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ABSTRACT

The paper focuses on the comparative analysis of the Italian companies' performance in the wine sector. Using the database from the Food Industry Monitor, which tracks 850 companies operating in the Food and Beverage sector, we analyze the performance of 183 wine companies from 2009 to 2023. The Italian wine sector constitutes a privileged observatory for the study of business models, being characterised by a competitive structure polarized between many small companies and a few large enterprises covering most of the production. We identify three clusters associated to the corresponding business models: Cooperatives, Integrated Producers, and Traders. Traders emerge as the most successful cluster in terms of profitability, measured through the ROS and ROIC. The Integrated Producers, thanks to an efficient integration between production and commercialization, also exhibit good performances, while Cooperatives are borne by a high debt ratio and lower profit margins. An ANOVA and the Tukey post-hoc test, confirmed the greater effectiveness of the Trader and Integrated Producer business models compared to that of Cooperatives in delivering higher ROIC and ROS levels. The results suggest that a growth-oriented business model and effective capital management may lead to a competitive advantage in the sector. In conclusion, the Traders and Integrated Producers emerge as the most competitive business models, whereas Cooperatives should undergo strategic changes to ensure sustainable growth and enhanced competitiveness.

L'articolo si concentra sull'analisi comparativa delle performance delle aziende italiane nel settore vitivinicolo. Utilizzando il database del Food Industry Monitor, che tiene traccia di 850 aziende operanti nel settore Food and Beverage, analizziamo le performance di 183 aziende vinicole dal 2009 al 2023. Il settore vitivinicolo italiano costituisce un osservatorio privilegiato per lo studio dei modelli di business, essendo caratterizzato da una struttura competitiva polarizzata tra molte piccole imprese e poche grandi imprese che coprono la maggior parte della produzione. Identifichiamo tre cluster associati ai corrispondenti modelli di business: Cooperative, Produttori Integrati e Commercianti. I trader emergono come il cluster di maggior successo in termini di redditività, misurata attraverso il ROS e il ROIC. Anche i Produttori Integrati, grazie ad un'efficiente integrazione tra

produzione e commercializzazione, mostrano buone performance, mentre le Cooperative sono sostenute da un elevato rapporto di indebitamento e da minori margini di profitto. Un'ANOVA e il test post-hoc di Tukey, hanno confermato la maggiore efficacia dei modelli di business del Trader e del Produttore Integrato rispetto a quello delle Cooperative nel fornire livelli di ROIC e ROS più elevati. I risultati suggeriscono che un modello di business orientato alla crescita e una gestione efficace del capitale possono portare a un vantaggio competitivo nel settore. In conclusione, i Commercianti e i Produttori Integrati emergono come i modelli di business più competitivi, mentre le Cooperative dovrebbero subire cambiamenti strategici per garantire una crescita sostenibile e una maggiore competitività.

Keywords: Wine sector, business model, performance, cluster analysis .

1 – Introduction

The Italian wine industry is a vital sector in the national food and beverage industry, boasting a rich history that spans millennia. This legacy is built upon the dedication of countless generations of winemakers, contributing to the diverse tapestry of local winemaking traditions (G. Ghilardoni, 2020). Today, the industry is characterized by a dichotomy between many small producers and a few dominant companies that control a significant portion of production (E. Pomarici et al., 2021).

Italy currently holds the position of the world's leading wine producer by volume, accounting for approximately 19% of the global market share, exceeding the historical average of the past decade (Gazzola et al. 2021). Italian winemakers have also made significant strides in international markets, surpassing France as the main supplier in key regions (Morrison and Rabellotti 2017). It then becomes natural to wonder what drove such a success. Despite the numerous scientific contributions on the Italian wine sector, it remains unclear what is the relationship between the adopted business model and firms' economic performance. In this research we aim at filling this gap by discussing the business models employed by Italian wine companies and studying how these models affect their performance.

While the concept of "business model" has been explored in academic literature since Bellman et al. (1957), a universally accepted definition remains elusive. Although there is some agreement regarding the central features, the definitions often exhibit a partial nature (Bernd W. Wirtz et al., 2015). Some scholars, such as Osterwalder and Pigneur (2010), define business models through a set of key elements, including customers, offering, infrastructure, and financial sustainability. Others, like Massa et al. (2017), emphasize the dynamic and evolving nature of successful business models, highlighting the importance of adaptation and innovation in response to changing market conditions.

However, research specifically investigating business model innovation in the agri-food sector, and particularly within the wine industry, is limited. Theoretical studies are at an embryonal stage, while the empirical ones have either been qualitative or, if quantitative, tend to focus on comparative analyses of a small number of wineries (Tell et al., 2016), such as those by Ferrer-Lorenzo et al. (2019) and Aiassa et al. (2018), or dig into the success factors of cooperative firms, as seen in the work of Ferrer et al. (2019), Schamel (2018), and Storchmann (2018). They also tend to have a strict geographical focus, particularly the ones based on Italy and Spain (Bono et al., 2012).

Pezzillo Iacono, Esposito, Mercurio, and Martinez (2016) examined value creation and coordination mechanisms within wine cooperatives, while Giraud (2014) explored vertical

integration and outsourcing in the French wine industry. More recently, Garzia, Gentile, and Slerca (2024) analyzed dominant business models in the Prosecco industry. While these studies provide valuable insights, they often focus on specific aspects of the industry or particular regions, leaving a gap in the understanding of the broader relationship between business models and performance across the Italian wine industry as a whole.

This research aims to bridge this gap by addressing the following key questions:

- *What are the prevalent business models employed by Italian wine companies?*
- *How do these models affect their financial and market performance?*
- *Which business models are associated with the highest levels of success in the Italian wine industry?*

To answer these questions, this study will conduct statistical analyses to identify significant differences in the average performance of companies utilizing various business models. By providing a deeper understanding of the relationship between business models and firm performance, this research aims to offer valuable insights for both academics and practitioners in the Italian wine industry, potentially enabling wine producers to make more informed decisions about their business strategies and contributing to the overall competitiveness of the sector.

We exploit a newly collected representative sample of 183 Italian wine companies covering 15 years, from 2009 to 2013. The data include firms from the whole Italian territory and well speak for the complexity of the adopted business models. Firms were grouped into three cluster, which we define *cooperatives* (i.e. cooperative companies specialized in the transformation and commercialization of wine), *integrated producers* (i.e. companies that are integrated upstream into vineyard cultivation and management) and *traders* (i.e. companies that purchase wine and are exclusively involved in bottling and commercialization, with a strong focus on exports).

Our results suggest that Traders are able to pursue a better performance in terms of profitability, measured through ROS and ROIC, thanks to particularly effective exploitation of both financial and market opportunities. Moreover, a statistically significant difference in ROIC and ROS emerges across the clusters, highlighting a greater effectiveness of the Trader and Integrated Producer business models relative to the Cooperative one.

The article is organized as follows: section 2 describes the data collection process and the methodology used to analyze our data sample; section 3 presents the empirical analyses and discusses the results; section 4 concludes and reflect on future researches.

2 – Data and Methodology

The *Food Industry Monitor* is an observatory that covers approximately 71% of Italian companies operating in the food and beverage sector. It analyzes the performance of 850 companies across 15 sectors and annually collects data on various aspects, including performance metrics, medium-term growth and profitability prospects, determinants of operating profitability, productivity, and growth. Starting from this database, companies classified under the wine sector were selected. Financial data for these companies were collected for the period between 2009 and 2023, providing a comprehensive 15-year analysis. The sample includes 183 companies with a total turnover exceeding nine billion euros.

From a methodological perspective, the research was structured into the following steps:

1. SAMPLE SELECTION: 183 companies were selected from the Food Industry Monitor database and restricted-access financial databases. Active companies operating in the wine sector were identified through a dual verification process based on ATECO activity codes and official company websites.
2. IDENTIFICATION OF BUSINESS MODELS: the selected companies underwent further qualitative analysis based on their official websites and the notes to their financial statements. This process enabled the classification of companies into three clusters based on their business models, as shown in Table 1.:
   - *Cooperatives:* cooperative companies specialized in the transformation and commercialization of wine; some are also integrated into production.
   - *Integrated producers:* companies characterized by a business model that is integrated upstream into vineyard cultivation (management).
   - *Traders:* companies that purchase wine and are exclusively involved in bottling and commercialization, with a strong focus on exports.

Table 1 – Composition of firms by cluster (year 2023)

Sector	Frequencies	Percent	Total revenues	% of total revenues
Cooperatives	43	23%	3.385.975.189	36%
Producers	81	44%	2.772.185.780	30%
Traders	59	32%	3.150.656.984	34%
TOTAL	**183**	**100%**	**9.308.817.953**	**100%**

3. PERFORMANCE ANALYSIS: financial indicators were computed for each cluster to analyze the economic performance of the companies over time. Statistical analyses, including ANOVA and post hoc tests, were conducted to evaluate the impact of the business models on economic performance.

This methodological approach has made it possible both to identify a representative sample of the Italian wine sector and to thoroughly examine the interaction between the identified business models and performance within the sector. The ultimate goal is to identify the best performing business models in the Italian wine industry.

3 – Empirical analysis and results

3.1 – *Financial variables data*

As variables of interest, we chose several financial measures to assess the performance of companies across four profiles: growth, profitability, productivity, and financial structure. The indices used are defined as follows:

To analyse *growth*, we used:

- the rate of change in revenue, which represents the percentage change in revenue from year t0 to year t1.

$$\frac{revenue\ (t1) - revenue\ (t0)}{revenue\ (t0)}\ X\ 100$$

To analyse *profitability*, we used:

- ROS (return on sales) is the ratio of operating profit to sales revenue.

$$\frac{operating\ profit\ (EBIT)}{sales\ revenue} \times 100$$

- ROIC (return on invested capital) is the ratio of operating profit to invested capital.

$$\frac{operating\ profit\ (EBIT)}{invested\ capital} \times 100$$

To analyse *financial structure*, we used:

- The debt ratio is the ratio between the company's total debts and its equity.

$$\frac{Total\ debt}{Shareholders'\ equity}$$

- The Net Financial Position/EBITDA ratio is an indicator that allows one to assess a company's ability to repay its net debt with its operating cash flows.

$$\frac{NFP}{EBITDA}$$

To analyse *productivity*, we used:

- The ratio of Revenues/Fixed Assets is an indicator that allows one to assess the productivity of a company in relation to its fixed assets to generate revenue.

$$\frac{Revenues}{Fixed\ assets}$$

Outliers and missing data were identified. The outliers were normalized using the Winsorization methodology, meaning that all outliers were replaced with the 95th and 5th percentile values. Missing data points were imputed using the value from the previous year.

For the ANOVA analysis, we considered the average value of the aforementioned ratio.

3.2 – *Sector performance*

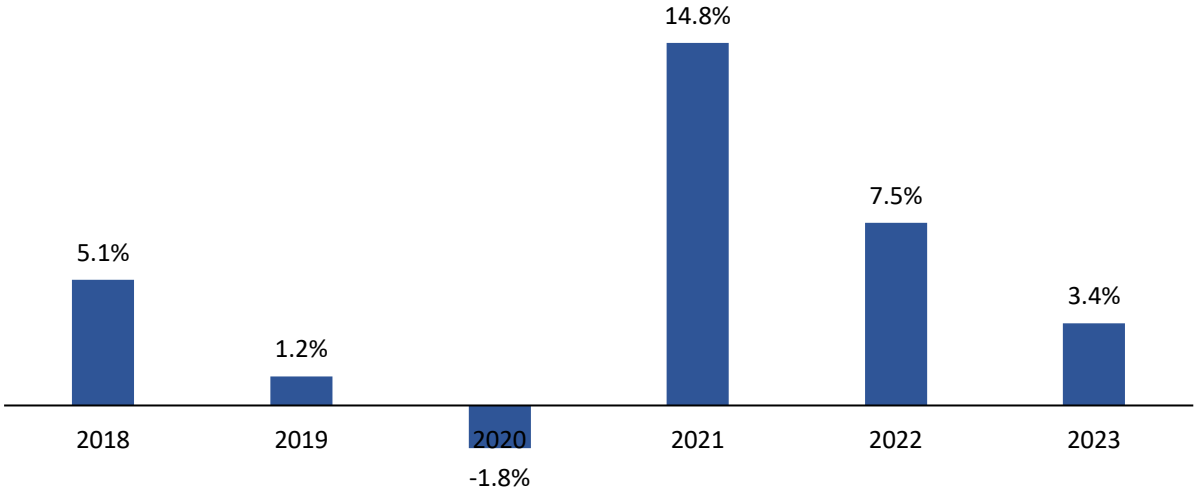
3.2.1 – Growth

The analysis of revenue growth (Graph 1) highlights the long-term resilience of the wine sector's growth. The year 2020 was marked by a sharp decline of -1.8%, caused by the global crisis triggered by the Covid-19 pandemic.

However, 2021 saw the sector's recovery, with a remarkable growth rate of 14.8%: an extraordinary figure, partly driven by the rebound in post-pandemic demand. From 2022

onwards, the sector's growth has continued at positive rates, confirming the strength of the industry in terms of revenue growth.

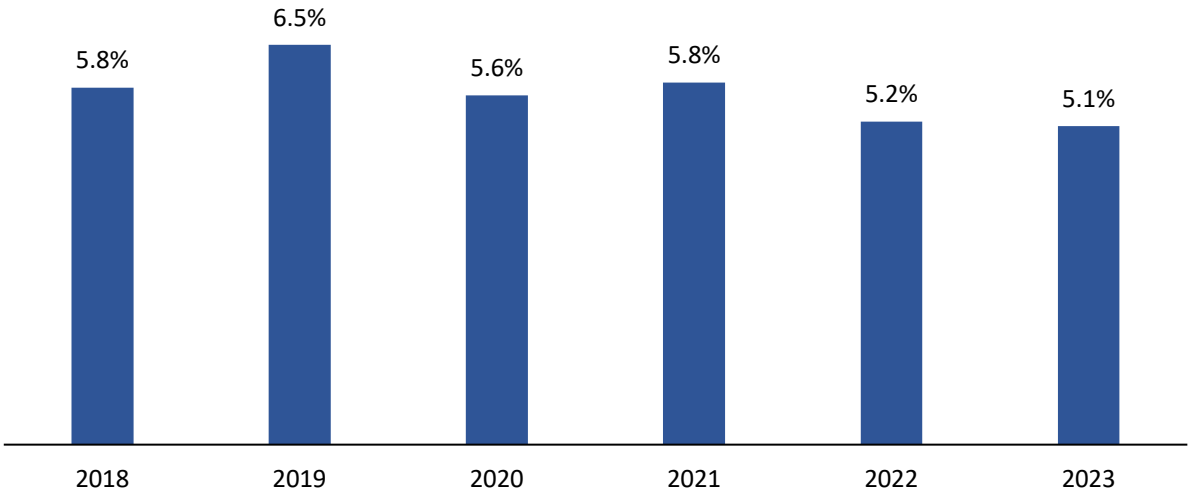
Graph 1 – Revenue Growth



3.2.2 – Profitability

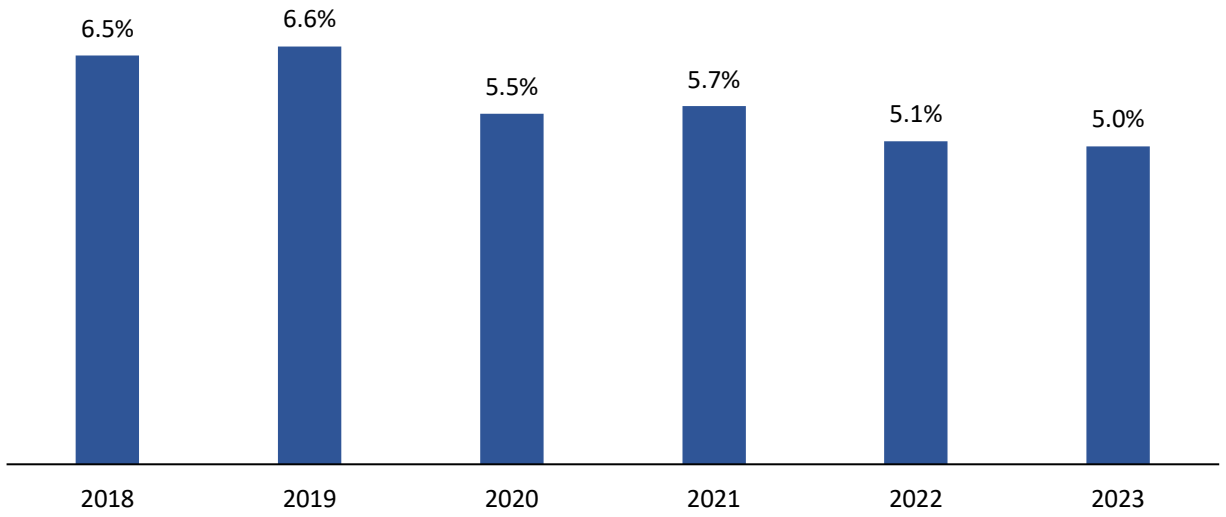
The profitability analysis shows a stable trend throughout the period considered. The ROS (Graph 2) remains at values above 5%. Even 2020 represents a substantially positive year, with a value of 5.6%, confirming the strong resilience of companies in terms of profitability. The year 2023, the latest available for this study, also confirms a positive outcome for companies in the wine sector, with a ROS of 5.1%.

Graph 2 – Return on sales (ROS %)



The ROIC (Graph 3) also confirms a positive long-term trend, with a pattern similar to that of ROS. From 2020 onwards, a reduction in ROIC can be observed, reaching 5.5%. Despite the decline in 2020, ROIC has maintained satisfactory levels above 5% throughout the period considered, confirming the financial solidity of the companies in terms of profitability.

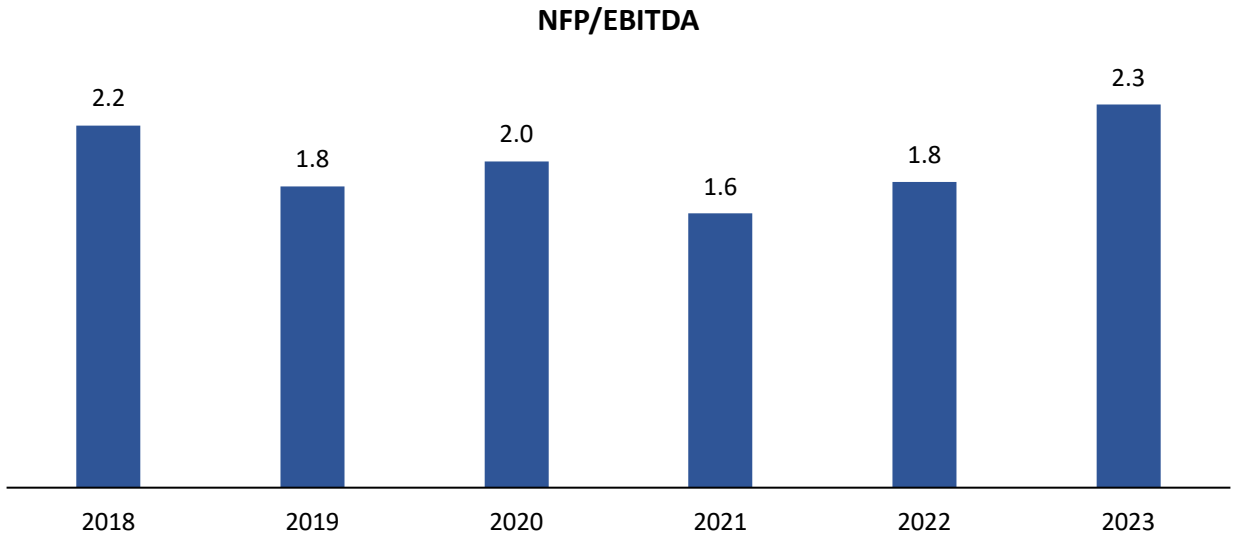
Graph 3 – Return on invested capital (ROIC %)



3.2.3 – Financial structure

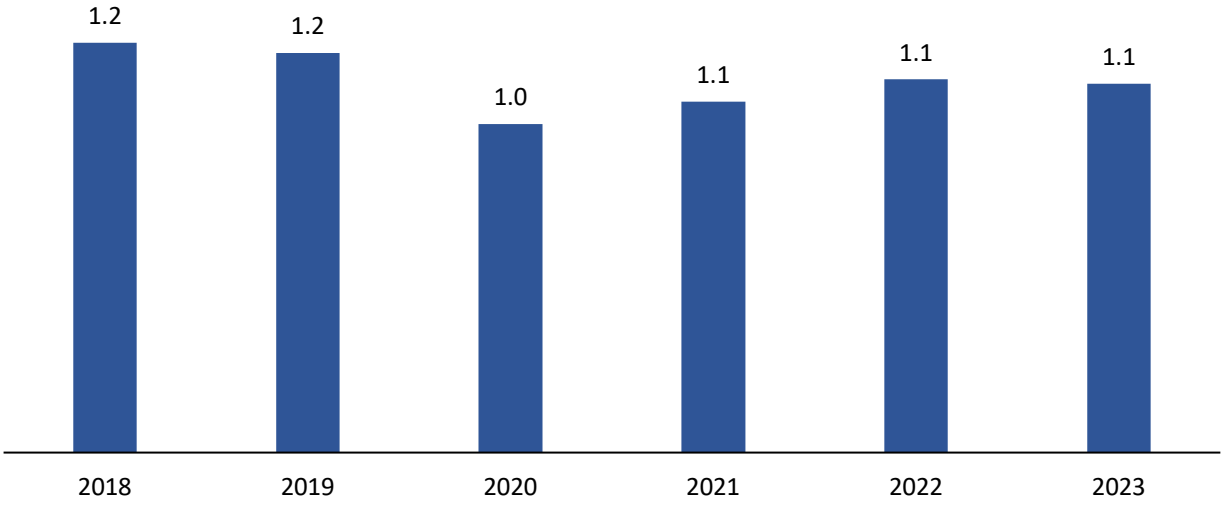
The analysis of the Net Financial Position on EBITDA (NFP/EBITDA) (Graph 4) shows a decreasing trend over the period considered, indicating an improvement in financial health and reduced dependence on debt relative to operational earnings. In 2023, there is an increase in the ratio, reaching 2.3, which marks the highest value of the period considered. Despite the increase, the NFP/EBITDA ratio remains relatively moderate, suggesting that companies in the wine sector are maintaining a manageable level of debt compared to their operational earnings.

Graph 4 – Net Financial Position on EBITDA



Regarding the debt ratio (Graph 5), a consistent trend is observed throughout the period considered, with average values around 1.1. The stability in the debt ratio values indicates that companies in the wine sector have a stable financial structure, and, given the stability even in 2020, they are resilient and capable of absorbing periods of crisis within the sector.

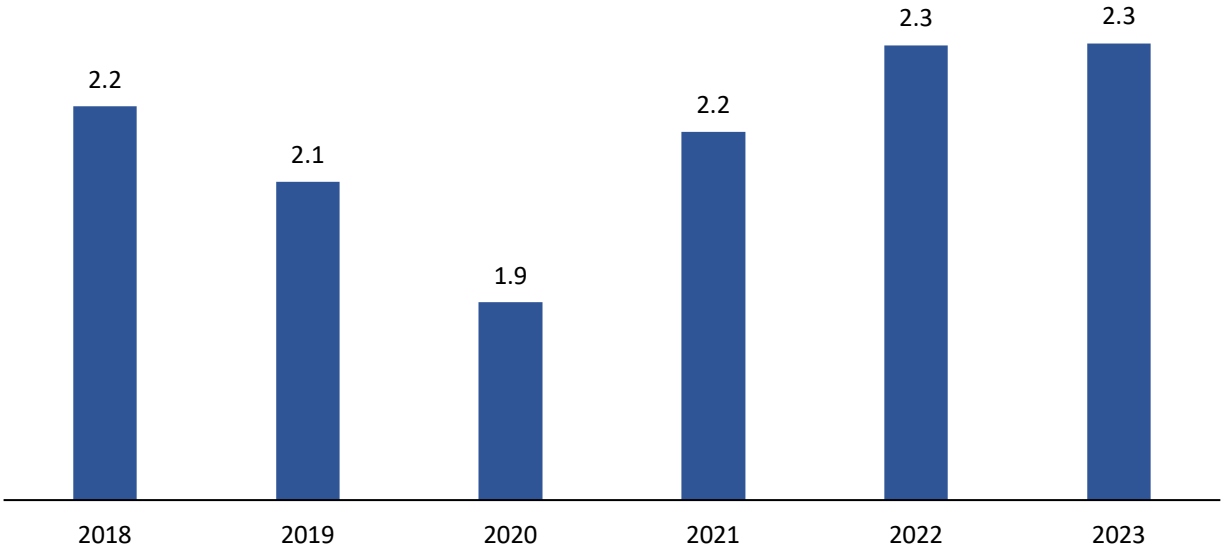
Graph 5 – Debt ratio



3.2.4 – Productivity

The analysis of the Revenues on Fixed Assets ratio (Graph 6) shows an increasing trend over the period considered. In 2020, the lowest value of the period was recorded, mainly due to the economic crisis caused by the Covid-19 pandemic. After 2021, the ratio returned to 2.2, indicating a recovery in the ability of companies to effectively utilize their assets to generate revenue. This recovery was further consolidated in 2022 and 2023, with the ratio increasing to 2.3 in both years, marking the highest value of the period.

Graph 6 – Revenues on Fixed Asset

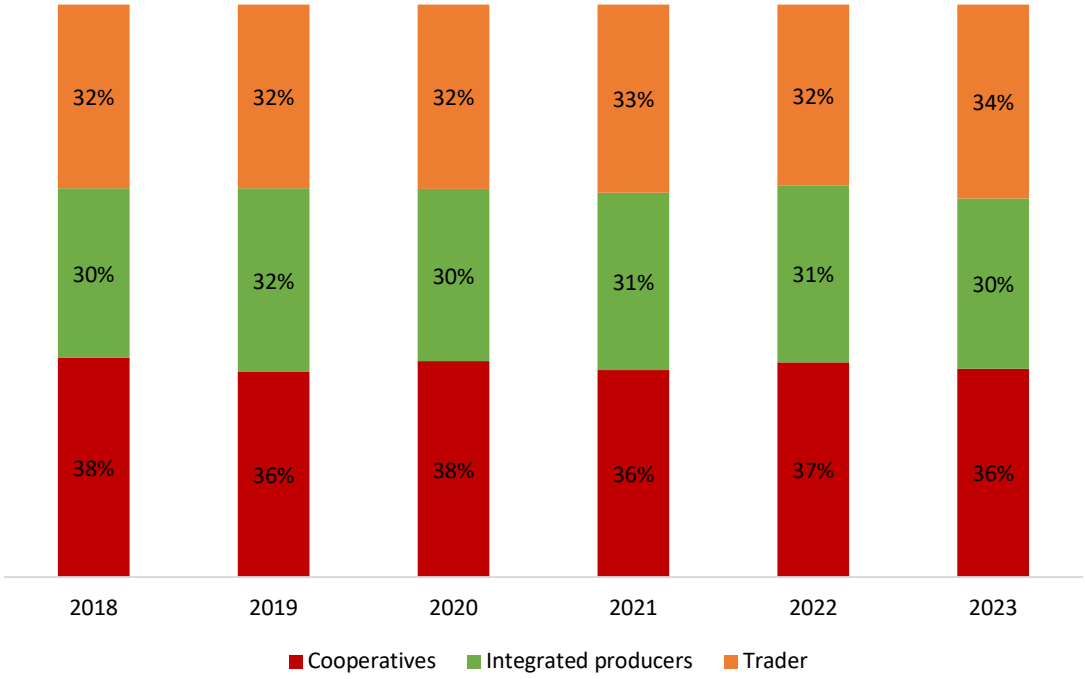


3.3 – Cluster performance analysis

From the analysis of the evolution of market shares by cluster (Graph 7), it emerges that Cooperatives maintain the highest market share, although slightly decreasing, from 38% in 2018 to 36% in 2023. Integrated Producers remain stable around 30-32% throughout the period, while Traders show an increase, rising from 32% to 34% over the same period. The analysis of market

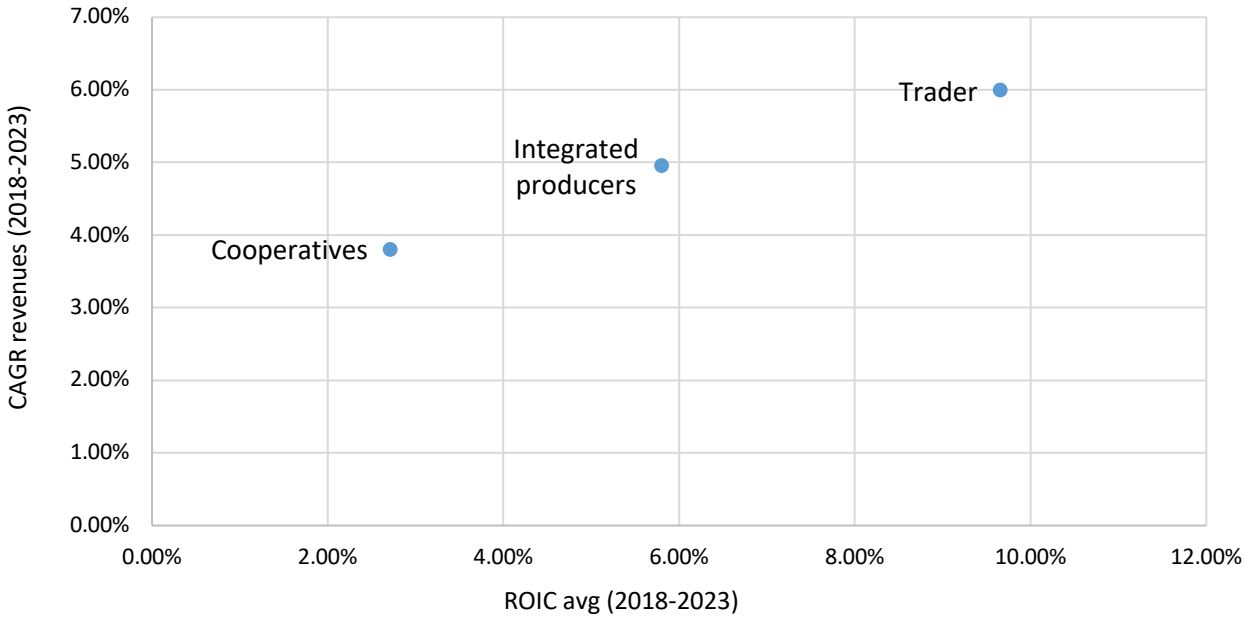
shares suggests that Traders are assuming a more central role within the sector in terms of revenue.

Graph 7 – Market share by cluster (revenues)



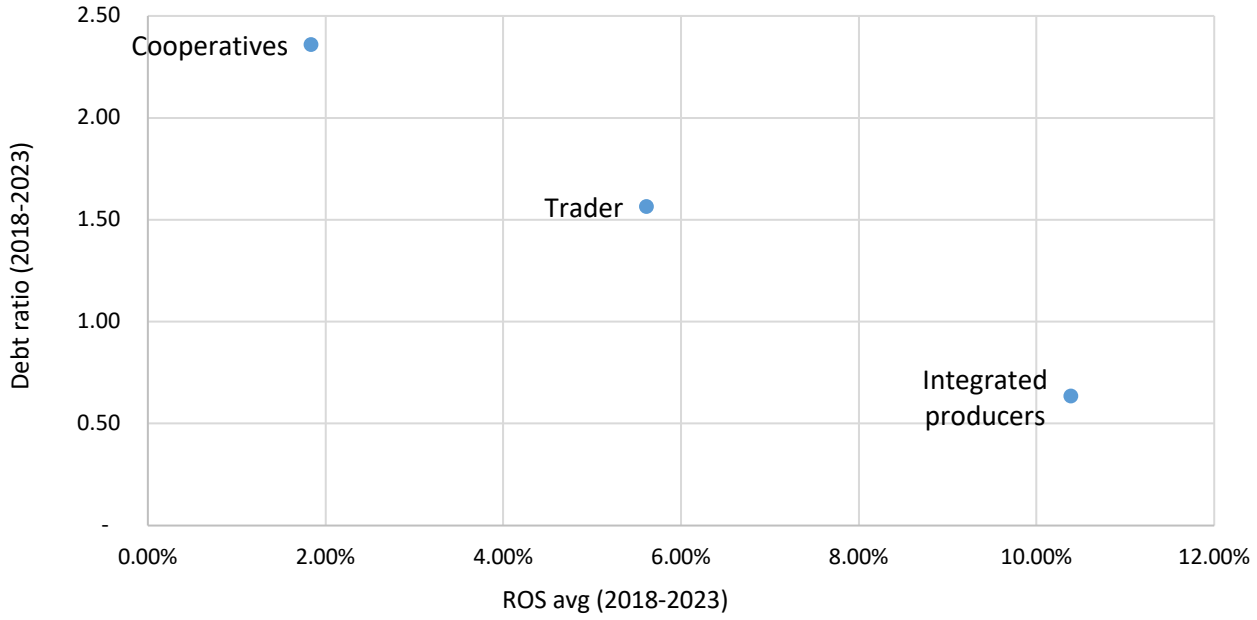
Analyzing the relationship between the compound annual growth rate (CAGR) of revenues and the average ROIC for the period 2018-2023, it is observed that Cooperatives show relatively low values for both ROIC and CAGR of revenues (Graph 8). Integrated Producers maintain an intermediate position, while Traders achieve the best performance in both profiles, combining solid revenue growth with greater efficiency in managing invested capital.

Graph 8 – Scatter plot, Growth vs ROIC



Regarding the relationship between the average ROS and the debt ratio (Graph 9), comparisons show that Cooperatives have a high debt ratio and relatively low margins, indicating a greater reliance on debt compared to the profitability generated from sales. Traders occupy an intermediate position in terms of both profitability and financial leverage, while Integrated Producers stand out for having the highest average ROS, exceeding 10%, and a relatively low debt ratio, below 1.0, suggesting strong efficiency in managing sales and lower dependence on debt.

Graph 9 – Scatter plot, ROS vs debt ratio



The relationship between the compound annual growth rate (CAGR) of revenues and the debt ratio (Graph 10) shows that Cooperatives have a relatively high debt ratio, associated with limited revenue growth.

This indicates a continued reliance on debt that does not translate into significant revenue growth. Integrated Producers, on the other hand, show a lower debt ratio, around 0.5, and higher revenue growth, with a CAGR close to 5%.

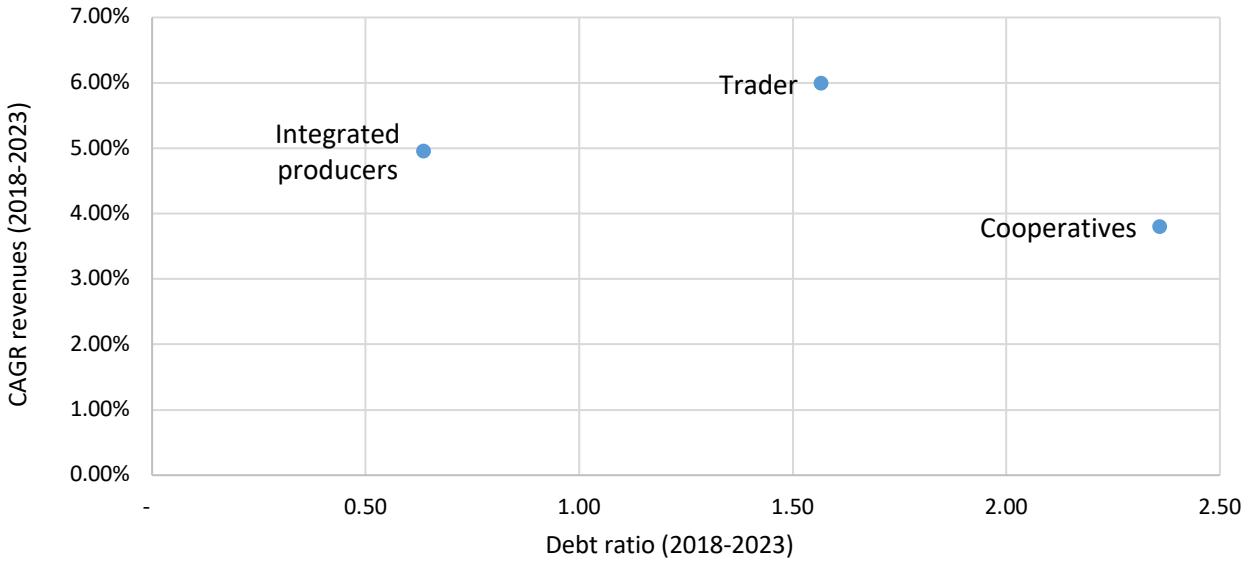
Traders show an optimal balance between debt ratio and revenue growth, with a debt ratio of about 1.5 and a CAGR exceeding 6%.

This indicates that Traders have successfully leveraged their level of debt to generate significant growth, highlighting a business model that effectively combines financial leverage with market expansion.

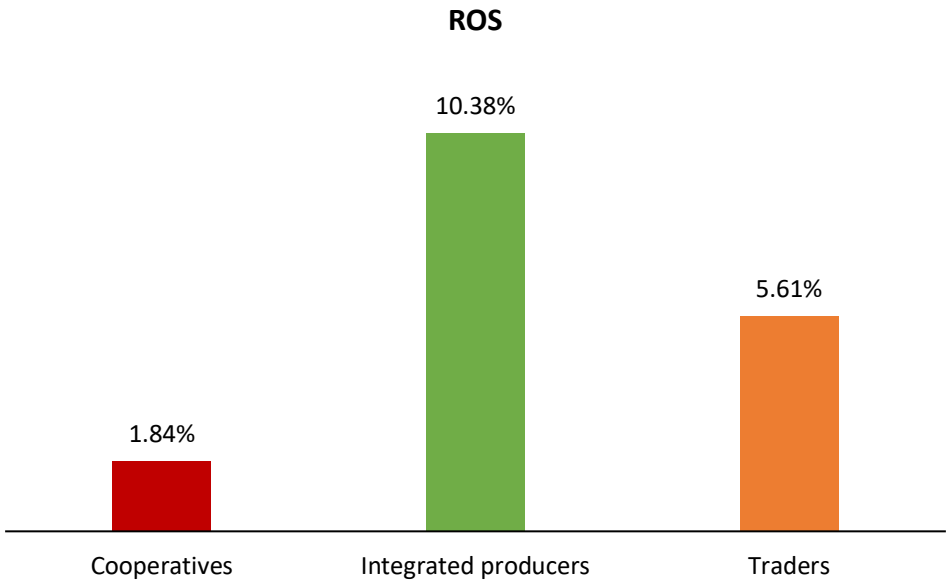
From the analysis of the scatter plots (Graphs 10-11), it emerges that, performance-wise, the Traders' business model is the dominant one. The Integrated Producers also stand out for their solid financial structure, which allows them to be competitivee in the market, potentially seeking for niche and high-end products.

Finally, companies adopting the Cooperative business model still show situations of financial difficulty probably fostered by the complexity of their organizational structure.

Graph 10 – Scatter plot, CAGR revenue vs debt ratio



Graph 11 –Average ROS by Cluster



3.4 – *ANOVA test and post-hoc test*

We conducted an Analysis of Variance (ANOVA) to test the association of the individual clusters on the financial variables. The goal is to understand whether the averages of ROS and ROIC belonging to a specific cluster are significantly different from the other clusters. More specifically, the variance of ROS and ROIC for each cluster is decomposed into two components: the share explained by the cluster and the share that is not associated to cluster's specific characteristics.

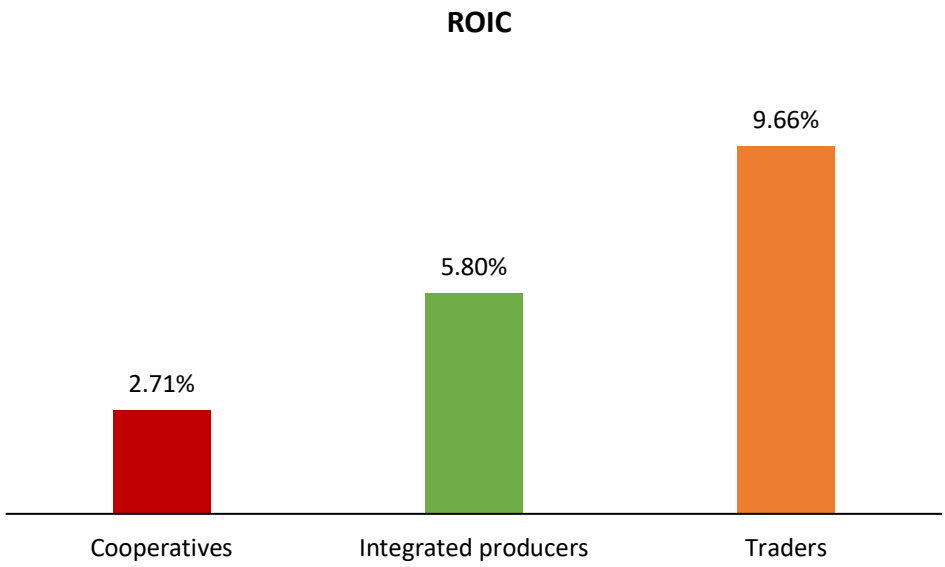
Moreover, in-depth analyses were conducted to verify whether ROS and ROIC associated to each cluster were statistically different from one another. More specifically, we performed a

Tukey post-hoc test, which allows for comparison of all possible pairs of clusters to determine which ones are significantly different.

The ANOVA results shows that there are significant differences between the clusters in terms of average ROS (Return on Sales) for the period 2018-2023. In particular, our results suggest that at least one of the clusters has a ROS which is statistically different from the average, at the 95% significance level (Graph 12). Moreover, the Tukey post-hoc test shows that there is a significant difference between Producers and Traders, with the average ROS of Producers which is significantly higher than the Traders'.

The ANOVA for the average ROIC (Return on Invested Capital) over the period 2018-2023 indicates that there are significant differences between the clusters ROIC, with a 99.9% significance level. At the same time, the results of the Tukey post hoc test show that both Traders and Integrated Producers exhibit a higher average ROIC relative to Cooperatives (Graph 12).
In summary, we can conclude that Traders' and Integrated Producers' business models are more effective in generating returns on invested capital.

Graph 12 – Average ROIC by Cluster



4 – Conclusions

The article highlights how specific business models adopted by companies in the Italian wine sector can foster growth in performance. Based on a representative sample of the Italian wine sector, our analyses have shown a complex scenario characterized by significant differences between the business models adopted by wineries. Companies adopting the Trader business model achieve better performance in terms of profitability, measured through ROS and ROIC. The Trader model, which focuses on the commercialization and export of bottled wine, appears to be particularly effective in leveraging both financial and market opportunities.

Further analyses conducted using ANOVA and Tukey post-hoc tests highlight statistically significant differences in ROIC and ROS across the clusters, emphasizing the greater effectiveness of the Trader and Integrated Producer business models compared to the Cooperative model. Though less profitable than Traders, the strategic role of Integrated producers should not be underestimated as they could open the sector to specialized niche

products, such as natural and organic wines, which are experiencing a growing success both towards consumers (Stiletto & Trestini, 2022) and the restaurant sector (Gazzola et al., 2023), given their attention to sustainability practices.

These results confirm the theory that adopting a successful business model can unlock a competitive advantage within the sector (Garzia et al., 2023).

In summary, the Italian wine sector showcases a range of business models with very different outcomes. The Trader and Integrated Producer clusters emerge as the most successful, thanks to their ability to effectively manage financial leverage and capitalize on market opportunities. Conversely, Cooperatives face challenges that may require strategic changes to ensure sustainable growth and competitiveness in a rapidly evolving market.

Further research should be devoted to identifying the specific characteristics of the business models proposed in this paper, considering internal organizational dynamics and the governance structure adopted. Moreover, it would be necessary to thoroughly study the variables underlying the different business models and how their interplay could allow for long-term improvement in company performance.

5 – References

Aiassa, P., Baltes, M., Danner, S., Frischengruber, H., Horvath, R., Klotz, W., & Vacca, A. (2018). Successful Wine Cooperatives: Field Reports from Cooperative Managers in Austria, Italy, and Germany, *Journal of Wine Economics*, *13*(3), 243–259. https://doi.org/10.1017/jwe.2018.50

Brannon, D. L. (2011). Identifying innovation in business models a wine industry study (Interactive paper*), Frontiers of Entrepreneurship Research*, *31*(12), 429–429;

Bellman, R., Clark, C.E., Malcolm, D.G., Craft, C.J., Ricciardi, F.M., 1957. On the construction of a multi-stage, multi-person business game, *Operations Research*, *5*(4), 469-503.

Burkhart, T., Krumeich, J., Werth, D., & Loos, P. (2011). Analyzing the business model concept-A comprehensive classification of literature, *paper presented at the International Conference on Information Systems*, 2011, ICIS 2011, *5*, 4183-4201.

Coda, V., Brunetti, G., & Barbato, M. B. (1991). Indici di Bilancio e Flussi Finanziari: Strumenti per l'Analisi della Gestione, *Etas, Milano*.

Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency, *Long Range Planning*, *43*(2–3), 227–246.

Ferrer-Lorenzo, J. R., Maza-Rubio, M. T., & Abella-Garcés, S. (2019). Business model and performance in the Spanish wine industry, *Journal of Wine Research*, *30*(1), 31-47.

Garzia, C., Gentile, F. M., & Slerca, E. (2023). Dominant business model consolidation processes: A System Dynamics-based analysis of the Prosecco wine industry, *International Journal on Food System Dynamics*, *15* (4), 397-407.

Garzia, Carmine. (2022). *The resilience of Italian food companies: An analysis of the industry's performance and business models*, *EGEA*.

Gazzola, P., & Amelio, S. (2014). Valutazione della Performance Finanziaria delle Imprese. Reddito Allargato o Reddito Netto? *Economia aziendale on line*, *5*(4), 223-238.

Gorini, A., Gazzola, P., Amelio, S., & Pavione Pavia, E. (2021). Comunicare l'Esperienza del Vino Attraverso il Family Business, *Economia aziendale on line*, *12*(1), 13-26. https://doi.org/10.13132/2038-5498/12.1.13-26

Gazzola, P., Pavione, E., Grechi, D., & Scavarda, F. (2023). Natural wine as an expression of sustainability: Anexploratory analysis of italy's restaurant industry, *British Food Journal*, *125*(13), 390-409. doi:10.1108/BFJ-08-20220680.

Gilardoni, G. (n.d.). The Culture and Sustainability of Italian Wine: Comparison between these two Elements, *Economia aziendale on line*, *11*(3), 359-368. https://doi.org/10.13132/2038-5498/11.3.359-36

Giraud, G. (2014). The effect of terroir on wine business model in Burgundy: To make wine or to sell harvest?, *Proceedings in Food System Dynamic*, *8*, 71–75.

Massa, L., Tucci, C.L. and Afuah, A. (2017), A critical assessment of business model research, *Academy of Management Annals*, *11*(1), 73-104.

McCormack, G. (2019). *Notes on Econometrics I. Kennedy_School*.

Mitchell, D. W., & Bruckner Coles, C. (2004). Business model innovation breakthrough moves, *Journal of Business Strategy*, *25*(1), 16–26.

Morrison A, Rabellotti R (2017) Gradual catch up and enduring leadership in the global wine industry, *Res Policy*, *46*(2), 417-430.

Osterwalder, A., Pigneur, Y., & Tucci, C. L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the association for Information Systems*, *16*(1), 1.

Paolone, F., & Magazzino, C. (2015). Earnings Manipulation among the main industrial sectors. Evidence from Italy. *Economia Aziendale Online-*, *5*(4), 253-261.

Pomarici, E., Corsi, A., Mazzarino, S., & Sardone, R. (2021). The Italian Wine Sector: Evolution, Structure, Competitiveness and Future Challenges of an Enduring Leader. *Italian Economic Journal*, 259-295.

Stiletto, A., & Trestini, S. (2022). When less isn't more and more isn't less: is there an overlap between "protected designation of origin", "mountain product" and "organic" in Italy? *British Food Journal*, *125*(13), 45–60. https://doi.org/10.1108/BFJ-02-2022-0107/FULL/PDF

Storchmann, K. (2018). Introduction to the Issue: Wine Cooperatives. *In Journal of Wine Economics*, 13(3), 239–242).

Schamel, G. (2018). Guest Editor's Introduction to the Symposium: Organization and Performance of Cooperative Firms in the Wine Sector. *In Journal of Wine Economics* 13(3). 260–262). https://doi.org/10.1017/jwe.2018.33

Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, *43*(2–3), 172–194.

Tell, J., Hoveskog, M., Ulvenblad, P., Ulvenblad, P. O., Barth, H., & Ståhl, J. (2016). Business model innovation in the agri-food sector: A literature review. *British Food Journal*, *118*(6), 1462–1476. https://doi.org/10.1108/BFJ-08-2015-0293/FULL/XML

Wirtz, B. W., Pistoia, A., Ullrich, S., & Göttel, V. (2016). Business models: Origin, development and future research perspectives. *Long Range Planning*, *49*(1), 36–54.