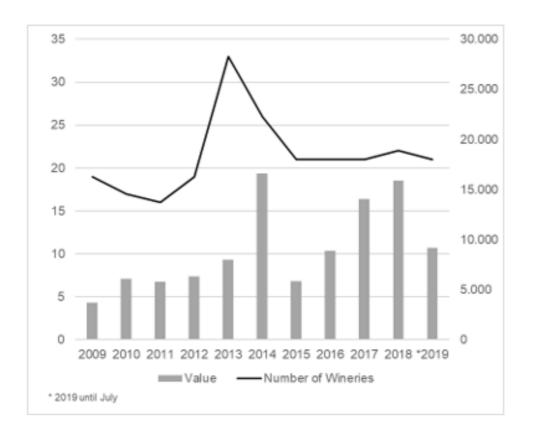
When comparing production and exporting it is not possible to relate both of them. In the years of lowest production, 2010 and 2016, exporting volume followed a similar pattern as the years before them. The volume showed little variation, and, counterintuitively, these variations were toward an increase in export volume.



Graphic 7 – Brazil's Wine Export (volume and value in thousands)

Source: Minstério da Indústria, Comércio e Serviços (MDIC) (2019) – NCM Searched: 2204.10.10 until 2204.3000 - except NCM 22.04.2900 to 2204.2919.

When analyzing the value of wine exports compared to the quantity of wineries that were registered at the government's foreign trade department as suitable for exportation, there is a spike in number of wineries in 2013 as volume increased. Although, volume increased in 2014 too, the number of apt exporting wineries decreased. From 2015 onwards, the quantity of wineries suitable for exporting starts showing little variation even though volume and value increased in this period. The number of wineries suitable for exporting follow a similar trend to the average price per liter exported, suggesting that wineries are concerned about the margin obtained when exporting.



Graphic 8 – Number of Exporting Wineries and Value of Exports (thousands USD)

Source: Minstério da Indústria, Comércio Exterior e Serviços (MDIC) (2019).

Regarding the way the wine is exported, most Brazilian wines are sold in bottles, as seen on figure eighteen. Although, bag in box is an increasing trend in developed countries such as USA (EUROMONITOR, 2019), the use of this kind of packaging is not as significant, as it accounts for less than 4% of exports, and shows no indication of an upward trend. Although considered on table below, tanks and demi johns are not a preferred for the packaging of fine wines.

The decision to not explore the bag in box trend and significantly reduce the portion of wines exported in tanks from 2014 to 2015 can signal a concern of the wineries related to the perceived image of the Brazilian wine. Bottled wine is normally a higher value-added product than the other packages cited before. Although, the price per liter decreased from 2014 onwards, pricing when exporting is also influenced by currency value. The Brazilian currency devalued along this period making pricing more flexible, as the cost of production is in real and the payment is made in dollars.

100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 2013 2014 2015 2016 2017 2012 ■ Bottles :: Tanks ■ Bag in Box ■ Demijohn ■ Barrel

Graphic 9 – Brazilian Wine Export Packaging

Source: Instituto Brasileiro do Vinho (IBRAVIN) (2018).

As for the main destinations of export in 2018, both for sparkling and still wines the main destinations were in Latin America. The United States of America and the United Kingdom are present for both varieties. Asian countries are present in both rankings, but with different countries and quantities. For sparkling wines, Singapore and China are important importers. For still wines, in Asia Japan is the key market. When compared to the countries that Wines of Brazil focus, that are Germany, the United States, United Kingdom, the Netherlands and China, only Germany and the Netherlands are not on the rank. Also, four of the five countries that Wines of Brazil choses to focus on are on OIV (2019) top five importers in volume. The only country that is not on the ranking is the Netherlands.

Table 8 – Main Destination of Exports in 2018

Ranking	Sparkling Wine	Still Wine
1	Chile	Paraguay
2	Singapore	USA
3	USA	United Kingdom
4	United Kingdom	Bolivia
5	China	Japan

Source: Ministério da Indústria, Comércio e Serviços (MDIC) and Instituto Brasileiro do Vinho (IBRAVIN) (2019).

5.3 THE LAST TEN YEARS OF THE CLUSTER

Taking in consideration all the details of the conjuncture of the last ten years -2009 to 2019 – on this part, the cluster is specifically analyzed using the initial study from Zen (2010) that described the internationalization of the cluster at the time. This data is compared to other data sources from 2019 to describe the cluster trajectory during this period.

In 2009, seventeen of the companies studied in the cluster were involved in exporting activities. In 2019, using the country's foreign trade database that lists all companies that are legally apt of exporting, ten are still exporting. About 40% of the wineries stopped their exporting activities in the last ten years.

One of the firm owners in an interview conducted by the research group in 2019 gave this statement explaining why the firm stopped exporting: "The international market has changed a lot and we have to pay to sell wine outside, I prefer to sell here. Nowadays everybody wants to sell wine in Brazil. What we want is to explore the domestic market" (Interview excerpt, 2019; translated by the author).

Additionally, one of the seven firms that stopped the internationalization process during that period studied, was Cordelier. This is a specific case were the firm ended all its activities and sold the brand rights of Granja Uniao to Garibaldi winery.

A common characteristic between all the companies that remain exporting is that they are part of the government program Wines of Brazil. The incentive program is a joint effort between the Brazilian Wine Institute (Ibravin) and the Brazilian Trade and Investment Promotion Agency (Apex-Brasil). It also has the support of institutions such as the Brazilian Tourism Institute (Embratur), Ministry of Agriculture, Livestock and Supply (MAPA), Ministry of Foreign Affairs (MRE) and Department of Development and Investment Promotion of Rio Grande do Sul Investment (SDPI). The goal of the program is to provide guidance and support to the local wine producers, as explained before.

Here, is a direct example of what Maskell (2001) and Menzel and Fornahl (2010) had already pointed on their researches. Institutions become part of the cluster and interact with each other as well as with the firms. These interactions create a beneficial environment for the creation of innovation and human capital networks. On this situation, many actors gather to gain enough resources to develop a joint internationalization strategy that benefits the firms of the cluster.

Looking at Wines of Brazil program through a resource-based view, especially when using Galuk (2017) perspective, it expands the cluster resources specially regarding intangible

ones. The program promotes market related, human related, internal management and external relations resources. The main contributions are access to market knowledge, international partnerships and reputational efforts.

Some tangible aspects concerning financial and technological resources are also improved but in a lower expressiveness when compared to intangible ones. As the program is in partnership with the government it allows access to incentives and benefits. Moreover, Wines of Brazil promotes links with consulting and technological guidance and standardization and quality technical committees.

Table 9 – Resources developed through Wines of Brazil

Resources		Description		
E	Financial	Government Incentives and Benefits		
TANGIBLE	Technological	Access to consulting and technology guidance		
TAL	recimologicar	Standardization and Quality Technical Committees		
	Market Related	Reputation (from country, region and / or cluster)		
		Market development		
		Quality certification		
	Human Related	Access to specialized management and strategy personnel		
		Culture of the region (cultural aspects, entrepreneurship and		
		competition between companies)		
ഥ	Internal Management	Horizontal and vertical cooperation		
INTANGIBLE		Governance of the actors		
TAN		Social networks		
LNI -		Internal Knowledge Acquisition		
		Knowledge exploration and cluster strategy generation		
	External Relations	Horizontal and vertical cooperation		
		Acquisition of external knowledge		
		Search for opportunities and partnerships		
		Connections with institutions and clusters within and outside the		
		region		

Source: Adaptation based on Galuk (2017).

When analyzing the firms, two bigger wineries show specific strategies. During the

period of this study, Miolo winery focused its efforts on internationalization and created a specific CNPJ for its exporting activities in 2015. The name chosen for it was Miolo Wine Group making it easier to be recognized in international markets. Casa Valduga, another relevant player, expanded its international presence and invested in a greenfield operation, buying a vineyard in Chile in 2017. Additionally, the firm has an importing firm that belongs to the holding.

Table 10 – International Overview

Wineries	2009	2019	Wines of Brazil
Aurora	X	X	X
Boscato	X		
Casa Valduga	X	X	X
Cordelier	X		
Courmayeur	X		
Don Laurindo	X		
Geisse	X	X	X
Irmãos Molon	X		
Lidio Carraro	X	X	X
Marco Luigi	X		
Mena Kaho	X		
Miolo	X	X	X
Mioranza	X	X	X
Perini	X	X	X
Peterlongo	X	X	X
Pizzato	X	X	X
Salton	X	X	X
Total	17	10	10

Source: Zen (2010), Minstério da Indústria, Comércio e Serviços (MDIC) (2019), Wines of Brazil (2019).

Analyzing another aspect of these wineries, most were established in mid-1990's and started exporting in the beginning of the 2000's. Consequently, most internationalization efforts happened during fourth phase of the lifecycle of the cluster, known as the second renewal, that was described previously.

Starting the effort to internationalize during a renewal phase of the cluster lifecycle is congruent with internationalization theories. As previously discussed, Melo (2011) observed that internationalization forces firms to go through a reconfiguration process. This process affects the resources as new capabilities are developed allowing the actors involved to carry out new strategic actions.

Table 11 – Year of Foundation and Internationalization

Wineries	Foundation Year	Year of Internationalization
Aurora	1931	1960
Boscato	1983	2004
Casa Valduga	1973	2002
Cordelier	-	2001
Courmayeur	1976	2001
Don Laurindo	1991	2004
Geisse	1979	2000
Irmãos Molon	1963	2007
Lidio Carraro	2002	2008
Marco Luigi	1946	2007
Mena Kaho	1920	2009
Miolo	1989	2003
Mioranza	1964	2007
Perini	1970	2007
Peterlongo	1915	1942
Pizzato	1998	2004
Salton	1910	2002

Source: Zen (2010).

To explore further these resource development, resource-based view theory was applied to the analysis again. This time aiming at the firm specific resources and their connection to the internationalization strategy. Between the firms that remained as exporters, three tangible resources were analyzed.

The first, was the number of employees. The numbers used on this study were self-declared by the firms. All, except Salton, that was contacted by phone, shared the number during interviews carried when studying the cluster. The average of fixed contract employees among the group is 142 workers with a standard deviation of 141. It can be concluded that between the wineries that remained exporting, there is not a predominance of size.

The second was if the firm had a specific department in charge of exports. This information was collected by phone with each winery. Of the ten remaining wineries, six have a department exclusively in charge of exporting. One of the wineries that does not have a dedicated department, Mioranza, uses a consulting firm specialized in exporting firm called Wings and Roots as a support for the internationalization process. The other wineries divide their executive and commercial teams to take care of the process.

Having a dedicated exporting department is to some extent related to firm size. When analyzing the arithmetic mean of employees within the group that has the specialized department and the one that does not have, a difference can be observed. The group that has a

dedicated department on average has 227 workers and the other group on average has 133 workers.

The third resource that was explored was if the firms had a website in English. Each of the firm's website were checked for the presence of a webpage in English. Out of the ten, four had a website in English. This can signal that most of the wineries do not make a direct effort to create brand recognition and impact in the final customer.

Three out of this four firms that have a website in English also have a specialized export department. Apparently, although relatively simple, this is not a common resource for firms within the cluster, as it is rarer than having a dedicated exporting department, which is a more costly and complex resource to the develop.

Table 12 – Firm Resources

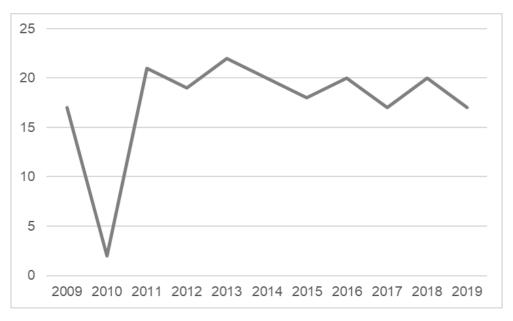
	Number of Employees	Specialized Export Department	Website in English
Aurora	492	X	X
Casa Valduga	250	X	X
Geisse	37		
Lidio Carraro	20		Х
Miolo	137	X	Х
Mioranza	35		
Perini	140	X	
Peterlongo	80	X	
Pizzato	41		_
Salton	260	X	

Source: Made by the author.

Additionally, the efforts of an institution that belongs to the cluster and is involved in the development of intangible resources that are key for the creation of cluster related competitive advantage were analyzed. The Brazilian Association of Enologists (ABE) has as one of its activities the task of sending samples of the wines produced at the cluster to international competitions.

This shows the effort of the network towards creating an image, improving reputation and exploring quality recognition for the region. Doing so, not only benefits the internationalization process of the cluster but also helps to reassure the product quality within the domestic market. This is relevant because domestic wineries, as previously discussed, have a difficulty of exploring the domestic market growth opportunity.

During the last ten years, from 2009 to 2019, the association enrolled wines from the cluster in average of seventeen competitions per year In this analysis, Casa Valduga's prizes won by DOMNO were not accounted as it is their importing branch Moreover, it is important to remember that during the writing of this research the year of 2019 had not finished, therefore the represent all the competition year to date, until August.



Graphic 10 – Participation in International Competitions

Source: Brazilian Association of Enologists (ABE) (2019).

Regarding prizes won in the competitions that ABE facilitated the applications, in the beginning period of this research, in 2009, ten out of the seventeen wineries that comprise this study were awarded, amounting to 109 wines prizes. In the last full year of this research, 2018, seven wineries were awarded totaling 162 wines acclaimed. The effort is somewhat related to exporting, since all the firms awarded in 2019 remain as exporters and all the firms that had received an award in 2009 and did not in 2018 stopped exporting.

Table 13 – Number of Prizes in International Competitions

Wineries	2009	2018
Aurora	11	47
Boscato	3	
Casa Valduga*	16	33
Cordelier	3	
Courmayeur	1	
Don Laurindo		

Geisse	1	2
Irmãos Molon	10	
Lidio Carraro		
Marco Luigi		
Mena Kaho		
Miolo	11	10
Mioranza		
Perini		8
Peterlongo	21	30
Pizzato		
Salton	32	32
Total	109	162

Source: ABE (2019).

Even though the number of prizes increased and number of wineries receiving decreased, suggesting a concentration of this effort on a few firms of the cluster, this is not negative characteristic. As the theory, previously explored, stated, the individual improvement of firms, the connections between firms and cluster institutions improve the cluster's unique features and capabilities (HÉRVAS-OLIVER; ALBORS-GARRIGÓS, 2007).

So, to conclude, all the cluster aspects and characteristics, the ones explored in this analysis and the remnants, create a unique set of resources that generate competitive advantage for the cluster. Consequently, it is possible to state, as other researches had previously identified, that the benefits of being part of a cluster affects firms' internationalization process.

6 FINAL CONSIDERATIONS

This work was set out to describe and analyze the internationalization process of the Serra Gaucha cluster during the period from 2009 and 2019. To achieve this goal a literature review, that explains what has already been studied regarding clusters, internationalization and resource-based view theory was carried. This was done to provide background for an organized analysis.

Afterwards, some information on the history of wine making and consumption was described. This part of the study aimed at providing information regarding the main historical events that affected wine production and trade and how wines are classified and analyzed by specialists. This was done to establish an outline about the industry being discussed on this research.

Lastly, the data was presented. It was crucial for the analysis of this problem to gather information not only about the cluster but the context which it is inserted. As this is an exploratory research, aimed at describing and providing a summary of the internationalization process of the cluster in the last decade, data about the economy and domestic wine consumption were also examined. The focus of the analysis was to examine firms and clusters resources and internationalization decisions.

As result of this work, the main conclusion is that cluster institutions are important for the development of the internationalization strategy of the region during the last decade. The data shows that the internationalization process of the Serra Gaucha cluster takes effort and maybe not all wineries are prepared for it, since the rate of success among the wineries studied during 2009 to 2019 is close to 60%. The ones that persevered, are connected to at least one of the institutions of the cluster studied on this paper. These findings are related to Wines of Brazil a joint effort between several institutions, previously explained, to promote internationalization, and the Brazilian Association of Enologists (ABE) work of collecting and sending samples from the cluster to international wine competitions.

The first consideration is closely related to improving resources such as market knowledge through the acquisition of external knowledge and the search for opportunities and partnerships. It helps and incentivizes wineries to structure their internalization strategy. Additionally, there is an effort focused on improving the region's image around the world that in turn promotes recognition in the domestic market too. The second consideration is an effort to build reputational resources for the cluster. As Brazilian wines win prizes at renowned international competitions, interested in the region is sparked and the cluster improves its

reputation as the quality becomes proven.

Thus, these institutions generate resources and create a governance within the cluster that are important for the internationalization process. This indicates that the maintenance and evolution of these institutions are key for the cluster's performance on international markets.

These conclusions do not exhaust the problem outlined at the beginning of this research. Therefore, it is suggested that further studies should be carried. There are there main suggestions for next researches.

The first suggestion is, since this study focus on gathering secondary data about the cluster in the last ten years to give an overview of what happened in more flexible research design, is to focus on specific parts of this analysis and gather more data in a structured manner so that statistical analysis can be carried. These analyses could lead to important causal and correlational definitions about the resources analyzed.

The second suggestion is, as this research is mostly based on general data from the cluster and focuses on the effects of the cluster on the internationalization process, is conducting new studies aiming at the firms. Doing so, it will be possible to understand the firm specific decisions and which behaviors and resources affected the internationalization strategy of each of the wineries.

The third, as this topic was not the main aim of this study, is to further explore the effects of the cluster internationalization on the domestic perception of the local wine quality. Following a research structured on consumer behavior can bring important insights about this phenomenon and help further develop the cluster's domestic reputation.

To conclude, as an exploratory research, this study has its limitations. The quantitative analysis cannot be used on inferential statistical models as the quantitative data is not structured for such. This research relies heavily on secondary data which possess fragilities inherent to it (Hair, 2007).

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APENDIX A – RESEARCH GROUP QUESTIONNAIRE (ONLY THE PARTS USED ON THIS RESEARCH)

Vinícola:	
Município:	
Localidade:	
 A.1 Como funciona o seu negócio na produção dos vinhos fine () Produz todas as uvas que utiliza na produção de vinhos. () Produz parte das uvas que utiliza e adquire uma parte de outro () Adquire integralmente as uvas que utiliza na produção de vinho () Adquire vinho fino a granel de outras vinícolas e engarrafa. () Recebe uvas de cooperados para produção de vinhos (Trata-se 	os produtores para produção de vinhos. os.
A.2 Em que ano a sua vinícola foi fundada?	(Favor, indicar o ano)
A.3 Qual é o número de <u>empregados permanentes</u> na vinícola	a?
A.4 Qual é o número de empregados permanentes na Administração Comercialização e Varejo Produção de vinhos finos	
A.5 Qual é o número de empregados com curso técnico (com A.6 Qual é o número de empregados com curso superior (com A.7 Quantos enólogos estão envolvidos no process	npleto)?
A.8 A vinícola registra as marcas (nome comercial e logotipo) () Sim () Não) dos seus produtos?
 A.9 Sua vinícola produz vinhos com Indicação Geográfica e/o () Sim. Qual é o percentual com IG ou DO da produção total de vi () Não 	
A.10 Quais são os canais de venda que a vinícola utiliza? (Favo de cada um) % Varejo Próprio % Internet % Lojas Especializadas % Bares e Restaurantes % Atacado e grandes redes varejistas % Outro:	or indicar o percentual das vendas aproximada

A.1	1 A vinícola vende vinhos finos no mercado externo?
•) Sim. Qual é o percentual do faturamento (2017)? / Para quantos países?) Não