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## The role of internal resources in the competitive positioning of Sicilian wine cooperatives

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**Abstract:** The paper is an original article that uses accounting frameworks to determine what creates a competitive advantage in a cooperative business model. In particular, it investigates the influence of tangible, intangible and financial resources on the business performance of cooperatives operating in the Sicilian wine industry, with the RBV of the firms as a theoretical background. Using a linear regression model, our results show that tangible and financial resources are a source of a sustained competitive advantage. This study fills the gap existing in the strategic management literature related to the role of resources, tangible and intangible, in the cooperative system, providing both theoretical and practical implications.

**Keywords:** tangible resources; intangible resources; resource-based view; RBV; wine industry; competitive advantage; econometric model.

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## **1 Introduction**

Creating strategic alliances, in which firms combine some of their resources and capabilities to create a competitive advantage, has become a way to survive in a globalised market. In fact, these alliances, as emphasised by Lavie (2006), may cover complementary resources, when firms share distinct resources that are difficult for any given firm to accumulate in combination (in this case, we are referring to a complementary alliance), or similar resources, when firms combine the same resources to achieve a greater scale and an enhanced competitive position in their industry (called a pooling alliance). Through the creation of alliances and networks, small and medium-sized enterprises (SMEs) gain benefits including greater market access, better pricing and lower input costs (Lee et al., 2012; Tennbakk, 2004). Alliances can take different forms, including cooperatives. The latter, are more than an alliance of independent firms and they are characterised by:

- 1 a clear governance structure
- 2 a focus aiming to benefit the co-operators
- 3 the sharing of profits among the member-owners (Altman, 2015).

In the agri-food sector, the cooperative form of business remains a viable and necessary option, particularly for some small farmers, to overcome financial problems and the pressures of the market (market failure, social needs, etc.) and to increase the concentration of large-scale supply by the food distribution chains and the liberalisation of markets (Centner, 1988; Galdeano Gómez, 2006). Consequently, agricultural cooperatives provide a viable alternative to large-scale corporate farms as well as to independent small private farms, as they are able to achieve economies of scale and reduce transaction costs as well as large privately owned farms, overcome the limits resulting from the dimensional structure, such as low market power and develop a 'countervailing power', achieving better levels of business performance (Camanzi et al., 2017; Altman, 2015; Galdeano Gómez, 2006). As emphasised by Fazzini and Russo (2014) and Othman and Arshad (2015), although people associate on the basis of a common business interest, the most important goal of a cooperative is to maximise the profit to grow the business of all the members through efficient use and allocation of

resources, according to the pursuit of mutualistic principles among the members. Furthermore, the cooperative's creation, in addition to benefiting its members, increases the standard of living of the society, especially among the low and middle-income population (Khan et al., 2016). The social role of the cooperation is emphasised, for example, in the Italian legislation, which recognises the social function of cooperation in the character of mutuality and favours its growth (Repubblica Italiana, 1948), with the aim of achieving better firm performance and the development of the competitive level, enabling the cooperative to compete with large international firms. Beyond the purely economic and social aspects related to profit maximisation, XiangyuGuo (2010) finds that agricultural cooperatives are also important tools:

- 1 to promote the quality and food security of agri-food products
- 2 to promote market orientation
- 3 to lay the foundations for greater collaboration with other organisations.

In the wine industry, Coren and Clamp (2014), analysing the Wisconsin cooperatives, confirm a strong propensity of the cooperative to meet the needs of winegrowers, giving them satisfactory remuneration, creating added value, offering access to new markets, making the firms more competitive on the market and promoting greater integration of production and the implementation of common marketing strategies.

Despite these benefits, the agricultural world encounters some limitations in the creation of cooperatives. Martín Lopez and Ruiz Guerra (2011) point out that, in some cases, there is a shortage of resources, both tangible and intangible, difficulty in their allocation and a lack of capacity to remain on the market, which is reflected in the organisation's economic performance. These limitations are probably due to a lack of strategy and poor managerial skills, which therefore require investment in innovation and marketing and the creation of a company brand capable of achieving a competitive advantage (Asciuto et al., 2008; Crescimanno and Galati, 2012; Martín Lopez and Ruiz Guerra, 2011; Parlato et al., 2014).

In view of the information given, there are plenty of benefits of cooperation and especially the opportunity of individual SMEs to share distinct or similar resources that become strategic to create a competitive advantage. Mazzarol et al. (2013) assert that cooperatives established by small firms can offer substantial value to their membership through more suitable access to the resources, sharing knowledge and information that they would otherwise not be able to acquire outside the network.

Against this background, the aim of this study is to explore the role of internal resources, tangible, intangible and financial and their impact on the business performance of a sample of cooperatives operating in the Sicilian wine industry, using the resource-based view (RBV) of the firms as a theoretical basis. As suggested by Galbreath (2005), analysing the relationship of tangible and intangible resources and firm success together may help to validate the main prescription of the RBV more precisely. Few studies focus on the role of resources, tangible and intangible, in the cooperative system and on their economic and financial performance, despite the fact that firms' network or cooperative can be thought of as a source of inimitable and non-substitutable value and as a means to access inimitable resources and capabilities [Galati et al., (2000), p.207].

Sicily is chosen due to its importance among Italian regions in terms of the area devoted to vine cultivation, where cooperatives play an important role of strategic significance for the local economy (Chinnici et al., 2013; Di Vita et al., 2013; Galati et al., 2015). Sicilian wine cooperatives represent, in fact, a crucial resource in social and economic terms, especially for growers with small vineyard plots, allocating almost 80% of the regional production of grapes to winemaking (Galati et al., 2015; Sarnari, 2011). The relevant role of cooperatives in the wine industry is highlighted by several data provided by the Osservatorio della cooperazione agricola italiana (2016), according to which more than 42% of the domestic turnover of the wine industry (10.3 billion euros in 2015) is controlled by 498 cooperatives. Furthermore, the link with the social-base is strong, with more than 9,000 employees and 148,300 accessions. As suggested by Camanzi et al. (2017), it is widely recognised that large-sized firms, such as wine cooperatives, benefitting from scale and scope economies and coexist with a fringe of small firms (mainly, vertical integrated wineries). In particular, cooperatives are a means of preserving both the landscape and the social fabric by enabling small wine growers to continue to exist without threatening large producers (Delay et al., 2015) and ensuring good results in terms of competitiveness, business performance and export levels compared with those of privately owned firms (Pascucci, 2016).

The paper is organised as follows. A literature review on the RBV of firms applied to clustered firms and other forms of strategic alliance and the role of internal resources in gaining a sustained competitive advantage is presented in Section 2. Section 3 deals with the materials and the methodological approach adopted. The results are presented and discussed in Section 4. Finally, Section 5 highlights the main conclusions and implications and indicates, based on the main limitations, directions for further research.

## **2 Literature review**

The pivotal role of internal and external resources in the creation of a sustained competitive advantage is emphasised in some theoretical approaches in the field of strategic management as well as in the organisation theory. Among them, the RBV of the firm attracts prominent attention. The RBV theory asserts that the capacity of a firm to gain and sustain a competitive advantage is dependent on a unique bundle of resources (unique, valuable and difficult to imitate) at the core of the firm (Barney, 1991a; Conner and Prahalad, 1996; Wernerfelt, 1984). Furthermore, the theory refers to the heterogeneity of the resources, which means that not all the firms possess the same amount of resources and their imperfect mobility across the firms acts as a barrier to entry by competitors (Barney, 1991a). The opportunity to gain and sustain a competitive advantage is linked to the possibility of duplication on the part of the other competitors and it does not depend on the period during which a firm achieves a competitive advantage (Barney, 1991b). As Barney (1991b, p.102) emphasises, indeed, “a firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy.”

Resources can be classified into many different categories. Wernerfelt (1984) defines a resource as anything that could be thought of as a strength or weakness of a given firm and at a given time as tangible and intangible asset (brand names, in-house knowledge of technology, employment of skilled personnel, trade contracts, machinery, efficient producers' capital, etc.) that are tied semi-permanently to the firms. Subsequently, Barney (1991a) asserts that resources can be categorised into physical, human and organisational capital resources or alternatively, into tangible and intangible resources (Barney, 2001). In particular, Barney (2001) defines tangible resources as financial and physical resources measured through the firm's balance sheet, while intangible resources include a wide range of technological, human, reputational and organisational capital, which are difficult to imitate and replace and therefore are more likely to be a source of competitive advantage (Antoldi et al., 2013). According to Hall (1992, 1993), intangible resources fall into two categories, namely assets and capabilities or skills. These resources (tangible and intangible) together are enabled in the execution of a particular business process to guarantee a sustained competitive advantage.

The RBV theory was conceived to understand the main sources of a sustained competitive advantage for firms as independent entities. One area that remains underexplored is the RBV applied to strategic alliances, despite their spread in recent years as a strategy to maintain and improve the competitive advantage in some industries. As emphasised by Das and Teng (2000), the RBV seems to be particularly appropriate for examining strategic alliances, because firms essentially use the alliance to gain access to other valuable firm resources. Through networks or strategic alliances, SMEs can access and share expertise, knowledge and resources in ways that would be impossible independently (Miller and Ross, 2003). Furthermore, new resources can arise that are unique to the alliance and possibility unanticipated at the time of its establishment (Das and Teng, 2000; Gall and Schroder, 2006). Therefore, in this context, the RBV focuses on the pooling of resources both held by individual partners and created as a result of the alliance, with the aim of achieving mutually beneficial outcomes.

Previous research in the field of strategic management with a focus on the wine industry stresses the importance of strategic alliances and cooperative models and the influence of resources on the construction of a sustained competitive advantage. Several empirical studies use the RBV of firms not only to analyse an individual firm but also to understand the role of networks and clusters of firms, as a geographical concentration of inter-related firms, in an industry. Carneiro Zen et al. (2014) argue that the gathering into clusters provides access to resources that influence the internationalisation process of firms. In particular, their findings show that companies belonging to wine clusters with increasing experience in the international market recognise the importance of cluster resources (among which are the region's reputation, access to economic information related to external markets, access to skilled human resources, access to technical assistance, etc.) rather than natural resources (which are the sole property of the company and depend on its background) in support of internationalisation. In accordance with the previous results, de Oliveira Wilk and Fensterseifer (2003) identify the strategic resources and capabilities of a wine cluster in Southern Brazil, related to the skills emerging from collective actions and to the advantage related to the increasing technological incorporation, selective technification of production without losing the human 'touch' in winemaking, shared by a cluster in its effort to formulate sustainable competitive strategies. However, the same authors highlight the need to consider

simultaneously both the individual resources and capabilities and the collective and shared resources and capabilities of the whole cluster.

The benefits emerging through the sharing of resources among inter-related firms are also highlighted in comparisons of independent units and other forms of strategic organisations. As emphasised by Capitello and Agnoli (2009), cooperative integration into the wine industry has allowed not only supply concentration and the protection of the bargaining power but also the link with the market and the entrepreneurial growth of the members. In addition, Pestana Barros and Gomes Santos (2007) find that the greater efficiency of Portuguese wine cooperatives is related to resource sharing, scale economies and the organisational structure. A similar result emerges in Bretherton and Chaston's (2005) study of New Zealand wineries, which finds that over-performers had access to adequate resources that led to their sustainable competitive advantage and superior performance. More recently, Ferrer Lorenzo et al. (2018) analysing the competitive performance of individual firms, cooperatives and mercantile companies operating in the Spanish wine industry, found the importance of resources or technology to explain the best organisational performance capabilities mainly in the cooperatives and mercantile companies. In other words, cooperating with competitors to access resources (such as knowledge) proves to be beneficial for SMEs in the wine sector.

Based on the above discussion, this paper explores the following hypothesis:

H1 Internal resources are a source of a sustained competitive advantage in the cooperative business model.

Although, on one hand, the economic literature contains many references to the role of resources in clustered firms, on the other hand, very few studies concern the influence of tangible and intangible resources on the economic and financial performance of cooperatives operating in the wine industry. In line with the RBV theory, Amadiou and Viviani (2010) investigate the impact of intangible expenses on the financial performance of different forms of alliances in the French wine industry (corporations, cooperatives and unions of cooperatives). The authors find that cooperatives are more product and production oriented, showing the greater importance of tangible capital, which at a high level, contribute to increasing the profit and decreasing the risk more than intangible capital, the impact of which on the business performance is positive but smaller.

The same authors (Amadiou and Viviani, 2011) obtain a discordant result when analysing the role of intangible investments in two categories of French wine companies, specifically cooperatives and corporations, taking into consideration that the decision-making process may be different and the goal of financial performance may be perceived differently. The authors find that a low level of intangible expenses reduces the expected profit and increases the risk, supporting the strategy of investments in intangible expenses to increase the competitive position that presupposes an increasing concentration of the sector to allow companies to reach a critical size.

These intangible resources include social capital made up of "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilised through that network" [Nahapiet and Ghoshal, (1998), p.243]. The importance and the presence of this social capital make cooperatives different from independent small enterprises in terms of intangible resources. In addition, the correct use of tangible resources within the

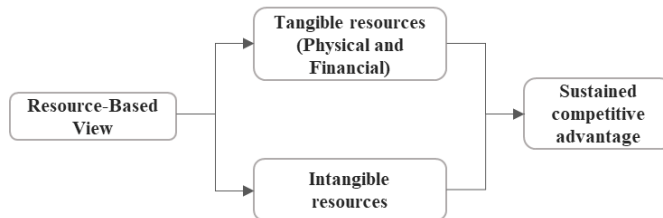
cooperatives can represent a valid business strategy that is able to achieve a competitive advantage in respect of the competitors and to neutralise the threats coming from the external environment, with a positive impact on the business performance and the financial performance of the organisation (Othman and Arshad, 2015). Nevertheless, the link between firm resources and financial performance is less direct in cooperatives than in individual firms or other forms of strategic alliance due to the fact that the co-operators are not directly remunerated by receiving part of the results achieved by the cooperative; the cooperative's performance affects the price paid to the co-operators and the financial resources of the cooperative (Amadiou and Viviani, 2011).

In light of this, the paper explores the following research hypothesis:

- H2 Intangible resources, measured in terms of promotion expenses, trademarks and licenses, are more likely to be a source of a sustained competitive advantage than tangible resources in the cooperative business model.

Figure 1 shows the theoretical framework adopted.

**Figure 1** Theoretical framework



### 3 Materials and methods

The study deployed a quantitative approach to data analysis. In particular, we collected data concerning the economic and financial indicators of wine cooperatives operating in Sicily. The data were extracted from the database of *Registro Imprese*, the business register of the Italian Chambers of Commerce, which contains comprehensive information about the legal position of each company and indicators of economic and business development. Specifically, these data concern seven indicators corroborated by previous studies (Amadiou and Viviani, 2011; Fiore et al., 2016; Othman and Arshad, 2015), available in the balance sheet and income statement, that represent the financial statements of businesses, chosen in this study as an expression of a cooperative's competitive position in the market and described below.

- Total reserve includes the sources of internal funding, coming directly or indirectly from the entities constituting the company and consists of social capital, reserves and profits/losses.
- Gross profit is the profit of a company after deducting the costs associated with making and selling its products or the costs associated with providing its services.

- EBITDA stands for earnings before interest, taxes, depreciation and amortisation; it is an indicator of a business’s financial performance and measures cash earnings without accrual accounting, cancelling tax jurisdiction effects and the effects of different capital structures. It is a very interesting operating profit measure because, differently from the interest expense (which is relatively stable and fixed), the EBITDA can vary from period to period and remove the impact of various financial policies.
- Current assets represents the value of all assets (cash and cash equivalents, accounts receivable, inventory, marketable securities, prepaid expenses and other liquid assets) that can be converted into cash within one year.
- Financial fixed assets are resources related to the business participation in companies and organisations operating in other synergic sectors.
- Intangible fixed assets are non-physical resources with utility in the long-term that provide value or a marketplace advantage (promotion and marketing expenses, software licenses, trademarks, industrial patents, intellectual property rights, etc.).
- Tangible fixed assets are physical resources that have long-term existence related to the plants, types of machinery, properties and other equipment used in the operation of the cooperatives.

In this study, we considered data referring to the years 2015 and 2016, the most recent periods available for each cooperative, excluding all the balance sheet and income statement data available for the previous period. As a consequence, out of a total of 51 wine cooperatives operating in the Sicilian wine industry, the sample consisted of 39 units. The descriptive statistics of the economic and financial indicators related to the sample studied are outlined in Table 1.

**Table 1** Descriptive statistics of the variables included in the model

<i>Variables</i>	<i>Variable acronym</i>	<i>Mean</i>	<i>Std. deviation</i>
Total reserve	TR	2,018,278.85	3,507,413.691
Gross profit	GP	120,762.59	267,793.686
EBITDA	EBITDA	455,548.00	668,781.959
Current assets	CA	5,306,457.97	9,874,031.932
Financial fixed assets	FFA	96,856.31	362,579.815
Intangible fixed assets	IFA	163,547.08	596,576.414
Tangible fixed assets	TFA	2,288,426.03	3,499,421.619

To analyse the impact of tangible and intangible resources on the cooperative performance, a linear multiple regression equation was formulated (Figure 1). Three models were performed with total reserve, gross profit and EDIBTA as dependent variables and current assets, financial fixed assets, intangible fixed assets and tangible fixed assets as independent variables. To avoid problems in the results related to the dimensional scale of the variables, the elaborations were performed on normalised values. The likelihood ratio test (LRT) shows for each model a value greater than one (8.65), guiding the choice towards a log-linear function that can be specified econometrically as:



$$\ln Perform = \beta_0 + \beta_1(CA) + \beta_2(IFA) + \beta_3(TFA) + \beta_4(FFA) + \varepsilon$$

where *Ln Perform* is based on three types of performance measures, namely total reserve, gross profit and EDIBTA,  $\varepsilon$  represents the stochastic error term, *CA* is the current assets and *IFA*, *TFA* and *FFA* refer to intangible, tangible and financial fixed assets, respectively.

The condition index was used to verify any collinearity problems between the variables included in the proposed models, showing that this value in the overall cases falls into a satisfactory range, between 1.000 and 6.618. However, to exclude multi-collinearity problems, we considered an additional collinearity index and in particular, the eigenvalue. According to the latter index, the variables included in our models are not affected by a collinearity problem, taking into consideration that none of the individual values is close to zero but lies between 2.648 and 0.060.

#### 4 Results and discussion

Table 2 presents the effect of each independent variable, estimated through a regression analysis, on three performance measurements. The adjusted R-squared is equal to 0.385, 0.425 and 0.550 for the three performance variables, total reserve, gross profit and EBITDA, respectively. Even the F-test value and its significance for each of the proposed models is an indicator of a significant regression.

**Table 2** Results of the adopted models

<i>Dependent variables</i>	<i>Total reserve</i>	<i>Gross profit</i>	<i>EBITDA</i>
Constant	-1.000E-013 (0.000)	-1.000E-013 (0.000)	-1.000E-013 (0.000)
Current assets	0.650 (6.401)*	-2.187 (-6.770)*	-0.442 (-2.767)*
Financial fixed assets	-0.246 (-4.590)*	1.259 (7.380)*	0.452 (5.356)*
Intangible fixed assets	0.155 (2.213)**	0.736 (3.313)*	0.347 (3.152)*
Tangible fixed assets	0.295 (4.628)*	1.330 (6.560)*	0.966 (9.634)*
<i>Indices</i>			
<i>R-squared</i>	0.966	0.657	0.916
<i>Adj. R-squared</i>	0.962	0.617	0.906
<i>F</i>	242.942*	16.314*	92.841*

Notes: \*Significant at 1%, \*\*significant at 5% and \*\*\*significant at 10%. Number of cooperatives = 39. Numbers in parentheses are t-statistics.

The results reveal a negative and significant relationship of the current assets variable only for performance measured in terms of gross profit and EBITDA, pointing out that the cooperatives are not able to use their circulating assets to maximise their business economic and financial performance. On the contrary, the relationship between current assets and total reserve is positive but not significant, emphasising that these cooperatives are able to use their current assets to safeguard their organisation, covering possible future losses.

Concerning the internal resources (tangible, intangible and financial), our findings reveal that only tangible and financial resources contribute to improving the cooperative

performance, partially supporting H1. In particular, tangible fixed assets have a positive and significant relationship with the three performance measures showing that equipment (land, buildings, plants, machinery and industrial and commercial equipment) has a positive impact both on the total reserve and on the cooperative revenues. This result is in line with the findings of Amadiou and Viviani (2011, 2010), according to which higher levels of tangible expenses increase the profit and improve the economic and commercial performance of French wine cooperatives. Investments in the construction and acquisition of physical assets positively and significantly affect the cash flow, which includes the pure income (EBITDA) and the working capital management (Chaddad et al., 2005). As is well known, tangible resources play a pivotal role in the construction of a competitive advantage, taking into account that they provide an individual firm or cooperative with the capability to generate new processes/products faster than its competitors (Hyvönen and Volk, 1997). Furthermore, Othman and Arshad (2015) confirm this statement, highlighting that the use of tangible resources within cooperatives allows them to gain a competitive advantage over their competitors and to neutralise threats and challenges coming from the external environment, with a positive impact on the business and financial performance. The relationship between intangible resources and gross profit and EBITDA is also positive but not significant. This result shows that the expenses incurred by Sicilian cooperatives operating in the wine industry for research, development, promotion and marketing, concessions, licenses, trademarks and similar rights contribute to increasing the business revenues. A high level of intangible expenses, as found by Amadiou and Viviani (2011), seems to be highly desirable, with a positive impact on profit. The choice of the cooperatives to invest in intangible resources, such as promotion, is linked to a product policy adopted by the cooperatives as well as to the cooperatives' branding strategies, which are in line with the market demand and the distribution channels (Begalli et al., 2014). Nevertheless, the lower impact of intangible resources compared with tangible resources, as shown by the respective coefficients of the regressions and the values of the t-statistics, does not support the H2 research hypothesis. This evidence, however, is in line with the results of the study on the impact of intangible expenses on financial performance in the French wine industry by Amadiou and Viviani (2010), according to which cooperatives with a greater orientation towards production show a greater influence of tangible resources on business performance.

Finally, concerning the financial fixed resources, the relationship with the performance measures is positive and significant with gross profit and EBITDA, showing their contribution to improving the business revenue, but negative with total reserve, taking into account that these resources are employed in other activities external to the cooperative. The positive impact of financial resources addressed to the establishment of relationships between the cooperative and the external bodies, as found by Khan et al. (2016), contributes to enhancing its performance measured in terms of profit growth, sales growth, ROA and ROS.

Overall, our findings show that adequate use of resources is able to contribute positively to the business performance and to obtain a greater competitive advantage than the competitors. In fact, wine cooperatives, in addition to encouraging the concentration of supply and the protection of contractual power, favour the sharing of resources, the achievement of economies of scale and the best organisational structure, allowing better organisational competitiveness and productive efficiency compared with private wine producers (Capitello and Agnoli, 2009; Pestana Barros and Gomes Santos, 2007).

## 5 Conclusions

The paper is an original article that uses accounting frameworks to determine what creates a competitive advantage in a cooperative business model. In particular, the research assesses the influence of internal resources on the economic and financial performance of cooperatives in the Sicilian wine industry. In the economic literature, there is little empirical evidence on the role of internal resources and particularly that of tangible and intangible resources in cooperatives' performance. This study tries to fill this gap by analysing the impact of internal resources (tangible, intangible and financial) on the economic and financial performance of cooperatives operating in the Sicilian wine industry. Our findings show that tangible and financial resources rather than intangible assets exert an important influence on the business performance of Sicilian wine cooperatives. These resources, in fact, are able to affect positively each of the three performance indicators considered; as found in previous empirical research, in this study, an important role emerges mainly for tangible resources compared with intangible ones. This means that Sicilian wine cooperatives should increase their investments in intangible resources, which represent a guarantee to reach the best economic and financial performance, according to several pieces of empirical evidence. Such investments, however, require a reorganisation effort of cooperatives with particular regard to the creation of specific areas for the management of resources.

This study provides both theoretical and practical implications. From a theoretical point of view, this study contributes to enriching the empirical evidence on the role of firms' internal resources (tangible, intangible and financial) and their impact on the business performance. From a managerial perspective, the results obtained can provide valid support for managers and members of cooperatives during their strategic decision-making about the allocation of existing resources to increase their business performance. In particular, the stronger influence of tangible resources could support a strategy of investment focused on these resources, which can help to increase the competitive position of Sicilian wine cooperatives in the marketplace.

One of the main limitations of this study is related to the fact that it focused only on Sicilian wine cooperatives, which does not allow the empirical findings to be extended to other contexts and other agri-food sectors. This could allow the validation of the main prescription of the RBV approach. Furthermore, our results should be read with caution, taking into account that the economic performance of a cooperative depends on various characteristics, both the physical characteristics of the organisation and those related to the quality of the wine produced and marketed. A recent study carried out by Galati et al. (2015) on Sicilian wine cooperatives shows that the main structural and management problems in cooperative systems are mainly due to conflicts between the grape growers and the cooperative to which they adhere.

Bearing in mind these limitations, future studies should be conducted in other regions to compare the influence of internal resources on cooperatives' business performance both in the wine industry and in other agri-food sectors and to consider other economic and financial variables. Finally, an interesting line of research to be developed, starting from this work, could be to study the effects of tangible and intangible resources on the firm performance in two different business models, cooperatives and investor-owned businesses.

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