



STRATEGIC RESOURCES:

A STUDY IN THE WINE PRODUCTION CHAIN OF FINE WINES IN PARANÁ

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ABSTRACT

Objective of the study: To comprehend how the competitive potential of human, physical, organizational and financial resources within the production and processing segments in the chain of fine wines in Paraná occurs.

Methodology: A descriptive, cross-sectional research was carried out using qualitative methods. Three semi-structured interview scripts were used as data collection instruments for winery managers, their suppliers and one of the VINOPAR representatives.

Originality: The focus of this study is to apply the Resource-Based View, and the VRIO model, to identify, describe and understand the sources of competitive advantages, through strategic resources, in a relatively unexplored field.

Main results: Wineries have several strategic resources, including human resources (labor, good relationship, experience of managers and employees), physical (technology, structure, location, access to raw materials), organizational (culture and reputation) and financial (investment capacity, financing, working capital, cash flow and profit). The VRIO model was used to assess the organization of resources in the investigated wineries, including their organizational structure, control mechanisms and remuneration systems.

Theoretical/methodological contributions: The study's theoretical impact stems from its ability to identify the competitive potential of certain resource types and emphasize their strategic value.

Social/management contributions: The fine wine industry in Paraná is struggling to establish itself and achieve growth in the national market. By examining available resources, this chain can work towards establishing a stronger presence.

Keywords: strategic resources, resource based view, fine wine chain

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RECURSOS ESTRATÉGICOS: UM ESTUDO NA CADEIA PRODUTIVA VITIVINÍCOLA DE VINHOS FINOS DO PARANÁ

Resumo

Objetivo do estudo: Compreender o potencial competitivo dos recursos humanos, físicos, organizacionais e financeiros presentes entre os segmentos de produção e processamento na cadeia produtiva de vinhos finos do Paraná.

Método: Realizou-se uma pesquisa qualitativa, descritiva, com recorte transversal. Utilizou-se como instrumento de coleta de dados três roteiros de entrevistas semiestruturadas para gestores de vinícolas, seus fornecedores e um dos representantes da VINOPAR.

Originalidade: Trata-se de um estudo que aplica a Visão Baseada em Recursos, junto ao modelo VRIO para identificar, descrever e entender as fontes de vantagens competitivas, por meio de recursos estratégicos, em uma cadeia que ainda não foi explorada nesse aspecto.

Principais resultados: Os achados mostram que as vinícolas têm diversos recursos estratégicos, entre eles, os recursos humanos (mão de obra, bom relacionamento, experiência dos gestores e funcionários), físicos (tecnologia, estrutura, localização, acesso a matéria prima), organizacionais (cultura e reputação) e financeiros (capacidade de investimento, financiamento, capital de giro, fluxo de caixa e lucro). Com o modelo VRIO, avaliou-se a organização desses recursos, em termos de estrutura organizacional, sistemas de controle e de remuneração adotados nas vinícolas investigadas.

Contribuições teóricas/metodológicas: Teoricamente, o estudo contribui ao identificar o potencial competitivo dos tipos de recursos, destacando quais são estratégicos.

Contribuições sociais/de gestão: Considerando os desafios que a cadeia produtiva de vinhos finos paranaense enfrenta para estabelecer sua competitividade e crescimento no cenário nacional, o estudo dos recursos pode auxiliar na consolidação dessa cadeia.

Palavras-Chave: recursos estratégicos, visão baseada em recursos, cadeia de vinhos finos

RECURSOS ESTRATÉGICOS: UN ESTUDIO EN LA CADENA VITIVINÍCOLA DE LOS VINOS FINOS EN PARANÁ

Resumen

Objetivo del estudio: Comprender el potencial competitivo de los recursos humanos, físicos, organizacionales y financieros presentes entre los segmentos de producción y procesamiento en la cadena de vinos finos en Paraná.

Método: Se realizó un estudio cualitativo, descriptivo, transversal. Se utilizaron como instrumentos de recolección de datos tres guiones de entrevistas semiestruturadas a los gerentes de las bodegas, sus proveedores y uno de los representantes de VINOPAR.

Originalidad: Este es un estudio que aplica la Vista Basada en Recursos, junto con el modelo VRIO, para identificar, describir y comprender las fuentes de ventajas competitivas, a través de recursos estratégicos, en una cadena que aún no ha sido explorada en este sentido.

Principales resultados: Cabe destacar que las bodegas cuentan con varios recursos estratégicos, entre ellos los recursos humanos (mano de obra, buen trato, experiencia de los gerentes y empleados), físicos (tecnología, estructura, ubicación, acceso a materias primas), organizacionales (cultura y reputación) y financieros (capacidad de inversión, financiación, circulante, flujo de caja y beneficio). Con el modelo VRIO se evaluó la organización de estos recursos, en cuanto a estructura organizacional, sistemas de control y remuneración adoptados en las bodegas investigadas.

Aportes teóricos/metodológicos: Teóricamente, el estudio contribuye identificando el potencial competitivo de los tipos de recursos, destacando cuáles son estratégicos.

Aportes sociales/de Gestión: Considerando los desafíos que enfrenta la cadena de vinos finos de Paraná para consolidar su competitividad y crecimiento en el escenario nacional, el estudio de los recursos puede auxiliar en la consolidación de esa cadena.

Palabras claves: recursos estratégicos, vista bajo recurso, cadena de vinos finos

Introduction

Wine is appreciated worldwide. It has a long-standing tradition dating back to the ancient practice of fermenting grapes (Bortoletto et al., 2021). The love for this drink in Brazil is just as strong, establishing the country as a rising force in the global grape and wine industry. Regarding the production of national wines, the production of table wines and, to a lesser extent, fine wines stands out (Mello & Machado, 2022). Furthermore, Brazilian fine wines have seen a growth in popularity and are now establishing a stronger foothold in the country (Mello & Machado, 2022). Thus, investments in the growth of wine production in Brazil are being made by various regions, wineries, grape producers, and state governments.

One of these regions is the state of Paraná, which represents 1% of all national wine production (SEAB, 2021). Although its production is still in its early stages, Paraná plays a significant role in national production due to its unique *terroir*, with its peculiarities, such as climate and soil, that contribute to the exquisite taste, color, and aroma of its fine wines. Paraná wines have been receiving recognition in national competitions, as evidenced by the awards they have received in recent years. As a result, the production in Paraná reveals the importance of diversifying and reinforcing grape and wine growing in other parts of Brazil (SEAB, 2021). Allied to this, justifying this need and interest, upon realizing the potential of the sector, REVITIS project (Paraná Viticulture Revitalization Project) was established by the Paraná government to aid in the development of grape farming and its by-products in the state.

In light of the national and state landscape, there are numerous obstacles that must be overcome in order to successfully develop and promote fine wines from Paraná. These factors include taxation, intense market competition, both locally and globally (Cella et al., 2021; Mello & Machado, 2022), as well as environmental conditions. (Hoeckel et al., 2017). With this in mind, it is crucial to explore methods to enhance the competitiveness and efficiency of the wine production process. Consequently, the study of the resources within wineries and the resources transferred among parties can offer significant inputs towards understanding the competitive standing of these wineries in the fine wine sector.

With the understanding of how crucial resources are for a company, the Resource-Based View (RBV) can be referenced in discussing how resources and capabilities can lead to competitiveness in a given sector (Barney, 1991; Barney et al., 2021; D'oria et al., 2021). According to this theoretical approach, resources can be classified into four categories: human, physical, organizational and financial (Barney, 1991; Barney & Hesterly, 2017). These resources are evaluated based on their value, rarity, difficulty to replicate, and organization,

which collectively make up the VRIO model. Understanding its strategic potential allows the company to leverage it for increased competitiveness. (Barney et al., 2021; D'oria et al., 2021).

By carefully examining each type of resource, wineries can gain a deeper understanding of their own structure. They have also the capacity to discern which resources can be leveraged as sources of competitive advantage. In addition, this study utilizes RBV and the VRIO model to identify, describe and understand the sources of competitive advantages within a previously unexplored sector.

The research conducted on the wine production chain aimed to identify general resources rather than systematically exploring each resource type, and uses the VRIO approach. The study carried out by Watanabe et al. (2016) looks into the resources of wineries. Nevertheless, the primary goal is to comprehend the reasoning behind wineries' being vertically integrated, as outlined by RBV. Castro & Giraldi (2018) assess the wine market and implement VRIO to comprehend the competitive advantage of utilizing shared brands, such as a Geographical Indication for wineries located in the same region. Stranieri et al. (2022) employ RBV and its application to comprehend how certifications can serve as a means for gaining a competitive advantage. In their study, Crik & Crik (2021) utilize the resource-based view (RBV) to assess the cooperation among wineries and highlight the significance of social capital in cluster relationships. Thus, it was observed that these articles study and analyze the firm's resources and sources of competitive advantages. Their method is general and does not classify resources, nor incorporates the VRIO framework. As such, the purpose of this article is to conduct an analysis of both the resources and the VRIO model.

As a result, it is evident that the wine production process in Paraná is evolving, while also facing various obstacles associated with its expansion. Despite the challenge, both wineries and rural grape producers, along with associations, funneled more investments into the wine production chain. Our goal is to increase the productivity and standard of Paraná's products. Considering this scenario, it is imperative for wineries to acknowledge and establish strategic potential in order to facilitate the development of successful competitive strategies. Thus, the recognition and analysis of the types of resources – human, physical, organizational and financial – can assist in the process of achieving competitive Advantage. Given the above, the following research query comes to mind: what is the level of competitiveness that can be achieved with the resources and capabilities displayed in the fine wine production chain in Paraná?

Based on the research question, the investigation aims to understand the competitive potential of human, physical, organizational and financial resources within the production and processing segments in the production chain of fine wines in Paraná. The theoretical basis for this study lies in its analysis of the firm's resources and their strategic potential. The VRIO model is a reliable framework for determining the strategic potential of resources identified in the field. The main objective is to demonstrate to wineries, managers, rural producers, and institutions the significance of examining available resources in order to devise competitive strategies.

In order to reach this goal, the research is organized into five parts. In the initial section, the introduction covers the presentation of the theme, research question, and objective. The second part introduces the conceptual framework of RBV. The subsequent section outlines the methodology used to conduct this research. Following that, an examination of all resources gathered in the field will be provided. In the last part, the study is concluded and references are provided.

Underlying principles

In this section, the theory of RBV and its assumptions will be discussed, along with an introduction to the VRIO model.

Resource-Based View Theory

The Resource-Based View (RBV) is a strategic management theory that examines the creation and distribution of economic value, taking into account the importance of resources and companies in this dynamic (Augusto et al., 2017; Barney et al., 2021; Greve, 2020; Kosaka et al., 2019; Ross et al., 2024). *The theory of growth of the firm*, written by Penrose in 1959, is a significant influence on RBV. According to this theory, the author perceives the firm as a vast network of interconnected resources that are managed through an administrative framework (Foss, 2005; Penrose, 1959).

Along with Penrose, Wernerfelt (1984), Barney (1991), and Peteraf (1993) are indispensable for comprehending and conceptualizing RBV. According to RBV, resources and capabilities can be seen as interchangeable terms, referring to both tangible and intangible assets utilized by a company in developing and executing strategies. (Barney et al., 2021; Almeida et al., 2018). Resources in this set pertain to both tangible and intangible assets under the company's control, while capabilities are a subset of intangible resources (Barney & Hesterly, 2017; Haseeb et al., 2019). Considering the crucial role that resources can play in achieving competitive advantage, Barney and Hesterly (2017) suggest the classification of four types of resources (Table 1).

Table 1

Firm resources

Types of resources	Description
Human resources	Qualification, training, experience, relationships, and individual perspectives of both managers and staff.
Physical resources	Technology, physical structure, machinery, equipment, geographic placement, factory design and access to raw materials.
Financial resources	Capital, whether from entrepreneurs, shareholders, creditors or banks, investments and profits.
Organizational resources	Formal structure, formal and informal planning systems, control, and coordination, reporting system, informal relationships between groups, culture, and reputation.

Source: Prepared based on Barney (1991) and Barney & Hesterly (2017).

Given the description provided in Table 1, the RBV emphasizes the importance of possessing resources and capabilities with strategic potential in order to achieve competitiveness and create value for an organization (Augusto et al., 2017; Fortes & Souza, 2020; Greve, 2020; Haseeb et al., 2019; Wright et al., 1994). Nevertheless, a resource can only be deemed strategic if it fulfills the criteria of heterogeneity and mobility.

Heterogeneity is based on the assumption that businesses have unique resources and capabilities that set them apart from other companies in the industry (Barney, 1991; Fortes & Souza, 2020; Penrose, 1959; Peteraf, 1993; Saes, 2009). For RBV, distinctive resources and capabilities are accountable for clarifying the variations in performance among firms (D'oria et al., 2021). The firm's resource mobility measures the extent to which resources can move from one company to another (Barney, 1991; Peteraf, 1993; Saes, 2009). The less mobile a resource is, the greater its heterogeneity will be, making it less vulnerable to being adopted by other competitors in the market.

Foss and Foss (2004) assert that Barney (1991) and Peteraf (1993) are accountable for conceptualizing the "pure" aspect of RBV and constructing key assumptions to support this theory. For Barney (1991), the RBV approach focuses on the essential qualities a resource must possess in order to qualify as strategic. According to Peteraf (1993), there are specific criteria that resources must meet in order to be deemed strategic.

Model proposed by Barney

The model proposed by Barney (1991) is based on the concept that, to generate sustainable competitive advantage, the firm must have resources and capabilities that are valuable, rare, inimitable, and irreplaceable (Barney, 1991; Greve, 2020; Ployhart, 2021). These characteristics are shown in Table 2.

Table 2

Characteristics required for a resource to be strategic

Characteristics	Description
Value	Resource that create or implement strategies that improve the efficiency and effectiveness of the firm and affect its profits, while also addressing external threats and uncovering potential opportunities.
Rarity	Scarce and unusual resource, with no easy access for other competitors on the market.
Imitability	This resource is virtually impossible for competitors to replicate, given the exorbitant expenses associated with acquiring or creating it, in contrast to companies that already possess it. The reason for the inability to replicate lies in the distinctive historical conditions, path dependence, causal ambiguity, social complexity and patents.
Organization	Non-existence of strategically equivalent resources (substitutes) in the market.

Source: Prepared based on Barney (1991), Barney & Hesterly (2017), Fortes & Souza (2020) and Greve (2020)

In response to criticism about RBV's implementation abilities, Foss & Foss (2004); Foss (2005) and Barney and Hesterly (2017) developed a model, focusing on the identification, analysis, and organization of a firm's resources: the VRIO model. According to this model, identifying resources with competitive potential involves the consideration of four key factors: value, rarity, imitability and the correct organization of these resources (Barney & Hesterly, 2017). VRIO elements, as well as its definition, are the same as those belonging to Barney's (1991) original model; the novelty of the model is the organization proposal.

The organization of the VRIO model, according to Barney and Hesterly (2017), considers three elements: organizational structure, control and remuneration system. Organizational structure is made up of the organizational chart and the reporting authority, which determine the organizational hierarchy. Control systems refer to the formal and informal mechanisms that ensure managers and employees according to the company's strategies. They can be formal, such as budgets and reports, or informal, such as culture. Remuneration encompasses various forms of payment and the guidelines for salary incentives and benefits. The VRIO model was created as a practical tool to help identify and analyze resources and capabilities that set a company apart from its other resources (Ross et al., 2024).

Therefore, the goal is to arrange these resources and concentrate on executing strategies that are both effective and competitive.

Model proposed by Peteraf

Peteraf (1993) and Barney (1991) both advocate for a model that considers resources in understanding sustainable competitive advantage. In his work, Peteraf (1993) highlights the four pillars necessary to achieve sustainable competitive advantage (Table 3).

Table 3

Four pillars of competitive advantage

Pillars	Description
Heterogeneity	In the same market, there are competing companies with varying capabilities and resources. These companies can break even or generate income if they have superior resources and capabilities.
Imperfect mobility	These resources are specialized for the specific needs of the firm. Imperfect mobility ensures that the profits generated by resources are exclusively for the firm and cannot be shared with other companies in the same industry.
Ex post barriers to competition	By imposing ex post barriers, potential conflicts over profits are avoided and existing profits are safeguarded. The stand out factors are the challenges of imitating and replicating resources, which can occur due to property rights, information asymmetries, socially complex assets, causal ambiguities, path dependencies and costs.
Ex ante barriers to competition	The purpose of these barriers is to avoid the costs associated with developing value strategies offsetting the income. As a result, the resource market takes control of all generated income. Example: establishment of information asymmetries, to limit competition and create uncertainty in the market.

Source: Prepared based on Peteraf (1993), Fortes & Souza (2020) and D’oria *et al.* (2021).

According to Peteraf’s (1993) model, sustainable competitive advantage can be achieved in a highly competitive market by utilizing heterogeneous resources and properties. Hence, Peteraf’s research presents a structured framework for the pillars of competitive advantage within the logic developed in RBV (D’oria *et al.*, 2021).

Resource-Based Vision in the wine production chain

In order to gain a deeper understanding on how the RBV theory can be utilized to examine resources within the wine industry, various articles were examined that specifically

apply this concept to the grape and wine production process (Almeida et al., 2018; Castro & Giraldi, 2018; Crik & Crik, 2018; Stranieri et al., 2022; Watanabe et al., 2016).

In addition to addressing strategic capacity resources, as evident in RBV, these studies also examine how they can be utilized in production chains, specifically in the context of the wine sector, which is the primary focus of this study. This highlights the significance of strategic resources in the field, both in terms of competitive advantages, and in the context of production chains.

Almeida et al. (2016) seek to portray a literature review, using RBV applied in the Serra Gaúcha wine cluster, to implement competitive advantages. The analysis and results of this study demonstrate that *terroir* is the main competitive advantage of Serra Gaúcha wineries. This wine cluster stands out in the country and has room for growth. Nevertheless, the research indicates a deficiency in a responsible institution and a thorough evaluation of available resources to expand the sector. It is crucial to understand the resources and how they are utilized in this production chain to facilitate its growth and to strengthen the sector through various institutions.

In their research, Castro and Giraldi (2018) utilize the RBV approach, particularly focusing on the VRIO framework. In this study, they have modified VRIO to VRIA, taking into account value, rarity, difficulty of imitation, and association. The purpose of this article, within the organization of "O", was to examine the correlation between wineries in the region and their utilization of shared brands. Furthermore, it sheds light on the use of Geographical Indication among wineries in southern Brazil. Hence, the findings suggest that incorporating shared brands in the Brazilian wine industry can serve as a sustainable competitive advantage. The utilization of Geographical Indication highlights a valuable and challenging-to-replicate advantage, thanks to the unique *terroir*.

According to Crik and Crik (2021), RBV is utilized to comprehend cooperation activities (interaction between competition and cooperation) between family-owned wine businesses. The RBV analysis highlights the vital role of social capital in building relationships with reliable partners in clusters and in sharing resources between them. In their study, Stranieri et al. (2022) draw on the theories of RBV and transaction costs economics (TCE) to assess strategic motivations when adopting a certification. In order to achieve this, they examine the impact of environmental certification (VIVA) and its potential effects on the Italian wine industry. According to the findings, the wineries in the studied chain view the environmental certification (VIVA) as a valuable tool for gaining a competitive edge. This certification works in conjunction with other capabilities and resources within the wineries.

Watanabe et al. (2016) carry out a case study in Brazilian wineries based on the theories of Transaction Cost Economics, Resource-Based View and Property Rights. By examining the strategic resources, transaction costs, and property rights of the wineries, this study aimed to shed light on the reasons for their vertical integration.

The studies consulted deal with wine companies from different angles. The central common theme is the investigation of resources and sources of competitive advantage, which are essential factors in the field of strategy. The primary objective of this search is to explore and demonstrate the relevance of studying resources and capabilities in wine companies.

Methodological procedures

The study addressed is a qualitative, descriptive and cross-sectional research, carried out between 2022 and 2023. The process of gathering data took place in two phases and utilized both primary and secondary sources. The secondary sources utilized included: a) documents on the wine sector: Brazilian Agricultural Research Corporation (EMBRAPA), Ministry of Agriculture and Livestock Development (MAPA), Brazilian Oenology Association (ABE); b) articles about the wine industry; c) news from the State government and; d) documents outlining the REVITIS Project and VINOPAR (Paraná State Winegrowers Association). Three semi-structured interview scripts were utilized as primary sources, including: a) wineries specializing in fine wines; b) suppliers of fine grapes and/or fine wine; c) representatives of VINOPAR. The research began by utilizing data from secondary sources to enable prior knowledge of the sector. Following this, primary sources were used to gather additional data in the field.

The primary objective of this study is to gain insight into the strategic resources utilized in the fine wine production chain, specifically in the relationship between suppliers and producers. To compose the research sample, the selection of wineries in Paraná was based on their involvement in at least one stage of the fine wine production process, such as growing high-quality grapes, making wine, or distributing the final product. In addition, we searched for fine wine wineries associated with VINOPAR, which is important as it is considered one of the main associations of winemakers in the state. The research participants are represented by Table 5.

Table 5

Participants of the research

Wineries – Producer link					
Identification	Time of activity (years)	Size	Workers	Interviewed	Position
Winery A	40	Small to medium	4	A	Winemaker and director e diretor
Winery B	14	Small	12	B	Owner partner
Winery C	9	Small	3	C	Technical responsible
Winery D	17	Small	5	D	Operational director
Winery E	123	Medium	7	E	Sommelier
Winery F	8	Small	19	F	Founding owner fundador
Winery G	9	Small	13	G	Owner and director
Winery H	30	Medium	15	H	Owner and administrator
Winery I	4	Small	2	I	Owner

Source: Prepared by the authors

The selection of suppliers was based on identifying the wineries involved in the study, with the goal of finding suppliers who directly provide goods to the wineries analyzed.

Hence, the supplier link refers to individuals who grow fine grapes or semi-ready wines, and the producer link refers to fine wine wineries. The interviewed suppliers are described in Table 6.

Table 6

Participants of the research

Suppliers – Suppliers link				
Identification	Time of activity (years)	Size in hectares (ha)	Workers	Winery to which it supplies
Rural producer 1	12	300 ha with 10 ha with fine wines	3	Winery D e E
Rural producer 2	23	74 ha with 14 ha with fine wines	3	Winery B
Rural producer 3	30	7 ha with fine wines	6	Winery H

Source: Prepared by the authors

In order to enhance data collection and achieve increased data triangulation, our team conducted interviews with wineries and a selection of their suppliers, and also spoke to a

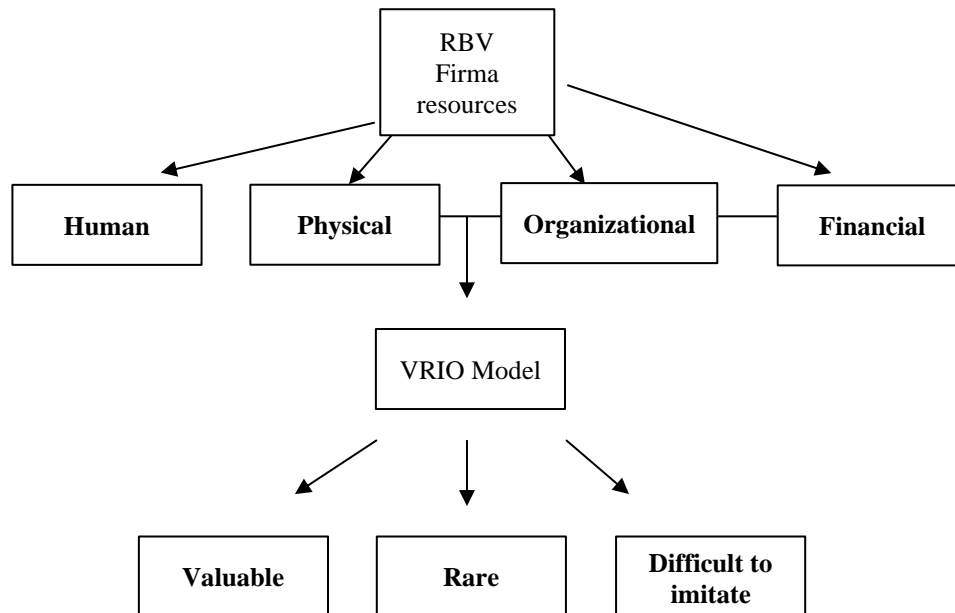
representative from VINOPAR. The reason for choosing this interviewee was his strategic position in the fine wine sector, representing the winegrowers association of Paraná. Additionally, the VINOPAR representative was important for opening up space in the sector, by obtaining the position of principal agent for conducting research.

The interview guide was structured based on analysis categories based on the Resource-Based View. The classification of categories in this instance was based on the distinct types of company resources: human, physical, financial and organizational. Moreover, the resource's strategic attributes gave rise to categories based on the VRIO model: valuable, rare, difficult to imitate, and organized resources. The firm's various types of resources were assessed by asking groups of questions, specifically focusing on valuable, rare, and difficult to imitate characteristics. The script concludes with a series of questions pertaining to the "O" aspect of VRIO, related to the organizational structure, control, and remuneration systems of wineries.

Thirteen interviews were conducted and recorded, amounting to 15 hours and 38 minutes of material, which were later transcribed in full into Microsoft Word files. It should be mentioned that the interviews were conducted with the interviewees ensuring the privacy of the information they shared. The data was analyzed using Bardin's (2007) content analysis method.

This technique consists of three stages: pre-analysis, exploration of the material and interpretation and inferences. In the pre-analysis, the study topic, the research problem, the guiding theory, the sample of interviewees, and the interviews were defined. During the second phase, a thorough examination was conducted on all gathered materials using the selected analysis categories. Before conducting field work, the analysis categories were determined based on previously researched and reviewed literature. Subsequently, the questionnaire was created based on the chosen categories of analysis, with the aim of addressing the research objective. The categories were: a) human resources; b) physical resources; c) organizational resources; d) financial resources; e) valuable; f) rare; g) difficult to imitate. The last stage of the analysis involved making interpretations based on the data obtained in the field and comparing them based on the theoretical framework (Figure 1).

Figure 1
Categories of analysis



Source: Prepared by the authors

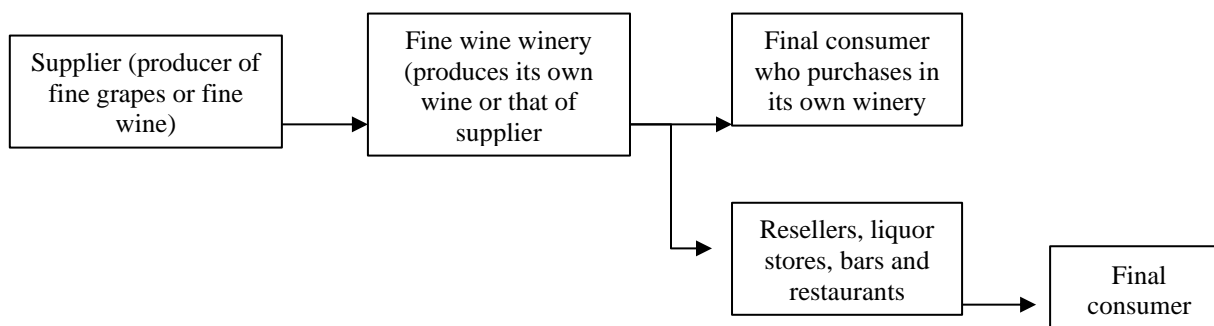
The Atlas.ti software was also used to help organize the transcribed interviews, code information, cut and sort into the predetermined analysis categories, based on the theoretical framework. Eventually, in the third and final stage, the material was transcribed, coded, categorized, and used to make inferences and interpretations. The aim was to uncover significance and meaning from the gathered material and fulfill the initial objective.

Analysis of results

To fully grasp the presence of resources in the Paraná wine chain, it is crucial to understand how the chain is composed, considering its links. In this study, the analysis links were the producer (supplier) and processor (winery that processes fine wine) dyad. The chain design is depicted in Figure 2.

Figure 2

Links in the Paraná wine chain



Source: Prepared by the authors. based of collected data

As a result, the wineries in Paraná are connected to either the winery itself or to rural producers who are affiliated with the wineries, all of whom cultivate fine grapes. The processing link is present as well, featuring a refined wine winery where grape processing occurs. Alternatively, certain wineries may handle final processing and packaging for marketing purposes. Once processed, the wine can have two destinations. The initial target audience is the consumer who directly visits the winery, seeking out wine tourism opportunities. The second group includes resellers, distribution centers, retail stores, bars, restaurants, and hotels, which serve as intermediaries for the wine to reach the end consumer.

As part of the chain being studied, Paraná also features VINOPAR, the association that represents winemakers in the region. In a professional sense, its objective is to provide support and represent the interests of wineries in Paraná. Understanding the chain is paramount in this study, making this information crucial. By having a clear understanding of the process, the VINOPAR representative is able to gain a comprehensive overview. Consequently, his interview positioned him as a vital contributor to comprehending the sector and unlocking opportunities for study. He offered his unique insight on the growth of the Paraná wine market.

With the importance of the links in the studied chain established, a survey was performed at every winery, focusing on the various existing resources. The aim of this topic is to recognize the strategic resources utilized by fine wine wineries in Paraná, focusing on the analysis of each type of resource – human, physical, organizational, and financial. The VRIO model (Barney & Hesterly, 2017; Ross et al., 2024) allows for the identification of the strategic potential of wineries by categorizing their resources. Resources with at least rare characteristics, that is, temporary competitive advantage, were considered strategic. As every resource that is

hard to duplicate is considered rare (Barney; Hesterly, 2017), the investigation also examined resources with the ability to sustain competitive advantage.

Human resources

Human resources encompass a wide range of skills and practices involved in producing grapes and crafting fine wine. Based on the input from the interviewees, Table 7 showcases the various human resources utilized in the winemaking process. In addition, this table displays the factors that interviewees consider when assessing the competitive potential of each resource.

Table 7

Types of human resources and their competitive potential found in each interviewee

Human resources	Valuable?	Rare?	Difficult to imitate?
Qualified labor in grape production (an agronomist within the winery)	A/ B/ C/ D/ E/ F/ G/ H/ I F1/ F2/ F3	A/ C/ D / G/ I	-
Qualified labor in grape production (an winemaker within the winery)	A/ B/ C/ D/ E/ F/ G/ H/ I F1/ F2/ F3	A/ C/ E	-
Experience and skills of managers	A/ B/ C/ D/ E/ F/ G/ H/ I F1/ F2/ F3	G/ F2/ F3	G/ F2
Experience and skills of workers	A/ B/ D/ E/ F/ G/ H/ I F2/ F3	B/ H/ F2	-
Good relationships between people or groups of people	A/ B/ D/ E/ F/ G/ I F2/ F3	D/ E/ F	D
Laboratories and winemakers (outside the winery)	A/ B/ C/ D/ E/ F/ G/ H	-	-
Agronomists (outside the winery)	G	-	-

Source: Prepared by the authors

It is worth noting that a few interviewees possess valuable human resources with significant strategic potential. The key factors include: skilled workers in grape cultivation;

labor force in wine making; competent management expertise; proficient and experienced employees; and positive relationships between people or groups of people.

Skilled workers are a crucial asset in grape production, particularly for wineries that handle their own planting and winemaking. This is due to the difficulty of finding qualified people to work with fine grapes in the state of Paraná. Regarding this, Interviewee D reports: “[...] thinking about qualified labor for grape production, it is valuable, it is rare and it is difficult to imitate, because it is difficult to train these people and find them and hire them at a plausible cost [...]”. According to Haseeb et al. (2019), the literature supports the idea that having qualified human resources is crucial for achieving high-quality outcomes in processes. Furthermore, the participants who identified this source as significant also employ agronomists on their lands, such as wineries A, C, and D.

The expertise of laborers is crucial for wineries that house full-time winemakers, such as wineries A and E, whose owners possess this specialized training. These wineries have an advantage over others that lack a full-time winemaker during production. The experience and skills of managers were deemed a strategic asset by winery owners who hold a degree in oenology. Therefore, this feature is related to the previous one. To these interviewees, this resource is scarce and not easily imitated, as the manager's training and knowledge significantly shape the company's management practices. Moreover, this training is a time-consuming process.

In terms of the employees' qualifications and abilities, as shared by a few respondents, this asset exhibits unusual features. Wineries in Paraná face a challenge in finding qualified professionals with significant work experience in fine wines. Therefore, wineries normally hire employees to train them, as Interviewee B reports: “[...] you don't find people trained to work with wine in the market, you have to develop these people's skills”. Broadly speaking, the human resources discussed thus far are regarded as strategic due to the time and effort required for training them. According to existing literature, the idea of path dependence suggests that specific historical circumstances have shaped the development of particular human resources, making them unique, immobile, and heterogeneous (Barney, 1991; Barney & Hesterly, 2017; Fortes & Souza, 2020; Haseeb et al., 2019; Penrose, 1959; Peteraf, 1993; Wright et al., 1994).

Another key element of strategic human resources involves fostering strong relationships among individuals or groups. According to Interviewee E: “[...] there is a great partnership between the sectors, [...] so there is this a good relationship. Things work very well. I recognize it's not that common. I've had experiences with other establishments and it's not something usual to see [...]”. Our findings suggest that developing strong relationships within a

company is crucial for individuals, as it is a time-consuming process that may go unnoticed by managers. This supports existing literature, particularly in regards to the intricate nature of causal ambiguity and social complexity, particularly in the context of comprehending human resources (Barney et al., 2021; Greve, 2020; Wright et al., 1994).

Physical resources

We identified the entire technological system used for producing grapes and wine as a physical resource. As a result, Table 8 displays the physical resources present in wineries, as well as their competitive capabilities.

Table 8

Types of physical resources and their competitive potential found in each interviewee

Physical resources	Valuable?	Rare?	Difficult to imitate?
Technology (machinery and equipment) for planting grape	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	F	-
Technology (machines and equipment) for wine manufacturing	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F3	-	-
Physical structure for grape and/or wine production	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	C/ E/ F/ I/ F1/ F2	C/ F/ F1/ F2
Wine tourism structure	A/ B/ C/ D/ E/ F/ G/ I/ F1/ F3	F	F
Hardware and Software	A/ B/ C/ E/ F/ H/ F2/ F3	-	-
Geographic location	A/ B/ C/ D/ E/ F/ G/ H/ I/ F2/ F3	A/ E/ F/ G/ H/ F2	A/ E/ F/ G/ F2
Access to raw materials	A/ B/ C/ D/ E/ F/ G/ H/ I	A/ C/ D/ G/ I	C/ D
Wines manufactured	A/ B/ C/ D/ E/ F/ G/ H/ I	D/ E	D/ E

Source: Prepared by the authors

As shown in Table 8, the physical resources deemed strategic were: technology for planting grapes; physical structure for producing grapes or fine wines; wine tourism

structure; geographic location; access to raw materials and manufactured wines. According to Interviewee F, the technology used for planting grapes is seen as a valuable resource, as their supplier has an innovative approach in the field. As he is with interviewee F's supplier, this has a direct impact on their final wine. According to Interviewee F, “[...] using chemicals during a biological treatment [...] can be harmful to certain plants. Performing a procedure such as injecting hot air to eliminate pests leads to an improvement in grape quality, thereby positively impacting the quality of sparkling wine.”

The physical structure used in the production of grapes and wine was also considered a strategic resource. Many of the interviewees who acknowledged the significance of this resource are the wineries that grow their own grapes and the suppliers who were interviewed. Supplier 2 states that the grape production structure is strategic due to its scarcity within the industry. Vineyards require both land and a suitable microclimate for their growth. Therefore, it becomes complex and difficult to imitate. Similarly, an adequate physical structure is necessary for wine production: a shed for installations, a cold room, and an underground cellar, with barrels for aging fine wines. Regarding this, Interviewee E reports that the structure is a valuable resource:

[...] if we didn't have this structure, we probably wouldn't be able to have high quality wines, since we have the ideal environment for wine maturation [...] it's not that simple, I see that there are many wineries with this production, but you see that the structure is not as it should be. So, it could be better.

The implementation of wine tourism as a necessary strategy is crucial for the survival of small wineries, as it provides a direct means of selling to consumers. Nevertheless, only Winery F deemed this resource strategic and acknowledged its difficulty to replicate. Nestled within an abandoned train tunnel, this spot offers a natural and consistent temperature that is perfect for the maturation of sparkling wines. The structure of Winery F serves as a key factor in attracting customers, particularly due to its historical context and geographical placement (Barney and Hesterly, 2017) and highlights the competitive obstacles faced by other competitors, as mentioned by Peteraf (1993).

According to the interviewees, there are two key types that should be emphasized when considering geographic location. The first factor concerns the positioning in relation to road access, while the second factor addresses the key microclimate conditions for grape cultivation. These two types of geographic location were seen as strategic by those interviewed. The first scenario, on account of the winery's strategic location near large centers and its innovative practices, mirroring those of A and E wineries. According to Barney (1991), Barney e Hesterly

(2017) e Barney et al., (2021), the benefits of being a pioneer can lead to the creation of a strategic resource that is challenging to imitate, especially when it is situated in a key area for a specific industry.

The second case of location concerns the microclimate for growing grapes. As a result, the focus shifted towards wineries that cultivate their own grapes, and rural producers. It is worth mentioning that the geographic location issue is also closely linked to *terroir*. The search for a region with ideal attributes for growing grapes demands a significant amount of time and can be connected to the path that guided agents to discover suitable spots for establishing vineyards, as seen in the case of Vinícola G. This is consistent with the literature regarding a resource's unmatched nature, which is intricately linked to its exceptional historical context and innovative qualities (Barney, 1991; Barney & Hesterly, 2017; Peteraf, 1993).

The primary raw material for fine wine was traditionally believed to be grapes, although there are other components to take into account, such as bottles, corks, and labels. As a result, wineries that grow their own grapes have a distinct advantage in obtaining raw materials, given their oversight of the entire production process and development of their own *terroir*. In their study of the Serra Gaúcha wine cluster, Almeida et al. (2018) observed that the winemaking tradition is greatly valued. This further supports the findings of Barney and Hesterly (2017), who argue that having access to valuable resources can significantly contribute to gaining a competitive advantage. This also confirms what Watanabe et al. (2016) mention regarding the importance of winemaking tradition.

The wineries that labeled it as strategic did so due to the wines' connection to the winery's brand, reputation, and history. Hence, although the brand and reputation are valuable assets for the organization, the participants were unable to separate them from the crucial components of their end product.

Organizational resources

Organizational resources can be defined as the various components of a company's culture and reputation, including processes, systems, and relationships (Barney & Hesterly, 2017). Based on the interviewees' perspectives, Table 9 outlines the organizational resources prevalent in wineries and their relationship to competitive potential.

Table 9

Types of organizational resources and the competitive potential according to each interviewee

Organizational resources	Valuable?	Rare?	Difficult to imitate?
Grape production planning systems	A/ B/ C/ D/ E/ I/ F1/ F2	D	D
Planning systems for fine wine production	A/ B/ C/ D/ E/ G/ H/ I / F1/ F2/ F3	D	D
Control systems (reports) on grape production	A/ C/ D/ E/ G/ I/ F1/ F2/ F3	-	-
Control systems (reports) on wine production	A/ B/ C/ D/ E/ F/ G/ I/ F1/ F2/ F3	-	-
Research and Development	D	D	D
Culture	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	A/ C/ D/ E/ F/ G/ I/ F1/ F2	A/ C/ D/ E/ F/ G/ I/ F1/ F2
Reputation	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	A/ C/ D/ E/ F/ G/ I/ F1/ F2	A/ C/ E/ F/ G/ I/ F1/ F2

Source: Prepared by the authors

Based on Table 9, the strategic organizational resources were identified as: planning system for grape and wine production, research and development, culture and reputation. In regards to the planning resource for grapes and wine, Interviewee D views it as a valuable asset that is both rare and difficult to replicate. This resource was created within the winery's own context:

[...] for both grape production and wine production, we internally developed spreadsheets for our individual management and production processes. They are adapted to our reality, our grapes, our way of conducting, the processes used for each of our wines. This is quite difficult to imitate [...].

Due to its internal development within Vinícola D, the resource possessed distinctive qualities that were hard to imitate. In line with existing literature, Barney and Hesterly (2017) argue that developing resources internally can create causal ambiguity, making it difficult for competitors to fully comprehend the resource's origins. Moreover, as stated by

Hasseb et al. (2019) and Wright et al. (1994), the internal development of resources leads to diversity in the utilization of the resource, providing the company that possesses it with a competitive edge.

With regard to research and development, this was a resource highlighted only by interviewee D. According to her, investing in research and development is considered a strategic asset. It has the potential to enhance the winery's brand value and competitiveness in the long run, since this resource is not currently utilized by other competitors. In addition, by teaming up with other rural producers and companies, they may have the opportunity to become allies or providers of inputs for Winery D in the future.

When discussing the company's culture and reputation, all participants emphasized the significance of these assets and the fact that they are both rare and hard to replicate. An analysis of culture revealed that the wineries' values are rooted in the owner's beliefs, as they are mainly family-owned and small establishments. The *terroir* issue is also important to highlight, given the culture and tradition of wineries. Watanabe et al. (2016) emphasized the challenging nature of replicating winemaking tradition, which aligns with our findings.

Wineries A and E embody a generational culture rooted in the values and customs of grape winemaking. The way in which these wineries have developed over time is heavily influenced by first mover advantages and path dependence. This is consistent with previous research on the connection between culture and reputation, as they are heavily influenced by human Factors, according to Wright, et al. (1994). Informal relationships are a key aspect, and exposes their heterogeneous characteristics (Saes, 2009). Furthermore, corroborating Barney (1991), Barney et al., (2021), D'Oria et al. (2021) and Peteraf (1993), the origins of these resources can be traced back to particular historical contexts, influenced by path dependence, as they were developed internally and gradually over time.

Based on the analysis of wineries and their suppliers, it was found that reputation is a highly significant organizational asset. According to supplier 2, wine is a sector where the identity and reputation of the agents are important, and long-term relationships tend to remain. According to Crik and Crik's (2021) research, there are similarities between working with social capital and the cooperation relationship among winemaking agents. In addition, the researches conducted by Kosaka et al. (2019) and Augusto et al. (2017) indicate that culture and reputation play a crucial role in fostering a strong and enduring relationship between agents, which aligns with the findings observed in Paraná wineries.

Financial resources

The fine wine sector, like any other sector of the economy, relies heavily on financial resources. Table 10 displays the financial resources present in wineries, taking into account their competitive capabilities.

Table 10

Types of financial resources and or the competitive potential found in each interviewee

Financial resources	Valuable?	Rare?	Difficult to imitate?
Investment capacity	A/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	F1/ F2	F1/ F2
Credit/financing sources	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F3	A/ D	-
Cash flow/turnover capital	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	C/ I/ F1/ F2	-
Profit	A/ B/ C/ D/ E/ F/ G/ H/ I/ F1/ F2/ F3	C/ D/ I/ F1/ F2	-

Source: Prepared by the authors

The production of high-quality wine involves significant investments in both grape vineyards and wine production equipment. Therefore, according to Barney and Hesterly (2017), all financial resources were considered strategic due to their rare characteristics.

Most interviewees stated that investment capacity was a valuable resource. For suppliers 1 and 2, investment capacity, besides being valuable, is rare and also hard to imitate. The success of investing in fine grapes requires producers to have a significant amount of capital available. This particular activity does not yield immediate results, as it typically takes four to five years for a grape field to be ready for harvest. As a result, the rural producer must allocate resources towards cultural treatments for the vineyard until the time of harvest, when it will see a return of its investment. Supplier 1 suggests that rural producers must work with other crops in order to ensure ongoing profitability. As a result, this creates financial obstacles for businesses operating in the industry, particularly for newcomers who may lack the necessary funding for initial investment. This resource may provide a competitive edge to those who have access to it in the sector. This concept of barriers to competition is related to that proposed in the literature by Peteraf (1993).

According to interviewees A and D, besides being valuable, credits and financing sources are not readily available for fine wine wineries in Paraná. According to interviewee D, there is a scarcity of financing sources in the fine wine industry, specifically in the production sector. This sector lacks financial support, incentives, or subsidies. In this scenario, fine wine producers that own vineyards can obtain credit and funding through their agricultural operations, which provides them with a competitive edge. As demonstrated in the study conducted by Ross et al. (2024), it is crucial to attract financial resources in order to achieve sustainable competitive advantage.

Regarding cash flow, working capital and profit, the interviewees stated that they were of a strategic nature. Their contribution is crucial in keeping the company running, as managing adequate cash flow, reliable working capital, and steady profits can be a complex task. Regarding financial resources, Interviewee I states that “[...] it requires high working capital and we have to finance the entire cycle of cultivation, wine production, marketing and this can take two years [...]. Thus, the profitability of fine wine is good, but it requires a lot of working capital [...]”. According to Interviewee I, a grape producer in Paraná, there is a financial obstacle to expanding the sector due to lack of governmental support through credit lines for wine production. Moreover, it states that a large number of wineries in Paraná source their grapes from Rio Grande do Sul not just because of the weather, but also because they are have more affordable prices. According to Barney (1991), interviewees who possess these strategic resources have the potential to outperform their competitors and also create cost barriers for new entrants, as highlighted by Peteraf (1993).

Organization of resources – VRIO

In order to assess the organization of a resource within a company using the VRIO model, three elements must be identified: organizational structure, control and remuneration systems (Barney & Hesterly, 2017). Table 11 outlines the components of the "O" in VRIO as reported by the interview participants.

Table 11

Organization of resources – VRIO Model

Organizational structure	
Structure	Small to medium in size centralized and family-oriented companies
Distribution of activities	-Well-defined activities between family members and employees; -For family members, the division occurs informally. For employees, the position is established through an employment contract; -Flexibility in the position, when necessary.
Communication	-It is satisfactory, however, informally, and through “word of mouth”; -Some wineries claimed the need to improve and formalize communication.
Control systems	
Formal control systems	- Control of purchases, sales and production, using software or electronic spreadsheets; - Quality control by specialized oenology laboratories and the Ministry of Agriculture; - Certification: not common in the sector, only one winery has certification; - Performance assessment: not found in wineries; - Customer satisfaction survey: most wineries do not carry it out. Some do it informally; - Post-sales control with customers carried out through review sites: TripAdvisor, Google and Instagram;
Informal control systems	- Informal culture and family values, originating from the owner and focused on the customer; - Less bureaucratic culture, with quick decision-making centered on the manager; - For being informal, it is difficult to maintain and carry out structured processes.
Remuneration	
Remuneration	-Remuneration in accordance with the wine sector, or above; -Mentioned as a way to keep employees engaged.
Incentives	-Most of the wineries interviewed do not have many incentives; -Bonus with achievement of goals; -Sales sector with variable payment by commission;
Benefits	Basic food basket; food aid; transport; fuel aid; housing; dental plan; courses; Internet; days off; wines at cost price.

Source: Prepared by the authors

In Table 9, we examine the impact of VRIO on the organization's strategic resources, including human, physical, organizational, and financial aspects. This analysis also takes into account the structure, control, and compensation systems, as defined by Barney and Hesterly (2017). In terms of the organization's structure, we observed how it strategically utilizes human and organizational resources. As to human resources, it was observed that, despite the wineries being centralized family businesses, employees manage to have well-defined roles and functions. Additionally, since these wineries are typically small, workers must acquire a range of abilities during the wine production process. The survival of wineries relies heavily on the experience and skills of managers, given their small size and centralized structure. Moreover, informal communication aids in building strong connections between professionals in the workplace.

Regarding the structure for organizational resources, it was observed that culture can benefit from the informal relationships existing in wineries to spread more quickly among employees. However, the informality in communication within wineries can obstruct the ability to measure how well employees are embodying the company's culture. The centralization of the structure results in a reputation and culture that is centered on the owner.

The organization of strategic resources, including human, physical, organizational, and financial resources, relies heavily on control systems. In terms of human resources, it is evident that employees perform their tasks with greater precision due to the implementation of control systems in all production processes. The small size of these wineries promotes quicker and less bureaucratic communication among employees compared to larger companies. It was found that, in all wineries, the lack of a performance assessment is directly related to the small their size, and to the expenses incorporated, if this practice were adopted. An interesting point to mention is that this strategy could support wineries in better understanding the contributions of their employees in their operations. Additionally, informal communication and positive professional relationships greatly contribute to the development of culture and values, and are closely associated with existing informal control systems.

The lack of winery certification has been observed in the formal control systems. The majority of wineries, when interviewed, reported that they do not possess certification. Winery B was the only one to report having certification from MAPA and TECPAR (certification on management systems and products). Wineries B and D claimed to have a tourism certification provided by SEBRAE (Brazilian Micro and Small Business Support Service). According to research conducted by Castro and Garibaldi (2018) and Stranieri et al. (2022), the utilization of Geographical Indication and certifications in the wine industry is crucial for gaining a

competitive advantage. Hence, the wineries we interviewed have not yet achieved this goal due to being a relatively new industry with difficulties in establishing a strong culture of cultivating fine grapes and lacking necessary techniques.

The data collected suggests that the utilization of control systems is beneficial for organizing the physical infrastructure and overseeing the purchase of grapes and production inputs. It also helps with wine sales later on. Additionally, it was determined that the implementation of quality control measures by laboratories contributes to increased reliability in wine production. In terms of organizational resources, control systems effectively facilitate the coordination of processes involved in grape and wine production planning. Additionally, informal methods of control help to spread the winery's culture and reputation in the market. Control systems enable wineries to have a better understanding of their financial resources, including investments, budgets, and expenses, throughout every step of the production process.

In conclusion, remuneration is a vital component, especially when it comes to managing human capital. Compensation within wineries is a way of engaging existing human resources through payments, salary incentives and benefits. Our research revealed that wineries typically utilize a payment system that aligns with the wine market. Regarding salary incentives, it was observed that wineries, in general, are not so well organized. The reason for this is that the sales sector is often outsourced or the wines are marketed and sold on the winery's premises. Salary benefits, in turn, keep workers engaged and enable them to carry out their work.

In addition, it was observed that the strategic resources available align with the organizational structure. Wineries have the ability to manage their resources when it comes to control systems. The caveat in this instance relates to assessing performance, which may offer more explicit direction for investments. Additionally, wineries can utilize the customer satisfaction survey as a means to pinpoint areas for improvement and guide future investments. Ultimately, pay is connected to the workforce and, in general, fulfills the job criteria of the wineries analyzed.

Final considerations

The objective of this study is to assess the competitive capabilities of human, physical, organizational, and financial resources within the fine wine production and processing sectors in Paraná. In order to achieve this goal, we utilized the Resource-Based View (RBV) along with

the VRIO Model to examine the various resources involved in the production of fine wine through qualitative, descriptive, and cross-sectional research.

Within the wine sector, each type of resource provides key strategic elements that contribute to value creation and competitiveness. Our research findings demonstrate the presence of path dependence, particularly in the domains of human, organizational, and physical resources. The research also uncovered a presence of causal ambiguity and social complexity in human resource dynamics, as the construction of these resources is not easily comprehensible. The pioneering aspects of strategic physical resources can greatly benefit wineries by providing optimal grape-growing conditions and convenient access to major cities. Additionally, it was found that strategic physical resources, such as geographic location, availability of raw materials, and technological capabilities, were associated with limited mobility and the ability to generate Ricardian profits.

In the wine sector, cultural and reputational resources play a crucial role and are closely linked to the long-standing traditions of grape winemaking, *terroir*, and winery branding. Furthermore, these resources are linked to heterogeneity, as they are unique, and imperfect immobility, as they cannot be reproduced in other wineries or circumstances. Ultimately, the fine wine industry relies heavily on strategic financial resources due to the high initial investments and longer-term returns, particularly for wineries that develop their own vineyards. In the interviews, participants pointed out that strategic financial resources can create obstacles to competition, as they are not easily accessible and play a crucial role in sustaining wineries and their suppliers' businesses.

Additionally, the strategic resources that were identified are connected to the organizational conditions of VRIO's "O" component, which encompasses its structure, control, and remuneration system, all of which are necessary for managing these resources. Overall, the wineries observed show a preference for informality, since they are family-run operations, relatively small in size, with a casual communication style and cultural atmosphere. Although less formal, there are control mechanisms in place to aid in the primary processes of grape and wine production. Corporations are not certified, which could be explored in order to gain a competitive edge. In addition, due to its status as a relatively new and continuously developing industry, the Paraná wine sector requires increased investment, research, and technological advancements to enhance grape cultivation in the region.

Despite being a great opportunity to enable the development of Paraná's wine chain, the REVITIS Project was very little discussed during the interviews. Both the wineries and their suppliers expressed appreciation for the state government's initiative to look at winemaking in

Paraná. The project is currently in its early stages and targets rural farmers who predominantly cultivate table grapes. As a result, this study did not fully explore the potential impact of the REVITIS project on the wine industry.

The study's theoretical value lies in its analysis of human, physical, organizational, and financial resources and their impact on competitiveness. Additionally, it aids in determining the strategic nature of these resources. As practical contributions, and considering the challenges that the fine wine chain in Paraná faces in establishing its competitiveness and growth on the national scene, examining and cultivating resources that can lead to a competitive edge can aid in the consolidation of the organization.

One limitation of this study is that it did not investigate all fine wine wineries in Paraná because some refused to participate. Moreover, we could not interview every supplier involved with the wineries being investigated, which could have supplied significant data to supplement the current information. In addition, it should be noted that the portrayals of strategic resources – value, scarcity, and difficulty to imitate – are influenced by the perspectives of the interviewees. This suggests that individuals may have cognitive restrictions when it comes to understanding the theory and scope. Similarly, the information pertaining to employee compensation is limited to responses from winery managers, making it impossible to compare data with employees.

As recommendations for future research, it is suggested to apply the VRIO model in studying the strategic potential and types of resources in other fine wine-producing regions, or with wineries in the region that produce table wines, aiming to compare the results. Furthermore, this research proposal could also include an examination of other production networks. An additional proposal is to extend the analysis of Peteraf's model, which can shed light on the factors contributing to competitive advantage, including the unique and fixed nature of resources, and the investigation of ex ante and ex post barriers to competition.

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