SUBJECT AREA: ORGANIZATIONAL STRATEGY AND BEHAVIOR

The Impact of Export Performance Resources of Companies Belonging to Clusters: a study in the French winery industry

O Impacto dos Recursos do Desempenho Exportador de Empresas Pertencentes a Clusters: um estudo no setor vitivinícola francês

El impacto de los recursos del rendimiento exportador de compañías pertenecientes a clústeres: un estudio del sector vitivinícola francés

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ABSTRACT

The purpose of this paper was to analyze the impact of resources on export performance of clustered companies. We argue that the insertion in clusters provides access to resources that influence the internationalization process of firms. We conducted a survey in the French wine industry, the main consumer market in volume and second largest producer of wine in the world. The population of the study includes exporting French wineries, located in clusters. The sample consists of 130 French wine exporters, located in different wine clusters. In short, the results indicated that access to cluster's resources has a positive impact on the process of internationalization and export performance of companies. One managerial implication of the research is the importance of commercial resources. The firms with higher export performance attributed greater importance to their commercial resources. Further studies may measure the utilization of resources in the internationalization strategy, and compare the importance and the use of resources in accordance with the level of export performance of companies.

Keywords: Internationalization. Clusters. Resources. Wine.

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RESUMO

O objetivo deste artigo é analisar o impacto dos recursos no desempenho exportador das empresas pertencentes a clusters. O argumento em que se baseia o presente trabalho é o de que a inserção em clusters possibilita o acesso a recursos que influenciam o processo de internacionalização das empresas. Foi realizada uma pesquisa quantitativa no setor vitivinícola francês, que é o principal mercado consumidor em volume, sendo a França o segundo país em produção de vinhos no mundo. Outro dado da pesquisa é a população-alvo do estudo, que são empresas exportadoras do setor vitivinícola francês, localizadas em clusters, além da amostra composta por 130 vinícolas francesas exportadoras, localizadas em diferentes clusters vitivinícolas. Em suma, os resultados apontaram que o acesso aos recursos disponíveis no cluster impacta no processo de internacionalização das empresas pertencentes às aglomerações e no seu desempenho exportador. Uma implicação relevante da pesquisa para a internacionalização das empresas é a importância dos recursos singulares ligados ao fator comercial, uma vez identificado que as empresas com desempenho exportador superior são aquelas atribuem maior importância aos seus recursos comerciais. Novos estudos poderão mensurar a utilização dos recursos na estratégia de internacionalização, bem como comparar a importância e a utilização dos recursos de acordo com o nível de desempenho exportador das empresas.

Palavras-chave: Internacionalização. Clusters. Recursos. Vinho.

RESUMEN

El objetivo de este trabajo es analizar el impacto de los recursos en las exportaciones de las compañías pertenecientes a los clústeres. El argumento del presente documento es que la inserción en grupos proporciona acceso a los recursos que influyen en el proceso de internacionalización de las compañías. Se realizó una encuesta cuantitativa en la industria del vino francés, el principal mercado consumidor en volumen y el segundo mayor productor de vinos del mundo. La población objeto del estudio son los exportadores del sector vitivinícola francés, situada en clústeres. La muestra se compone de 130 exportadores de vino francés situados en diferentes clústeres. En resumen, los resultados indican que el acceso a los recursos disponibles en el clúster impacta en el proceso de internacionalización de las compañías pertenecientes a los clústeres y en los resultados de exportación de los mismos. Una de las implicaciones de la investigación relevante para la internacionalización de las compañías es la importancia de los recursos naturales relacionados con el factor comercial, ya que se encontró que las compañías con mayor rendimiento en las exportaciones son las que conceden mayor importancia a los recursos de su negocio. Estudios posteriores pueden medir la utilización de los recursos en la estrategia de internacionalización, así como comparar la importancia y el uso de los recursos de acuerdo con el nivel de rendimiento de las exportaciones de las empresas.

Palabras clave: Internacionalización. Clúster. Recursos. Vino.

1 INTRODUCTION

Geographical agglomerations have drawn the attention of researchers from different fields, as they are associated with the economic and technological development of the regions. The externalities of physical proximity may be one explanation of the benefits from the integration in clusters. Several studies confirm this positive relationship between the insertion in these agglomerations and the higher performance of companies (MOLINA-MORALES, 2001).

However, Ferreira, Goldszmidt and Csillag (2010) provide evidence that partially contradict that statement. The authors identified that the influence of location on company performance may be higher or lower according to the location. In other words, the location may be very important in the performance of companies, but that does not occur homogeneously, which reinforces the need to understand that characteristics specific

to regions could promote or delay performance of companies.

Based on this evidence, the use of the Resource Based View (RBV) for the analysis and evaluation of cluster resources, may allow a better understanding of the specific differences of each region, which could explain the higher performance of regions and companies (FENSTERSEIFER; WILK, 2005), since the resources developed and shared by companies in the cluster environment can have a positive influence on competitiveness.

Parallel to this debate, we also consider the growth of internationalization of companies and the role of clusters as one of the drivers of this process. Internationalization has become a necessity for strategic expansion of the company in the face of globalization of markets, or even a matter of survival in highly competitive sectors. Thus, as geographical clusters can positively affect the company's competitiveness, it may also impact its internationalization process. However, few studies have explored the influence of the clusters on the internationalization of companies (ZHAO; ZOU, 2002; ROCK; PEREIRA; MONTEIRO, 2007). Therefore, the following questions are applicable: what is the impact of cluster on the export performance companies? What are the most important resources in this process? What is the relationship of these resources with the export performance of companies? These questions are especially relevant in the wine sector, characterized by a strong link with the territory, from grape growing, winemaking to marketing strategies (HALL; MITCHELL, 2008).

The sector has undergone deep changes since the 1990s. The globalization of markets imposed on companies in this sector the need to expand their efforts in the pursuit of maintaining a competitive position in the global market. European countries, traditional in wine production, such as France, Italy and Spain, face a reduction in domestic consumption and the growing competition with emerging countries in the wine world, such as the USA, Australia, Chile, Argentina and South Africa. In France, e.g., per capita consumption was 100 liters in the 1960s and only 55 liters in the 1990s (OFFICE NATIONAL INTERPROFESSIONNEL DES VINS, ONIVINS, 2010). This reduction in per capita wine consumption in traditional markets in recent decades, coupled with the increase in the number of producing countries, has contributed to the intensification of international competition.

The goal of this paper is to analyze the impact of existing resources in wine clusters in the export performance of companies. To do so, a quantitative research was conducted in the French wine industry, the largest consumer market in terms of volume and the second vine producing country in the world (ORGANISATION INTERNATIONALE DE LA VIGNE ET DU VIN, OIV).

The paper is organized in four parts, in addition to this introduction. The following section discusses the review of the literature on internationalization of enterprises belonging to clusters and research hypotheses. In the third section, the methodological procedures will be described. The fourth section presents our research results. Finally, the last section contains our conclusions.

2 THE INTERNATIONALIZATION OF COMPANIES BELONGING TO CLUSTER

Studies on geographical clusters of companies, in certain geographic areas, have as the historical reference Marshall's work (1890) on the English industrial districts, later called marshallian districts. According to Marshall (1983), these agglomerations generate positive externalities arising from the presence of three factors: concentration of companies specialized in different stages of production of a given area; easy access to production resources, and constant availability of skilled labor.

The definitions and theoretical approaches to the agglomerations are different. Among these different types, the term cluster is possibly the most widespread term in the literature. According to Porter (1998, p 211.), "A cluster is a geographical proximate group of interconnected companies

and associated institutions in a particular field, linked by commonalities and externalities".

In the field of studies on internationalization, Zhao and Zou (2002) point out that the focus of research on the determinants of export performance has been on the internal dimension of the company. However, to advance the knowledge of this field, it is urgent to expand studies that consider the external dimension not controllable by the companies in the internationalization process. More specifically, the authors point out the need for studies analyzing the impact of geographical clusters and location of the companies as determinants of export performance.

Confirming the argument of Zhao and Zou (2002), we found few studies in order to investigate and increase knowledge of the influence of geographical clusters with respect to the export performance (BECCHETTI; ROSSI, 2000; ZHAO; ZOU, 2002; MACCARINI; SCABINI; ZUCCHELLA, 2003; MITTELSTAEDT; WARD; NOWLIN, 2006; BELSO-MARTINEZ, 2006; BECCHETTI; PANIZZA; OROPALLO, 2007; FERNHABER; GILBERT; MCDOUGALL, 2008).

In addition, the results of these studies are contradictory: on the one hand, the results indicate the existence of a positive influence of the geographical agglomeration of companies in export performance (BECCHETTI; ROSSI, 2000; MITTELSTAEDT; WARD; NOWLIN, 2006; BELSO-MARTINEZ, 2006; BECCHETTI; PANIZZA; OROPALLO, 2007); on the other, studies that found no relationship or even a negative influence of geographic concentration on the export performance (ZHAO; ZOU, 2002; MACCARINI; SCABINI; ZUCCHELLA, 2003). Intermediately, Fernhaber, Gilbert and McDougall (2008) found that the concentration of companies in a cluster relates positively with the intensity of exports of new projects to some extent, from which the relationship becomes negative.

In general, we observe that there is no consensus on the impact of geographical clusters on internationalization, and more specifically,

the export performance of businesses. This lack of convergence in the results of previous research brings evidence that it is not only a matter of belonging to a cluster, but a matter of *cluster* characteristics, i.e., the shared resources in the cluster accessible to businesses. Thus, the impact of cluster internationalization of business is not homogeneous, since they depend on available and relevant resources.

RBV, considered a dominant perspective in the strategy literature, has also grown in international business (PENG, 2001; FAHY, 2002; DHANARJ; BEAMISH, 2003; IBEH; WHEELER 2005). In the context of the internationalization of companies in clusters, the RBV and the Relational View (RV) can be complementary in understanding the phenomenon of internationalization of the companies included in the same geographical agglomeration. However, the RV complements the RBV for arguing that the critical resources may include the boundaries of the company, generating relational income, which are is to the joint action of companies. Relational income derives from specific assets dedicated by the company to inter-organizational relationships, and from the complementarity between their resources and those of their partners. In conclusion, RV emphasizes the common benefits that companies cannot generate independently (DYER; SINGH, 1998; COMBS; KETCHEN, 1999; LAVIE, 2006).

In this work, we argue that in addition to internally developed resources, the company can access resources through inter-organizational relationships and interaction with other organizations in the same geographical territory. These resources can influence the internationalization process (MEYER; SKAK, 2002; CHETTY; WILSON, 2003; SEPPO, 2007). Thus, the resources required for internationalization of the company are not limited to those developed internally and can be accessed through inter-organizational relationships of the company in the cluster. In the process of internationalization of companies in a cluster, geographical agglomerations can have an

important influence on business competitiveness and international integration through shared resources in the cluster environment.

According to Meyer-Stamer (2001), the analysis of competitiveness generated by clusters needs a more comprehensive view of the phenomenon comprising four levels: micro, meso, macro and meta. The micro level refers to activities within the company and the development of relationships and cooperative agreements for creating competitive advantage. The meso level is related to the actions of public and private players to create advantages that benefit a number of companies in certain locations and/or performance of sectors, such as technological development, economic promotion and exports. At the macro level, there are the economic, political and legal environments, affecting companies in the country by means of monetary, exchange rate, budgetary, fiscal and foreign trade policies. Finally, the meta level implies standards of economic and political organization aimed at developing the country, such as competitive structure of the economy, the capacity to formulate visions and strategies, social cohesion and social status of entrepreneurs. This level transcends the performance of companies and public authorities, as it results from the collective action of players: individuals, organizations and institutions.

It should be noted that the focus of this research is the resources developed in the meso and micro levels, i.e., cluster and businesses. So, we considered two analytical dimensions of the process of internationalization of companies in cluster – the meso and micro levels. The meso level covers the resources developed from interactions that occur in the cluster environment. These resources are allocated by companies and impact on their performance on the market, and the development of their internationalization strategy.

The network theory addresses the company's relationship with other stakeholders to access and develop the necessary resources for the internationalization process (CHETTY; WILSON, 2003; GELLYNCK; VERMEIRE; VIAENE, 2007). In the context of agglomerations, the meso level is about access to available resources in the cluster to the formation of its strategy, and that impact the competitive performance of companies (HERVÁS-OLIVER; ALBORS-GARRIGÓS, 2007).

The micro level covers the resources developed internally by the organization, called natural resources. The development and the accumulation of these resources stem from the trajectory of the company and therefore are also the main source of competitive advantage. These are also important in the process of internationalization, whether or not used in accordance with the strategy adopted in the internationalization process.

Based on these two levels of analysis, we argue that the internationalization strategy of the companies located in a cluster can consider two types of resources: the natural and the cluster. Natural resources are the sole property of the company and depend on its background, as recommended by the RBV (WERNERFELT, 1984; BARNEY, 1986, 1991; GRANT, 1991; PETERAF, 1993). Cluster resources, on the other hand, derive from the idiosyncrasies of inter-organizational relationships (DYER; SINGH, 1998) and the "coopetitive" dynamics that are established, which enables the development of resources shared by companies in the same geographical agglomeration (MOLINA-MORALES, 2001; WILK; FENSTERSEIFER, 2003). Thus, the following section presents the research hypotheses.

2.1 Research hypotheses

According to Becattini (1991), a geographic agglomeration is a collective agent which, to be successful, also depends on building a strong relationship network with the end market, as well as developing an image of the geographical

agglomeration of businesses, regardless of the particular image of the players that make up the cluster. This is a new economic agent, resulting from the synergy between companies and institutions present in the cluster. Thus, the dynamics of existing relationships in the cluster explains the generation of shared resources that cannot be replicated by competitors or enterprises outside the cluster. These resources will also be considered in the development of company strategy and sources of income (DYER; SINGH, 1998; LAVIE, 2006).

In this paper, we considered that the cluster resources may be relevant in the inter clusters competition and in the internationalization process of companies. For Molina-Morales (2001), the shared resources on cluster provide market opportunities that are not accessible to external companies. Similarly, the perception of the importance of cluster resources in the internationalization process will be different, since the development of cluster resources diversifies between different geographical agglomerations of companies. Each cluster will develop its resources based on its historical path, governance structure and cultural aspects (MENDEZ; MERCIER, 2006). This logic leads to the first hypothesis in the research:

H1: The perception of managers regarding the importance of cluster resources in the process of internationalization will be different for each geographical agglomeration.

Shared resources also have causal ambiguity for external companies, which will not be aware of the combination of resources that led cluster members to obtain a competitive advantage, making it difficult to copy such action (MOLINA-MORALES, 2001). Previous research (MOLINA-MORALES, 2002; WILK, 2006) indicate that the cluster resources can positively impact the company performance.

Specifically, regarding the internationalization of companies belonging to the cluster, several studies (BECCHETTI; ROSSI, 2000; BELSO-MARTINEZ, 2006; BECCHETTI; PANIZZA; OROPALLO, 2007) show that their export performance is higher than that of non-cluster companies.

The research results of Ferreira, Goldszmidt and Csillag (2010), who analyzed the relationship between the regional concentration of industries and higher performance, indicates, however, that the location of firms and how a city interacts with an industry have considerable influence on how they will play, i.e., the location is important for the performance of companies, which reinforces the need to understand which characteristics specific to cities or regions could promote or delay the performance of companies. Due to shared resources in the geographical agglomeration, firms located in certain clusters may have a higher export performance vis-à-vis companies belonging to other clusters. This is not just about being inserted in a cluster, but which cluster the company is located. So, we formulate the second research hypothesis of this study:

H2: There is significant difference in export performance of companies located in different clusters.

The perceived importance of natural and cluster resources can also be related to the level of exporting performance of the company. According to the research results of Eisenhardt and Schoonhoven (1996), companies in vulnerable strategic positions are more susceptible to the formation of strategic alliances. This finding indicates that these companies will be more likely to draw on the resources generated in their inter-organizational relationships because they realize that their own resources are not sufficient to overcome the level of competition imposed by the market.

In the cluster context, it is argued that companies with lower export performance perceive cluster resources as most important in the process of internationalization, compared to natural resources. Consequently, these companies will be more dependent on shared resources in the cluster to develop their internationalization strategy. Top exporting performance companies, in turn, tend to consider their natural resources as the most important in the internationalization process. Thus, they realize that their basic natural resources are greater than the cluster resources. Thus, the following research hypotheses arise:

H3: Managers of companies inserted in geographical agglomerations, with lower export performance, will notice that the cluster resources are more important than natural resources for internationalization.

H4: Managers of companies inserted in geographical agglomerations, with higher export performance, will notice that the natural resources are more important than cluster resources for internationalization.

The time over which companies have operated in the international market is also considered a key element in the analysis of company internationalization. This dimension is central in the School of Uppsala, which defines internationalization as a gradual process, aimed at reducing risk. The process begins with the company operating in lower psychic distance markets, and adopts a low-commitment entry. Gradually, the company gains experience and knowledge of foreign markets, expanding its operations to higher psychic distance markets, using entry modes with greater commitment (JOHANSON; VAHLNE, 1977, 1990). In this sense, the Uppsala model shows that, over time, players' perception changes in relation to the risk of the international market and the level of commitment in certain markets. Similarly,

the perception of the importance of resources in the internationalization process may change as a result of the company's international operations.

According to Chetty and Wilson (2003), focus on internal development resources is consistent with the stage model of internationalization, in which the initial efforts to enter the international market are also limited by the lack of company resources. At initial internationalization, the company will seek, in the external environment, the resources it does not have in order to enter the foreign market, mainly through inter-organizational relationships (MEYER; SKAK, 2002; CHETTY; WILSON, 2003; SEPPO, 2007). At this first moment, the company can assign more importance to shared resources in the cluster than to its own resources. However, as time goes by, the company will develop resources internally, based on experience and knowledge acquired in the international market, becoming less dependent on resources not owned thereby. Thus, with the accumulation of experience, the company will change its perception of the importance of resources in its internationalization, and natural resources will be perceived as more important than cluster resources. So, we have the fifth and sixth research hypotheses:

H5: Managers of companies inserted in geographical agglomerations, with less time of international operations, realize that the cluster resources are more important than natural resources for internationalization.

H6: Managers of companies inserted in geographical agglomerations, with more time of international operations, realize that the natural resources are more important than cluster resources for internationalization.

3 METHOD

This research is a quantitative and descriptive study, survey type, held in the French wine industry. According to the estimate by the International Vine and Wine Organization (OIV), in 2009, France had an area of vineyards of approximately 840,000 hectares, a production of 45 million hectoliters and consumption of 29.9 million hectoliters (OIV, 2010).

In comparison with other producing countries, in 2007, France ranked second in produced volume, and second in export volume (OIV, 2008). However, in terms of consumption, there is a significant reduction per capita and a change in the pattern of consumption. In the 1960s, per capita consumption was 100 liters per year. In the 1980s, per capita consumption dropped to 80 liters per year. The mean consumption, in 1999 and 2000, was 55 liters per year, totaling 32.5 million hectoliters consumed annually (ONIVINS, 2010).

One of the main elements of French wine model is the wine classification system based on the typical characteristics depending on the region of origin. Until 2008, French wines were classified into four types, according to the standard requirement for production: *Vin de Table* (table wine), *Vin de Pays* (Country Wine), VDQS - *Vin Délimité de Qualité Supérieure* (Wine Determined as of Superior Quality) and AOC – *Appellation d'Origine Contrôlée* (Controlled Origin Appellation). This model facilitates the identification of clusters, depending on the geographical limits to production.

The studied target population includes exporters of the wine sector, located in clusters. The sample consists of 130 exporting wineries located in different French wine clusters. The research mainly involved three wine clusters in south of France: Languedoc (50 wineries), Vallée du Rhone (33 wineries) and Provence (21 wineries). A fourth group was also created, called "other," in which the respondent could indicate another cluster (26 wineries)

For this study, we developed a questionnaire consisting of three blocks of questions: general information about the company; internationalization process and the company's performance in this process; and the perception of the importance of resources for internationalization at the company level, covering 23 resources, and the cluster, considering 16 resources. In the evaluation of resources, we opted for the use of scalar variables. Thus, a five-point importance Likert scale was used, with 1 for "unimportant" and 5 for "very important." The questionnaire was written in French and reviewed by two bilingual experts. The instrument was then validated by three experts linked to the sector. Finally, a pre-test was conducted at the wineries. CHART 1 presents the list of resources adapted to the wine sector used in this research.

CHART 1 – Winery business resources and winery clusters

Winery business resources	Winery cluster resources
winery facilities Machinery and equipment used in the production process Access to inputs and raw materials (fertilizers, grapes, bottles, corks and labels, etc.) Production management and quality control Technical structure to develop new products Financial capital availability for investment Access to credit (how easy it is to request and receive loans) Intellectual property (trademark protection and know how) Agreements and licenses (to use technology, trademark or explore a market) Agreements with raw material suppliers Database on customer portfolio Company information system (exchange of internal and external data – with suppliers and customers) Organizational culture (company values and how it operates in the market) Winery reputation in the domestic market Wine expertise Knowledge of the foreign market Commercial management (sales and customer management) Qualified human resources in the technical area Qualified human resources in the commercial area Distribution network in hypermarkets and supermarkets Distribution network in specialized wine shops Distribution network in restaurants and bars Cooperative relationships with different players (industry associations, educational and research institutions, trade unions, suppliers, competitors, customers)	*Terroir* (variety of grapes, wine-related practices, specific soil and climate characteristics) Existence of technological research institutions Existence of professional institutions related to wine-related activities Existence of public and private institutions related to wine activities Tourism-related infrastructure Logistics infrastructure Access to technical assistance (viticulture and winemaking) Access to credit (specific loans for farmers and wineries located in the region) Access to skilled human resources (education and availability of skilled human resources in the region, with specific knowledge of the region) Region reputation (reputation value of the region of origin) Reputation of as specific *terroir* (value of a limited *terroir,* as a geographical indication - formal or being formalized) Region culture Access to economic information related to the external market Access to legal information related to the external market Horizontal cooperation relationships among wineries in the region Vertical cooperation relationships in the region

Source: The author

Regarding export performance, the variable was measured by the question: what was the percentage of sales volume in the foreign market on total fine wine sales (still and sparkling) in 2009 (percentage in relation to total sales)? The questionnaire also included questions about the development of sales to the foreign market, but, due to the 2008 crisis, we opted for excluding these variables.

The questionnaire was administered on site by a researcher fluent in French during events dedicated to the commercialization and internationalization, with a strong presence of distributors from several countries. As representatives of wineries, there were sales directors, export managers and/or owners of the company. We selected two events between November 2009 and May 2010, held in the cities of Marseille and Montpellier. Thus, we managed to collect information from wineries located in different clusters in the south of France, the main geographic area of the study. This is a non-probabilistic sample with a questionnaire answered by the company, since participation depended on the availability of the approached respondent. During the approach, the researcher ensured that the respondent knew the process of internationalization of the winery.

Data was analyzed in three phases: in the first phase, we assessed and prepared data; in the second, there was a descriptive statistical analysis on the sample profile; in the third, we tested our hypotheses. The test contained two types of statistical tests: not parametric and parametric. To evaluate the influence of the cluster in the perceived importance of the cluster resource for internationalization (H1), and export performance (H2), we used the non-parametric test Kruskal-Wallis for k independent samples. The test was chosen due to the number of respondents in each

cluster (N <30). In the test of hypotheses H3, H4, H5 and H6, we used parametric techniques of average comparative analysis (T test) and analysis of variance (ANOVA).

4 RESULTS

The research covered 130 companies mainly located in three winery clusters in the south of France: Languedoc (50 wineries), Vallée du Rhone (33 wineries) and Provence (21 wineries). A fourth group was also created, called "other," in which the respondent could indicate another cluster (26 wineries)

The sample has a large concentration of wineries with less than 9 permanent employees (79.2%), 18.2% with 10 to 49 employees, 2.3% with 50 to 249 employees and no company of the sample has more than 250 permanent employees. The French wineries surveyed had an average age of 37.7 years, but the main concentration was in the range of 1 to 15 years of foundation (34.4%), with 79.2% of companies with less than 45 years of foundation. Regarding production, the average of respondents was 7,764.9 hectoliters, which corresponds to approximately one million bottles per year. Most research participant wineries (68.5%) produces up to 2,000 hectoliters, or about 270,000 bottles a year.

The average time of company internationalization was 14.8 years. 24.2% of companies have been in the international market between from 1 to 5 years, followed by 22.7% of companies with 6 to 10 years of internationalization, and 18.0% with 16 to 20 years in the international market. The results indicate that the majority of the investigated wineries (57.8%) joined in the international market less than 15 years ago. Regarding the number of countries where the wineries sell their products, the average was 7.8, and 34.7% of respondents operated in 4 to 6 countries, 20.5% in 10 to 12 countries, and 19.7% in 1 to 3 countries.

The proportion of sales to the foreign market in wineries surveyed in France is on average 32.2%. The main concentration of wineries is in the range of 11 to 20% of sales, which includes 22.3% of respondents, followed by 21-30% of sales with 17.7% of the sample. This ratio is consistent with France's position as the third largest exporter and second largest producer (OIV, 2010).

The main entry mode adopted by companies in the sample is the export, possibly due to the characteristic of an agri-food sector. In the research, we chose to differentiate specific exports (110 companies) from continuous exports with long-term contracts (45 companies). In addition, four companies reported having strategic alliances and two joint ventures. As respondents could choose more than one option, we observed that some companies conduct individual and continuous exports at the same time.

The following are the tests of the hypotheses of this study, to evaluate the perception of the importance given to resources in the internationalization process. While the sample predominantly comprises exporting companies, we considered this standard sufficient to define a company as internationalized, particularly given the characteristics of an agri-food sector.

We used factor analysis to identify factors related to natural and cluster resources listed in Chart 1. At the company level, the classification included 23 resources. The sampling adequacy was 0.757 and the Bertlett's sphericity test was significant (0.000). The factor analysis of the variables detected seven factors which explain 68.6% of the variance (Production, Legal and Financial, Commercial, Information Systems, Specialized Distribution Network, know-how and Relational).

Factor analysis of the "cluster resources" variables resulted in four factors, corresponding to 63.2% of the variance. The sampling adequacy was 0.809 and Bartlett's sphericity test was significant (0.000). The 16 resources listed in the questionnaire, mentioned in Chart 1, were grouped in four factors (infrastructure, information-relationship, terroir-institutions and reputation). Based on these natural and cluster resource factors, we tested our hypotheses.

4.1 Testing hypotheses

H1: The perception of managers regarding the importance of cluster resources in the process of internationalization will be different for each geographical agglomeration. To test the influence of the cluster, in the perception of managers regarding the importance of the cluster resources for internationalization (Chart 1), we used the Kruskal-Wallis non-parametric test. In this test, we considered the natural resource factors identified in the factor analysis. As noted in Table 1, we identified that there is a significant difference (0.041) only in the "*terroir* and institutions" factor at a 0.05 significance level. In the other factors, the impact was not significant: infrastructure (0.178), relationships and information (0.190) and reputation (0.830).

TABLE 1 – Kruskal-Wallis test for types of cluster and cluster resources

	Infrastructure factor	Relationships and information factor	*Terroir* and institutions factor	Reputation factor
x^2	4.916	4.766	8.234	0.880
DF	3	3	3	3
Significance	0.178	0.190	0.041**	0.830

a. Kruskal Wallis Test

b. Grouping Variable: Type of Cluster
* $\rho < 0.10$; ** $\rho < 0.05$; *** $\rho < 0.001$

Source: The author

Thus, H1 is partially supported by the "*terroir* and institutions" factor and the null hypothesis can therefore not be totally rejected. The cluster in which the company is located can influence the perceived importance of the "*terroir* and institutions" factor. One explanation for this is that the characteristics of the *terroir* and its promotion abroad are different in each region, according to the operating strategy for the inter-professional council, which represents the wineries with *Appellation d´Origine Contrôlée* (AOC). The characteristics of the *terroir* will also be emphasized by the winery according to the wine region where they are located. The typical characteristics of the wine, linked to its region of origin, are an important element in product differentiation and value adding. In short, the location in different clusters influences, significantly, the perceived importance of the "*terroir* and institutions" factor for the internationalization of the wineries.

Compared to other unconfirmed factors, Bonaccorsi (1992) argues that the relationship between the company's resources and the export behavior is not direct, but mediated by functional level and business strategy. The quantity and quality of resources for the internationalization depend on the strategy adopted by the company. In this regard, while companies in different clusters have a homogeneous perception of the importance of other cluster resource factors for internationalization, this does not mean that these companies use the cluster resources in the same way, or even that they adopt the same strategy.

H2: There is significant difference in export performance of companies located in different clusters. In the analysis of the influence of the cluster in the proportion of exports, we used the Kruskal-Wallis non-parametric test. As noted in Table 2, we identified that there is a significant difference (0.049) in the export performance of companies located in different clusters of the sample at a 0.05 significance level.

TABLE 2 – Kruskal-Wallis test for type of cluster and proportion of exports

	Export ratio
X^2	7.867
DF	3
Significance	0.049**

a. Kruskal Wallis Test

b. Grouping Variable: Type of Cluster
* $\rho < 0.10$; ** $\rho < 0.05$; *** $\rho < 0.001$

Source: The author

The H2, which presents the statement on the location in different clusters and their influence on the export performance, was supported, and the null hypothesis was rejected. This result is consistent with the research results by Ferreira, Goldszmidt and Csillag (2010), who analyzed the relationship between the regional concentration of industries and superior performance. The results found by these authors indicate that the location of companies and how a city interacts with an industry have considerable influence on how they will perform.

Similarly, considering the export performance of companies based on the proportions of exports, the result of this research suggests that the location will have a positive influence on the export performance of companies. Unlike previous studies, which evaluated the impact of belonging to clusters on internationalization in export performance (BECCHETTI; ROSSI, 2000; MITTELSTAEDT; WARD; NOWLIN, 2006; BELSO-MARTINEZ, 2006; BECCHETTI; PANIZZA; OROPALLO, 2007). These findings indicate that, depending on the cluster in which the winery is located, this impact will be different. A possible explanation for this difference are the shared resources in the cluster, which may generate a competitive advantage for companies in the internationalization process.

H3: Managers of companies inserted in geographical agglomerations, with lower export performance, will notice that the cluster resources are more important than natural resources for internationalization.

H4: Managers of companies inserted in geographical agglomerations, with higher export performance, will notice that the natural resources are more important than cluster resources for internationalization.

Katsikeas, Leonidou and Morgan (2000) found that the main indicators of export performance of economic measurement are: proportion of sales to the foreign market in relation to total sales and sales growth abroad. However, there was a strong impact of the global economic crisis on exports, while the research was conducted, which affected significantly the result of the "growth in sales abroad for the last period" variable. So, we opted for excluding the variable in the analysis of export performance. The definition of performance groups used, as classification criteria, only the "proportion of sales to the foreign market" variable. Therefore, we formed three groups based on the distribution of the sample:

- Low export performance group (proportion of sales to parties abroad of up to 15% of company billing);
- Medium export performance group (proportion of sales to parties abroad from 16 to 40% of billing); and
- High export performance group (proportion of sales to parties abroad over 40% of billing);

The comparative analysis of the averages of natural and cluster resources indicates that the low performance companies realize cluster resources (3.44) are more important to support the internationalization process than the natural

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resources (3.42). The same occurs in the companies of medium performance group, which assess the importance of cluster resources at 3.54 and natural resources at 3.46. High performance companies, in turn, consider the natural resources (3.46) as more important for the internationalization than the cluster resources (3.32). The analysis of the average difference in each export performance group by the paired tTest indicated that the differences between the averages of natural and cluster resources were not significant: low performance (p = 0.103), medium performance (p = 0.140) and high performance (p = 0.903).

Total sample of French wineries indicated that they realize cluster resources (3.45) as more important for the internationalization than the natural resources (3.42). However, the result of the paired t-Test variable "average natural resources" and "average cluster resources" indicates that this difference is not significant (p = 0.702).

For a more detailed assessment of these differences in the importance assigned to the cluster resources, we analyzed variance (ANOVA) with performance groups (low, medium and high) and cluster resource factors. The results of this test also indicated no significant difference between groups in the perceived importance of the factors: infrastructure (0.062), relationships and information (0.547), *terroir* and institutions (0.878) and reputation (0.283), with a significance level of 0.05.

Only considering a significance level of 0.10, the "infrastructure" factor shows a significant difference (0.062) among export performance groups. This factor added five resources: logistics infrastructure, existence of public and private institutions, access to credit, tourism-related infrastructure, and access to skilled human resources. Based on this result, the H3, in which companies with lower export performance consider the cluster resources more important than natural resources, has not been confirmed at a 0.05 significance level. Thus, the null hypothesis was not rejected.

The results indicate that the average of natural resources (3.45) is higher than the average of cluster resources (3.32) in the high

export performance group. However, the result of the paired t-test indicates that the difference is not significant (0.103). For further analysis, the differences of the natural resource factors were tested using the analysis of variance in the export performance groups. Analysis of variance (ANOVA) shows that there is a significant difference in the commercial factor (0.030). The Tukey test indicated that this difference was significant between the groups of low and high performance (0.033). Higher export performance companies realize natural resources linked to the commercial factor (knowledge of foreign markets, commercial management and skilled human resources in the commercial area) as of greater importance than underperforming companies do.

Thus, H4 is partially supported by the "commercial" factor, and the null hypothesis cannot be totally rejected. Evidence indicates that companies with higher export performance consider the "commercial" factor as more important for the internationalization than the lower export performance companies. This result is consistent with the Belso-Martinez findings (2006), that the advantage in marketing of the companies in cluster is positively correlated with export performance.

> **H5:** Managers of companies inserted in geographical agglomerations, with less time of international operations, realize that the cluster resources are more important than natural resources for internationalization.
>
> **H6:** Managers of companies inserted in geographical agglomerations, with more time of international operations, realize that the natural resources are more important than cluster resources for internationalization.

The winery internationalization time may also influence winery perception of the importance of natural and cluster resources in the internationalization process. This is due to the experience, knowledge and resources accumulated over time. In order to evaluate this

relationship, the sample was divided into three groups according to the operating time in the international market:

- Group with less time of internationalization (from 1 to 7 years of international operations);
- Group with intermediate time of internationalization (from 8 to 18 years of international operations); and
- Group with more time of internationalization (over 18 years of international operations).

In the group of wineries with less time of experience, natural resources (3.47) have an average degree of importance in the internationalization process higher than cluster resources (3.35). The intermediate group indicates the average importance of natural and cluster resources are very similar, with 3.37 and 3.39, respectively. But the group with more experience assigns greater importance to the cluster resource (3.59) than to natural resources (3.43). The t-Test of the averages of both groups, with less and with more internationalization time, indicates significant difference (p = 0.05) between the natural and cluster resources. Thus, H5 and H6 hypotheses were not supported and the null hypothesis cannot be rejected.

The results indicate that, at the initial moment of the internationalization process, companies belonging to wine clusters attach more importance to natural resources in support of internationalization. However, with increasing experience in the international market, companies change their perception of importance of cluster resources, and those with more time in the international market realize that the cluster resources are more important than their natural resources. One explanation for this result is that companies learn in the process and change their perception of the cluster resource. Such resources become more valued by companies in the internationalization strategy. The resources perceived as less important at the beginning of the process become more important with the international market knowledge accumulation. This result also highlights the dynamic nature

of the internationalization strategy, since, with time and experience, the company will realize differently its own resources and those accessible within the geographical agglomeration of businesses.

5 CONCLUSION

This article aimed to analyze the impact of existing resources in wine clusters in the export performance of companies. The argument on which we based our paper is that entering clusters provides access to resources that impact the export performance of companies. These resources may be natural, that is, the exclusive property of the company and dependent on its historical path, as recommended by the RBV (WERNERFELT, 1984; BARNEY, 1986, 1991; GRANT, 1991; PETERAF, 1993), or, considering the cluster context, shared resources, resulting from inter-organizational relationships (DYER; SINGH, 1998) and "coopetitive" dynamics established in the same geographical agglomeration of companies (MOLINA-MORALES, 2001, WILK; FENSTERSEIFER, 2003).

Among the six research hypotheses in this study, the results confirm the H2 and partially H1 and H4. They do not confirm the H3, H5 and H6. In short, results indicate that access to the resources available in the cluster impacts the process of internationalization of companies belonging to the agglomerations, in addition to their export performance. We also detected an export performance difference between wineries located in different clusters. This finding suggests that the location may have a significant effect on the export performance of companies, that is, it is not only a matter of belonging to a geographical agglomeration of companies, but belonging to which agglomeration. This theoretical contribution brings an important managerial implication in defining the location of enterprises in cluster, particularly for projects focused on the international market.

The results of this research show the importance of natural resources linked to the

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commercial factor in internationalization, as we found that the companies with higher export performance give more importance to their business resources. Thus, a managerial implication of this result in the internationalization of companies is the need of the development of business resources, such as commercial human resources, qualified for international operations, and access to economic and market information on foreign markets. In this sense, the orientation for the foreign market can also increase the export performance of companies.

Regarding the role of time in the international market and the importance of the cluster resources, we observed that, in the initial phase of the internationalization process, companies tend to give more importance to their natural resources than to cluster resources. Gradually, this relationship is reversed and the cluster resources are perceived as more important to companies than their natural resources. Thus, companies should develop their internationalization strategies considering the synergy between their natural resources, and the resources shared by the member organizations of the geographical agglomeration.

We should point out three limitations of the study regarding the composition of the sample and the data collection tool. First, the selection of wineries was not made at random. Second, the questionnaire used in the quantitative study aimed to evaluate the perceived importance of the resources in internationalization and not their use in the internationalization strategy. Therefore, the results show the perceived importance of the resources used by the winery managers for the internationalization of their enterprise. Further studies may be conducted to measure the use of these resources in the internationalization strategy and compare the importance and use of resources, according to the level of performance of exporting companies. Finally, the sample concentration in exporting companies limits the generalization of the results for internationalized companies, but it should be noted that the issue of the importance of resources comprehensively assessed the internationalization process, considering the internationalization of the elements of this process.

This study examined the influence of resources in the internationalization of companies belonging to winery clusters. However, we should point out that internationalization may influence companies and the cluster, indicating the need for a recursive look. De Martino, Reid and Zugliodopoulos (2006) suggest that internationalization can reduce the level of local interaction, as it exposes the company to a broader knowledge network. The effect of internationalization in companies belonging to clusters could be explored in further research. This effect could also be investigated specifically in cluster resources, for example, the impact of internationalization on the reputation of the region.

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