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WINE INDUSTRY AND WINE MARKETS: DYNAMICS, CHALLENGES, AND IMPLICATIONS OF GLOBALIZATION

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ABSTRACT

This paper presents a comprehensive exploration of the impact of globalization on the global wine industry, encompassing shifts in production, consumption, and market dynamics. It combines data mining from online sources and statistical information from the International Organization of Vine and Wine (OIV) accessed through Statista. The findings reveal the diversification of wine production across regions, with Europe experiencing a decrease in production while other regions, including the American continent, Oceania, Africa, and Asia, show growth. The study emphasizes the economic significance of the wine industry and highlights the need for wineries to adapt their strategies to meet market challenges. In addition, it recommends the development of wine tourism as a strategy to revitalize consumer interest and promote the cultural heritage associated with wine. The research also delves into the historical origins of wine, the decline in consumption, and proposes hiking wine paths as a means to enhance the wine tourism experience. Furthermore, the paper discusses the steady growth in global wine consumption, the emergence of new wine-producing countries like China, and the challenges posed by globalization to traditional wine-producing nations. It emphasizes the importance of market adaptation, environmental responsibilities, and the opportunities presented by the internet for direct interactions with customers. Ultimately, we provide insights for researchers, industry professionals, and policymakers, emphasizing the need to adapt to market dynamics, leverage wine tourism, and tap into emerging markets.

Keywords: *wine industry, wine production, wine consumption, wine tourism, economic significance.*

INTRODUCTION

The origins of winemaking can be traced back to 6000 BC in Georgia, marking its historical significance as one of the oldest known alcoholic beverages. However, in the period from 2000 to 2020, wine consumption experienced a decline due to shifting societal lifestyles influenced by economic, social, and cultural factors (Jones et al., 2021). These changes have prompted a need for the wine industry to adapt and find innovative strategies to revitalize consumer interest.

One such strategy is the development of wine tourism, which offers participants the opportunity to engage with wine traditions, explore current wine producers, gain insights into vineyard cultivation practices, wine cellars operations, and indulge in wine tastings. The concept of wine tourism has gained traction as a means not only to educate consumers about the art of winemaking but also to showcase the rich cultural heritage associated with wine (Carlsen & Charters, 2006).

Globalization has played a pivotal role in reshaping the dynamics of the wine industry, introducing increased competition and transformative changes in production and consumption patterns. Wineries must now navigate this global market and align their strategies with market challenges while emphasizing environmental responsibilities (Faria et al., 2021). Over the past two decades, the wine industry has undergone significant transformations, driven by the forces of globalization and the emergence of "New World" countries such as the United States, Australia, Argentina, Chile, and South Africa. These countries, with their availability of resources and economies of scale, have gained market share and disrupted the traditional dominance of established wine-producing nations (Morrison & Rabellotti, 2017; Cusmano et al., 2010).

The global wine landscape can be classified into distinct regions based on production, including Europe, the New World (Australia, North and South America, and South Africa), and emerging wine regions such as China, India, Brazil, North Africa, and Eastern Europe. These regions contribute to the diversification and expansion of the global wine market (Kaur et al., 2019; Ljavic et al., 2023).

In light of these developments, this study aims to explore the changing dynamics of the wine industry, analyze the market power and competitive landscape, and assess the implications of globalization on wine production and consumption. By examining key trends, challenges, and opportunities, this research seeks to contribute to a comprehensive understanding of the evolving wine industry in a global context.

MATERIAL AND METHODS

Methods: To gather comprehensive data on global wine production, our methodology involved a combination of data mining from internet sources and utilizing the statistical information provided by Statista.

Data collection: We conducted a review of scientific and professional literature to gather relevant information. General scientific methods were employed, and specific methods and tools included the use of statistical and economic indicators, as well as composite data on world production, sale, and consumption of wine. We also utilized a database on international trade in wine.

Data source: For our study, we utilized the dataset sourced from the International Organization of Vine and Wine (OIV), which is accessible through the renowned online platform, Statista. Statista provides access to a vast array of global statistics and market data. The dataset from OIV, available on Statista, is known for its comprehensive coverage of global wine production trends, including production volumes and regional distribution.

Data analysis: By leveraging the dataset from OIV accessed through Statista, we obtained reliable and up-to-date data on the global wine production landscape. This dataset served as the foundation for our comparative analysis across different regions within the wine industry.
Additionally, we conducted a thorough review of the literature available on the internet. This review complemented the statistical data obtained from Statista, providing us with additional insights and contextual information to enhance our analysis.
By combining the data mining approach, the use of the OIV dataset from Statista, and the review of internet literature, we ensured a comprehensive and robust methodology for our research on the global wine industry.

RESULTS AND DISCUSSION

Wine production in the world
In Europe, there has been a decrease in the production of wine; this decrease was compensated by the increase in production in other countries. The production of wine on the American continent increased to 16%; Oceania grew its output by 1.6% toward 5.1%; Africa by 3% to 4.1%; and Asia by 1.5% to 5.1% (Anderson & Pinilla, 2022).
Figure 1 shows the total production of wine in the world from 1990 to 2021. Figures are expressed in millions of hectoliters. Accordingly, the global manufacturing of wines will trend from 1990 to 2021. Global wine output is recorded peaks in 2013 and 2018 (294 million of hectoliters).

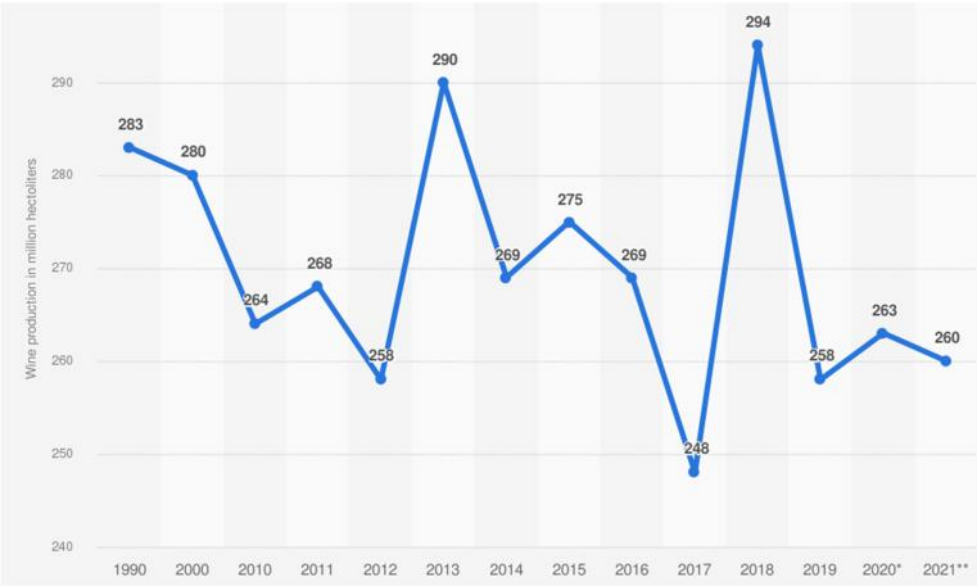

Figure 1. Wine production worldwide from 1990 to 2021(in millions of hectoliters).
Source: OIV. Statista. https://www.statista.com/statistics/397870/global-wine-production/

On the contrary, the lowest value was reached in the previous year 2017, when it was 248 000 hl. It means that the year 2018 had, in comparison with the year 2017, a higher production of wine by 46 000 hl. The year 2019 also had a decreased character, when from 2018, the value of production of wine decreased by 36 000 hl.

There are a huge number of producers and consumers of wine in the world, so we can talk about the competitive market. This huge number of participants on the market ensures that every individual has only a little influence on the market price. Figure 3 illustrates the wine market volume per capita globally between 2012 and 2025 by corresponding subfields.

Regarding the revenues generated through global wine markets between 2012 and 2025, in 2020, the worldwide wine market generated 340.8 billion US dollars in income. It is predicted that sales in this area will reach $528.7 billion through 2025.

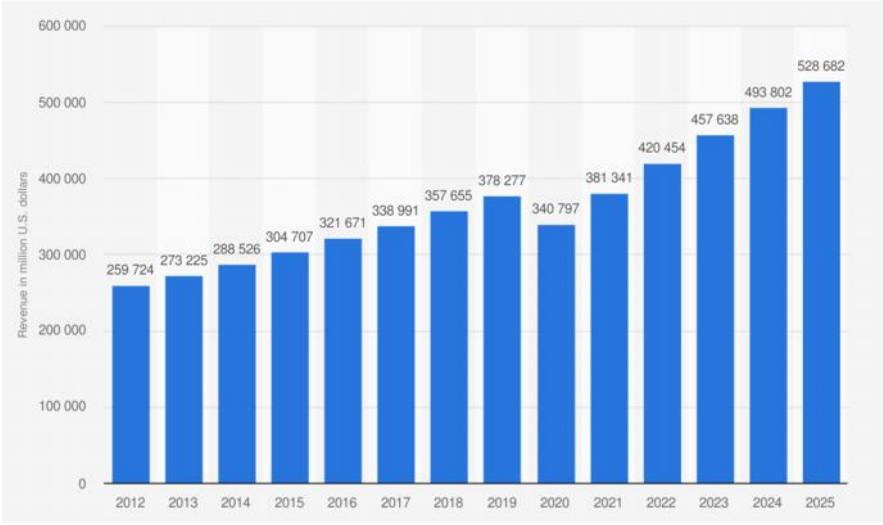

Figure 2. Wine market revenue worldwide from 2012 to 2025. Source: Statista. Wine market revenue worldwide from 2012 to 2025 (in million U.S. dollars). Statista. Retrieved August 30, 2023, from https://www.statista.com/statistics/922403/global-wine-market-size/

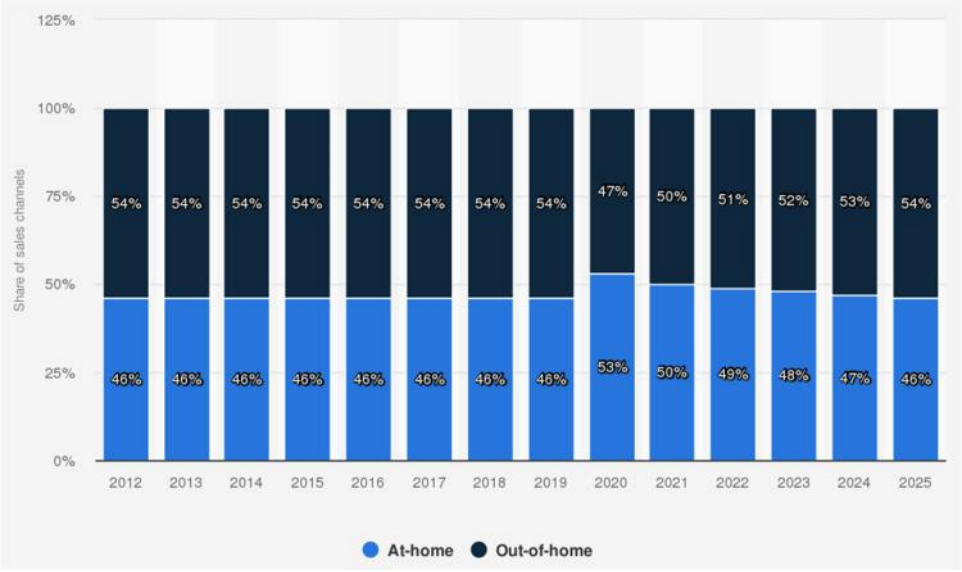

Figure 3. Share of sales channels of the wine market worldwide from 2012 to 2025. Source: Statista Consumer Market Outlook. (March 17, 2021). Share of sales channels of the wine market worldwide from 2012 to 2025 [Graph]. In Statista. Retrieved January 26, 2022, from https://www.statista.com/forecasts/1222547/global-wine-market-sales-channel-share

Wine markets possess alcoholic drinks produced from grapes that are fermented. According to Figure 3, table wine (also known as still wine), sparkling wine (including champagne), and fortified wine are the most popular sectors within the wine market (Amerine & Joslyn, 2021; Bastian & Iland OAM, 2020). The global wine industry is regulated around the world by wine acts that determine directions for particular qualitative levels of wines and whose contents and rigorousness of directions can be different among particular states. The consumer market for alcoholic beverages is divided into retail sales for consumption at home and food service sales for consumption away from home. The at-home market, also known as the off-trade market, includes all retail sales made through hypermarkets as well as supermarkets, convenience shops, and other comparable sales channels (Plata et al., 2022). The out-of-home market, also known as the on-trade market, away-from-home market, and HORECA, which is the segment of the culinary service industry comprised of enterprises that prepare and offer food and drinks, includes all sales to hotels, restaurants, caterers, cafés, bars, and other hospitality businesses (García-Madurga et al., 2021; Wang et al., 2018). Retail selling prices, comprising both sales and consumption taxes, are used for assessing each of the at-home as well as out-of-home markets (Schmutz et al., 2018). The appraisal of the out-of-home category at retail prices is a significant shift in market structure from previous incarnations of the Customer Market Outlook since consumption outside of the home was previously valued at wholesale prices.

The economic element of wine production is significant, and this is why governments encourage substantial research programmes in the context of wine industry expansion and enhancement (Bisson et al., 2002). Economically active and rich countries are active in international trade with wine. Increased tourism, which leads to the creation of emerging wine regions, is economically significant for many countries (Global Agricultual Information Network, 2012; Apostolopoulou et al., 2005).

The global distribution of brewery sales statistics shown that 53% of worldwide wine revenue in 2020 will be earned domestically (off-trade). This proportion is expected to fall to 46% by 2025. Nonetheless, amid the openness of global economic circumstances, regional and metropolitan externalities are seen as important sources of competitive advantage (Porter, 2000). Over the years, the world's wine-producing areas have mainly maintained their market share. France accounted for 13 and 14 percentage points within the global wine market, whereas the other main European manufacturers, Italy, Spain, Germany, and Portugal, crested at 51% and have subsequently decreased to 48% in 2021. The corresponding share of global wine trade in the international market within 2010–2020 is depicted in Figure 4.

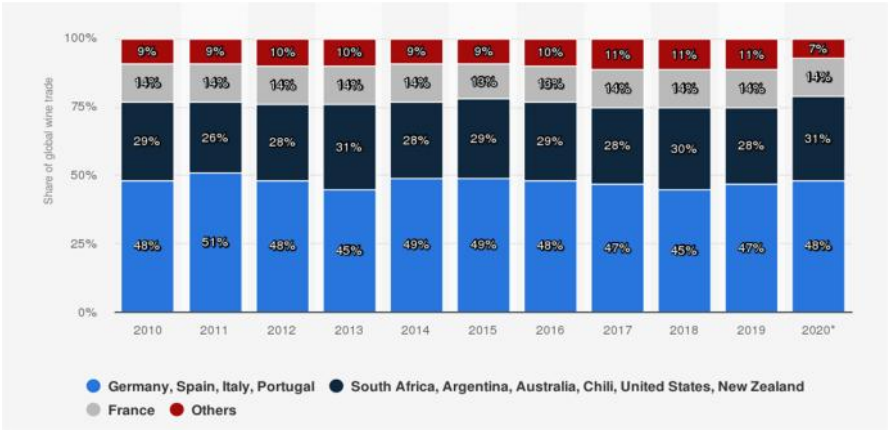

Figure 4. Share of wine trade volume worldwide from 2010 to 2020, by major regions. Source: FranceAgriMer. (August 17, 2022).

Share of wine trade volume worldwide from 2010 to 2021, by major region or country [Graph]. In Statista. Retrieved December 01, 2022, from https://www.statista.com/statistics/1150624/global-wine-trade-share-by-region/

According to Figure 5 sales growth in 2020 across all categories within the global wine industry fell sharply, with fortified beverages in particular falling to a negative 21.2% rate. All segments rebounded in 2021, with growth slowing in 2022.

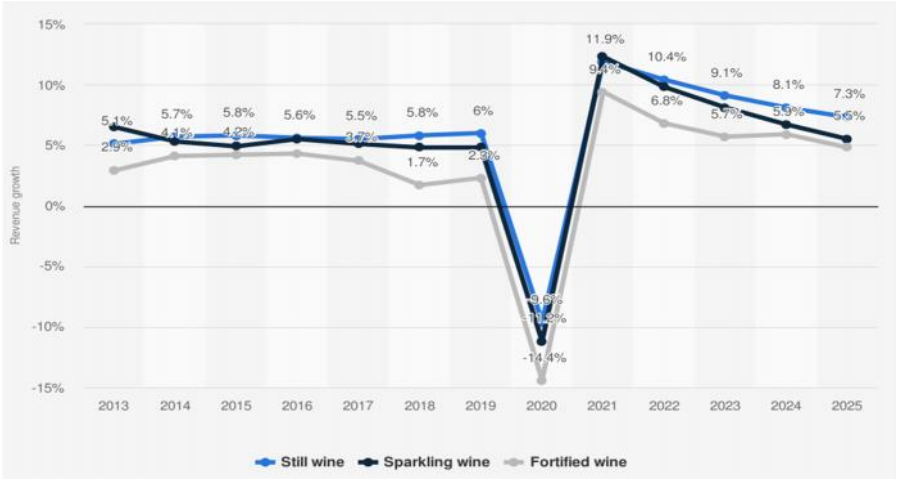

Figure 5. Growth of revenue of the wine market worldwide from 2012 to 2025, by segment

Source: Statista Consumer Market Outlook. (October 19, 2022). Growth of revenue of the wine market worldwide from 2012 to 2025, by segment [Graph]. In Statista. Retrieved December 01, 2022, from https://www.statista.com/forecasts/1222546/global-wine-market-revenue-growth-by-segment

By comparing the experiences of different regions in the wine industry, specifically focusing on Greece, Spain, Israel and Montenegro (Mediterranean countries) and Serbia and Slovakia from the Continent, we examined the behavior, preferences, and habits of consumers, as well as the operational practices of wineries, and we gained valuable insights into the dynamics and challenges of the wine sector (Hefler & Kissinger, 2023). Starting with the Greek experiences, Greek consumers' behavior, preferences, and habits regarding wine compared to other alcoholic beverages revealed that wine is consumed more frequently on a weekly basis compared to other alcoholic beverages. Among the different types of wine, red and semi-sweet bottled wines were the most preferred by Greek consumers. When making their selections, Greek wine consumers considered factors such as quality, cost, color, odor, and origin. These insights are based on knowledge for wineries across Greece, enabling them to align their operations with consumer preferences and market demands. The majority of wineries in Greece primarily produce dry, red, and white bottled wine, with a significant portion of their production being exported. Additionally, many wineries actively participate in wine tourism activities, indicating promising prospects for further development in this area. The use of the internet and social media has also become crucial for attracting new consumers and promoting value-for-money and high-quality wine products (Sykalia et al., 2023; Tsiakis et al., 2022). Moving on to Spain, our focus was on the technical processes. While wineries demonstrated efficiency in terms of energy and water consumption, attention was drawn to the weight of wine bottles, which had a significant environmental impact and production costs. Efforts to reduce bottle weight were recommended. Waste management practices in wineries showcased promising outcomes, with waste either minimized or transformed into useful by-products. Enhancing recycling alternatives and utilizing by-products as valuable raw materials could further improve overall production efficiency. The socioeconomic significance of the wine chain, including employment generation, social contributions, and environmental conservation, was highlighted. These aspects should be leveraged as distinguishing factors in wineries' marketing strategies (OIV, 2022; AFI, 2020; MAPA, 2021; Ferrer et al., 2020; Gazulla et al., 2010; Koutroupi et al., 2005; Melovic et al., 2020). The lessons from Serbia focused on improving vine production to ensure economic viability and minimize environmental impacts, considering territorial conditions and the challenges posed by climate change. Such efforts are instrumental in guiding decision-making for the Policy, with the aim of promoting sustainable production throughout the vine-wine chain, like in all sustainable management of fruit growing in Serbia, but also in the Balkans (Melovic et al., 2019; Zejak et al., 2021). Additional characteristics such as income, education level, and experience/involvement, along with increased participation of wineries, were also highlighted (Ignjatijevic et al., 2022; Djukanovic et al., 2021; Trisic et al., 2020; Jaksic 2019; Vlahovic et al., 2017).

Israeli experiences shed light on the influence of changing growing conditions, primarily driven by climate change, on the wine industry. Analyzing the carbon footprint (CF) of Israeli wine vineyards was crucial for understanding greenhouse

gas (GHG) emissions and identifying potential mitigation strategies. Despite the challenges posed by arid regions, grape cultivation for wine production could still achieve sustainability by implementing alternative management practices and adapting grape varieties. By reducing emissions and adapting to future changes, winegrowers can navigate the challenges posed by climate change (Hefler & Kissinger, 2023; Marras et al, 2015; Tsalidis et al, 2022; Da Silva & da Silva, 2022). The behavior of the Slovak consumer has been changing dynamically over the last decades. This dynamic could be used in the context of creating sales support for national - local products (Olsavsky et al., 2022). In Slovakia, similar to Greece, wine emerged as the preferred choice among consumers, consumed more frequently on a weekly basis compared to other alcoholic beverages. Slovakian wine consumers also prioritize factors such as quality, cost, color, odor, and origin when making their wine selections. These findings provide valuable knowledge for wineries in Slovakia, Montenegro, and Greece, enabling them to align their operations with consumer preferences and market demands. Furthermore, in line with the findings from Spain, Slovakian wineries are recommended to focus on optimizing their production processes to enhance efficiency, particularly in terms of energy and water consumption (Gazulla et al, 2010). Similar attention should be given to packaging practices, including the weight of wine bottles, as this can have significant environmental impacts and production costs. Waste management practices, such as minimizing waste and exploring opportunities for transforming by-products into useful resources, are crucial for improving overall production efficiency in Slovakian wineries, as well as in Montenegro and Greece.

Additionally, the experiences from Serbia and Israel regarding vine production and adapting to changing growing conditions are also relevant to the Slovakian, Montenegrin, and Greek wine industries. Efforts to improve vine varieties adapted to territorial conditions and address climate change challenges can enhance economic viability and minimize environmental impacts in these regions. These efforts should be considered in the context of the Common Agricultural Policy.

These experiences underscore the need for ongoing research and adaptation within the wine industry. Monitoring consumer preferences, optimizing production processes, promoting sustainability, and addressing climate change challenges are crucial for the long-term success of wineries worldwide. By embracing these factors and conducting further comprehensive studies, the wine industry can continue to evolve and thrive in an ever-changing landscape.

CONCLUSIONS

Globalization has had a profound impact on wine production, consumption, and the overall dynamics of the wine industry. It has led to increased competition, evolving consumer behavior, and growing environmental and public health concerns. The decline in wine consumption from 2000 to 2020 can be attributed to changing societal lifestyles influenced by economic, social, and cultural factors. To revitalize consumer interest, the development of wine tourism, such as hiking wine paths, can provide an immersive experience in wine traditions and promote the cultural

heritage associated with wine. Despite the decline in wine consumption during the specified period, the analysis shows steady growth in global wine consumption over the past two decades. The emergence of new wine-producing countries, such as China, presents substantial growth potential, and sales are projected to thrive for the next 20 to 30 years. Global wine production has diversified, with Europe experiencing a decrease in production while other regions, such as the American continent, Oceania, Africa, and Asia, have shown growth. The economic significance of the wine industry is evident, contributing significantly to the economies of many countries. The wine market is competitive, with a large number of producers and consumers worldwide. Market positioning and adapting to market challenges, along with emphasizing environmental responsibilities, are crucial for wineries to succeed.

Wineries should adapt their strategies to meet market challenges, including understanding changing consumer preferences and behavior. By aligning their operations with market demands, wineries can capitalize on emerging opportunities and differentiate themselves from competitors. The development of wine tourism, such as hiking wine paths, should be pursued as a means to revitalize consumer interest and promote the cultural heritage associated with wine. Creating immersive experiences for participants can help educate consumers about winemaking traditions and foster a deeper appreciation for wine. Wineries should embrace the potential of emerging markets, such as China, by exploring opportunities for expansion and establishing a presence in these regions. Understanding the unique preferences and demands of these markets will be essential for success.

Environmental responsibility should be a priority for wineries. Implementing sustainable practices in vineyard cultivation, production processes, and packaging can help reduce environmental impacts and improve overall production efficiency. Leveraging the internet and digital platforms can provide wineries with new opportunities for direct interactions with customer segments. Developing online channels for sales, marketing, and customer engagement can enhance accessibility and broaden reach. Continued research and adaptation within the wine industry are essential. Monitoring consumer preferences, optimizing production processes, addressing climate change challenges, and promoting sustainability should remain areas of focus to ensure the industry's long-term viability and success.

Overall, the findings of this study emphasize the transformative effects of globalization on wine production, consumption, and the economic significance of the industry. Adapting to market dynamics, harnessing the potential of wine tourism and emerging markets, and embracing environmental responsibilities are key factors for wineries to thrive in a globalized wine industry.

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REFERENCES

AFI (2020). Importancia Económica y Social del Sector Vitivinícola en España. Interprofesional del Vino de España: Madrid, Spain,

Amerine, M. A., & Joslyn, M. A. (2021). Table wines: the technology of their production. University of California Press.

Anderson, K., & Pinilla, V. (2022). Wine's belated globalization, 1845–2025. Applied Economic Perspectives and Policy, 44(2), 742-765. doi: https://doi.org/10.1002/aepp.13174

Apostolopoulou, A.A.; Flouros, A.I.; Demertzis, P.G.; Akrida-Demertzi, K. (2005). Differences in Concentration of Principal Volatile Constituents in Traditional Greek Distillates. Food Control, 16, 157–164.

Bastian, S. E., & Iland OAM, P. G. (2020). Australian Wine's Taste Evolution. Handbook of Eating and Drinking: Interdisciplinary Perspectives, 543-573. doi: https://doi.org/10.1007/978-3-030-14504-0_169

Bisson, L. F., Waterhouse, A. L., Ebeler, S. E., Walker, M. A., & Lapsley, J. T. (2002). The present and future of the international wine industry. Nature, 418(6898), 696-699.

Da Silva, L.P.; da Silva, J.C.E. (2022) Evaluation of the Carbon Footprint of the Life Cycle of Wine Production: A Review. Clean. Circ. Bioeconomy, 2, 100021.

Djukanovic, Z.; Zivkovic, J.; Radosavljevic, U.; Lalovic, K.; Jovanovic, P. (2021). Participatory Urban Design for Touristic Presentation of Cultural Heritage Sites: The Case of Negotinske Pivnice (Wine Cellars) in Serbia. Sustainability, 13, 10039. https://doi.org/10.3390/su131810039

Dudic, B., Michael, R., Campbell, J., Jaufer, L., Glisic, Ivana., Glisic, I. (2023). Influence of cultivar and fertilization treatment on the yield and leaf nutrients content of apple (*Malus domestica* Borkh.). Heliyon, 9(6): 1-9, e16321. https://doi.org/10.1016/j.heliyon.2023.e16321

Faria, S., Gouveia, S., Guedes, A., & Rebelo, J. (2021). Transient and Persistent Efficiency and Spatial Spillovers: Evidence from the Portuguese Wine Industry. Economies, 9(3), 116. doi: https://doi.org/10.3390/economies9030116

Ferrer, J.R.; Abella-Garcés, S.; Maza-Rubio, M.T. (2020). Human Resource Practices and Performance in Small Spanish Wineries, and Their Evolution with Age and Size. Ciência Téc. Vitiv., 35, 107–119.

García-Madurga, M.-Á., Esteban-Navarro, M.-Á., & Morte-Nadal, T. (2021). Covid key figures and new challenges in the horeca sector: The way towards a new supply-chain. Sustainability, 13(12), 6884. doi: https://doi.org/10.3390/su13126884

Gazulla, C.; Raugei, M.; Fullana, I.; Palmer, P. (2010). Taking a life cycle look at crianza wine production in Spain: Where are the bottlenecks? Int. J. Life Cycle Assess., 15, 330–337.

Global Agricultual Information Network (2012). Wine Annual Report and Statistics; USDA Foreign Agricultural Service: Washington, DC, USA.

Hefler, Y.T.; Kissinger, M. (2023). Grape Wine Cultivation Carbon Footprint: Embracing a Life Cycle Approach across Climatic Zones. Agriculture, 13, 303.

Ignjatijevic, S.; Tankosic, J.V.; Lekic, N.; Petrovic, D.; Brkanlic, S.; Vapa, B.; Tomasevic, V.; Puvaca, N.; Prodanovic, R.; Milojevic, I. (2022). Agro-Environmental Practices and Business Performance in the Wine Sector. Agriculture, 12, 239.

Jaksic, D. (2019). Study Analysis of the Regulatory Framework and Economics of the Wine Sector; Cardno Emerging Markets: Arlington, VA, USA.

Kaur, P., Ghoshal, G., & Banerjee, U. C. (2019). Traditional bio-preservation in beverages: fermented beverages. In, Preservatives and preservation approaches in beverages (pp. 69-113): Elsevier.

Koutroupi, E.; Natos, D.; Karelakis, C. (2015). Assessing Exports Market Dynamics: The Case of Greek Wine Exports. Procedia Econ Financ., 19, 184–192.

Ljavic, D., Radovic, M., Kulina, M., Zejak, D., Spalevic, V., Kader, S., Dudic, B., Michael, R., Campbell, J., Jaufer, L., Glisic, I. (2023). Influence of cultivar and fertilization treatment on the yield and leaf nutrients content of apple (*Malus domestica* Borkh.). Heliyon, e16321. doi: https://doi.org/10.1016/j.heliyon.2023.e16321

MAPA (2021). Anuario de Estadística. Avance 2021; Ministerio de Agricultura, Pesca y Alimentación (MAPA): Madrid, Spain.

Marras, S.; Masia, S.; Duce, P.; Spano, D.; Sirca, C. (2015). Carbon footprint assessment on a mature vineyard. Agric. For. Meteorol., 214–215, 350–356.

Melovic, B.; Cirovic, D.; Dudic, B.; Vulic, T.B.; Gregus, M. (2020). The Analysis of Marketing Factors Influencing Consumers' Preferences and Acceptance of Organic Food Products—Recommendations for the Optimization of the Offer in a Developing Market. Foods, 9, 259. https://doi.org/10.3390/foods9030259

Melovic, B.; Milovic, N.; Backovic-Vulic, T.; Dudic, B.; Bajzik, P. (2019). Attitudes and Perceptions of Employees toward Corporate Social Responsibility in Western Balkan Countries: Importance and Relevance for Sustainable Development. Sustainability, 11, 6763. https://doi.org/10.3390/su11236763

Morrison, A., & Rabellotti, R. (2017). Gradual catch up and enduring leadership in the global wine industry. Research Policy, 46(2), 417-430. doi: https://doi.org/10.1016/j.respol.2016.09.007

OIV (2022). State of the World Vine and Wine Sector 2021. International Organisation of Vine and Wine: Paris, France.

Olsavsky, F., Starchon, P., Mitkova, L. & Dudic, B. (2022). Dynamics of the Slovak consumer behaviour in the context of ethnocentrism: Managerial

implications. Agriculture and Forestry, 68(3): 7-21. doi: 10.17707/AgricultForest.68.3.01

Plata, A., Motoki, K., Spence, C., & Velasco, C. (2022). Trends in alcohol consumption in relation to the COVID-19 pandemic: A cross-country analysis. International journal of gastronomy and food science, 27, 100397. doi: https://doi.org/10.1016/j.ijgfs.2021.100397

Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. Economic development quarterly, 14(1), 15-34. doi:https://doi.org/10.1177/089124240001400

Schmutz, U., Kneafsey, M., Kay, C. S., Doernberg, A., & Zasada, I. (2018). Sustainability impact assessments of different urban short food supply chains: examples from London, UK. Renewable Agriculture and Food Systems, 33(6), 518-529. doi:https://www.doi.org/10.1017/S1742170517000564

Statista. (2022). OIV. Retrieved from https://www.statista.com/statistics/397870/global-wine-production

Sykalia, D.; Chrisostomidou, Y.; Karabagias, I.K. (2023). An Exploratory Research Regarding Greek Consumers' Behavior on Wine and Wineries' Character. Beverages, 9, 43. https://doi.org/10.3390/beverages9020043

The International Organisation of Vine and Wine (2020). State of the World Vitivinicultural Sector in 2020. Available online: https://www.oiv.int/public/medias/7909/oiv-state-of-the-world-vitivinicultural-sector-in-2020.pdf (accessed on 28 May 2023).

The International Organisation of Vine and Wine (2019). Statistical Report on World Vitiviniculture in 2019. Available online: http://www.oiv.int (accessed on 28 May 2023).

Trisic, I.; Stetic, S.; Privitera, D.; Nedelcu, A. (2020). Wine Routes in Vojvodina Province, Northern Serbia: A Tool for Sustainable Tourism Development. Sustainability, 12, 82. https://doi.org/10.3390/su12010082

Tsalidis, G.A.; Kryona, Z.P.; Tsirliganis, N. (2022). Selecting south European wine based on carbon footprint. Resour. Environ. Sustain. 2022, 9, 100066.

Tsiakis, T.; Anagnostou, E.; Granata, G.; Manakou, V. (2022). Communicating Terroir through Wine Label Toponymy Greek Wineries Practice. Sustainability, 14, 6067

Vlahovic, B.; Puskaric, A.; Uzar, D. (2017). Contemporary Trends in the Wine Market. University of Novi Sad: Novi Sad, Serbia.

Wang, L., Xue, L., Li, Y., Liu, X., Cheng, S., & Liu, G. (2018). Horeca food waste and its ecological footprint in Lhasa, Tibet, China. Resources, Conservation and Recycling, 136, 1-8. doi: https://doi.org/10.1016/j.resconrec.2018.04.001

Zejak, D.; Glisic, I.; Spalevic, V.; Maskovic, P.; Dudic, B. (2021). Sustainable Management of Fruit Growing in Rural Areas of Montenegro: The Impact of Location on the Phenological and Nutritional Properties on Raspberry (*Rubus idaeus* L.). Agronomy 2021, 11, 1663. https://doi.org/10.3390/agronomy11081663