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Wine production in Ukraine: Challenges, opportunities today

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► **Abstract.** The relevance of the study is driven by the need to overcome the challenges facing Ukraine's viticulture and wine production sectors, such as the lack of consistent state policy, high tax barriers, competition with imported products, and the negative impact of military actions, to ensure their sustainable development and recovery. The study aimed to analyse current trends in Ukrainian viticulture and wine production, identify key problems, and develop proposals for their resolution to stimulate the sector's development in the context of European integration and wartime conditions. The research focused on assessing the current state of viticulture and wine production in Ukraine using statistical methods to analyse production indicators and structural changes in the sector. The study revealed a significant reduction in the area of fruit-bearing vineyards and a decrease in grape production from 1990 to 2023. It was found that military actions led to additional losses of vineyards and winemaking capacities, negatively impacting the sector's development. Structural changes in the winemaking industry were also analysed, and their implications for the national economy were summarised. Despite the difficulties, there has been a growing interest in Ukrainian wine in the domestic market and the beginning of export recovery from 2014 to 2023, indicating the potential for the sector's recovery and growth. The study's results can be used by government authorities and entrepreneurs to develop policies supporting viticulture and wine production, aimed at reducing import dependency and increasing the competitiveness of Ukrainian wine products

► **Keywords:** wine; state support; European integration; economic challenges; sector development; innovative technologies

► Introduction

Ukraine has rich traditions in wine production and unique grape varieties that stand out for their distinctiveness. Viticulture and wine production have always been important economic activities in Ukraine. Over the post-reform period of agricultural development, the Ukrainian viticulture sector has undergone significant changes. However, due to the lack of consistent government policy, the wine production industry has struggled to function effectively. One of the main challenges in Ukraine's wine production sector has been insufficient state support. Wine production was not considered a priority for state policy for a long time. In Ukraine, winemakers have operated under Soviet-era excise administration standards. Notably, in some European Union countries, there is no licensing for natural wine production at all, while in most other cases, the licensing process is significantly simplified. Unlike Ukraine, countries such as Moldova, Georgia, and EU member states have considered wine production an important part of rural prestige and entrepreneurship development, which

includes the growth of small wineries, the reduction of the informal economy, and the creation of new jobs in rural areas (Chamber of Commerce and..., n.d.; Between Barcelona and Ochakiv..., 2021).

Modern literature on wine production examines various aspects, ranging from innovative methods for improving grapes quality, and geographic designation policies, to intercultural wine consumption. N. Zelenska *et al.* (2023) focused on the implementation of innovative methods to improve grapes quality. The authors studied the effect of a live chlorella suspension on the growth and development of grafted Cabernet Sauvignon grape seedlings. J.M. Alston & D. Gaeta (2021) analysed the historical development of European wine policy within the Common Agricultural Policy (CAP) framework and the economic consequences of technological regulations related to wine production. The authors noted that while these regulations had a positive educational impact on producers and consumers of wine, they were less valuable due to the availability of

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alternative information sources and the inefficiency of certain regulations, particularly yield economically ineffective restrictions. L. Gutsalenko *et al.* (2020) focused on the development of the wine production sector in Ukraine, particularly organic viticulture. The studies emphasised the need for standardisation and certification to establish and fix the qualitative characteristics of wine, as well as analysed the impact of various factors on the cost of organic production.

G. Szolnoki & G. Totth (2020) studied consumer behaviour differences and sales channel structures in these countries. The results showed significant differences not only in wine preferences but also in the use of sales channels, providing important information for producers and marketers. M. Hermans & D. Finchelstein (2020) analysed the internationalization strategies of seven Argentine companies from various sectors, including wine production. The authors emphasise the importance of developing strategic capabilities for success in international markets. N. Jiménez-Asenjo & D.A. Filipescu (2019) examine the marketing strategies of Spanish winemakers in the Chinese market. The authors found that external factors force companies to adapt their strategies, while internal factors determine the standardization of their product range. A. Kovalyov *et al.* (2022) researched innovative approaches to the clustering of viticulture and wine production enterprises, identifying problems and development prospects, and substantiated the creation of a cluster in the cross-border region of Ukraine-Moldova as a promising direction for restructuring.

V.A. Castro *et al.* (2018) studied the process of building and operating sectoral brands in the Brazilian wine sector, identifying the impact of participation in international fairs on the spread and image of the brand, and justifying the need for investment in internal projects to develop the national market. M. Vázquez-Fariñas & J.M. Rosso (2017) explored the development of viticulture and wine production in the city of Cádiz in the 19th and 20th centuries, revealing the transformation of the wine business into a modern agribusiness and substantiating the significance of wine production for the city's economy.

The increase in studies on macro- and microeconomic processes in wine production, as well as the expansion of thematic areas, including wine tourism and collaboration between winemakers and wine producers, is reflected in the works of Ö. Güzel *et al.* (2021). Wine tourism is a key component of the wine production industry, actively supporting its development (Aleffi *et al.*, 2020; Fuentes-Fernández *et al.*, 2022). This type of tourism includes trips to wine regions, involving visits to wine cellars, participation in tastings and festivals, as well as promoting local wines and cultural traditions.

These studies provide valuable insights into various aspects of the wine production industry, including economic, environmental, cultural, and strategic factors that influence the development and functioning of this important sector in different countries. However, modern trends in the development of wine production in Ukraine require detailed consideration. The objective of the study was to conduct a comprehensive analysis of current trends in Ukraine's viticulture and wine production sector in the context of European integration processes and the

impact of martial law. The study's objectives are as follows: identifying key challenges faced by the industry, developing practical recommendations to overcome these challenges and stimulate sustainable development, and evaluating the effectiveness of existing strategies for maintaining the competitiveness of Ukrainian wine production in domestic and international markets.

► Materials and methods

The study of current trends, challenges, and prospects for the development of viticulture and wine production in Ukraine was based on the use of a comprehensive set of scientific methods that enable in-depth analysis and provide well-grounded recommendations to stimulate the industry's development in the context of European integration and martial law. Various methods of scientific inquiry, such as analysis, synthesis, comparison, and generalisation, were used to investigate the issue thoroughly and propose scientifically substantiated recommendations.

Analysis and synthesis were used to examine existing literature and scientific works that reveal current trends in viticulture and wine production. These methods helped form a holistic view of the sector's problems and opportunities. The synthesis method generated summarised conclusions regarding the industry's status, highlighting key areas for development and identifying problem zones. The systems analysis method was applied to explore the interconnections between different components of viticulture and wine production, including production, market demand, regulatory frameworks, and export opportunities. This allowed for a comprehensive assessment of the interrelated factors affecting the industry's development and helped identify potential growth points and risks. The systemic approach was also used to evaluate the effectiveness of government support programs for the industry and their alignment with EU requirements.

The case study method was employed for an in-depth examination of successful examples from craft wineries, such as Kalyus Winery and Beykysh Winery (Wines of Ukraine. Podillia..., 2023; Beykush Winery official website, n.d.). This approach enabled the study of specific cases that demonstrated the effective use of marketing strategies, wine-tasting tours, wine clubs, and socially-oriented initiatives for promoting wine products in domestic and international markets. The content analysis method was applied to examine materials from mass media, industry publications, and official statements related to the development of viticulture and wine production in Ukraine. The implementation of these methods provided a comprehensive understanding of the current state of viticulture and wine production in Ukraine, identifying key trends and challenges. Additionally, it facilitated the development of well-founded recommendations for the further advancement of the industry under the conditions of European integration and martial law.

Data from the Official website of the State Statistics Service of Ukraine (n.d.) was used to analyse vineyard areas, grape and wine production volumes, and structural changes in the industry. Some data for 2022-2023 became unavailable or confidential due to martial law and related restrictions. Information was also obtained from official websites of leading industry associations, such

as Ukrvinprom (Ukrvinprom, n.d.), the International Organisation of Vine and Wine (International Organisation of Vine..., n.d.), and industry journals and web platforms specialising in viticulture and wine production. Additionally, regulatory documents governing the development of viticulture and wine production in Ukraine, including laws, government decrees, state support programs, EU association agreements, and other regulatory acts defining the framework conditions for the industry's operation, were analysed. To study the scientific approaches and methods applied in viticulture and wine production, works of Ukrainian and other authors published in periodicals, monographs, and conference proceedings were reviewed.

► Results

With the development of the market economy in Ukraine, new winemakers emerged aiming to transform Ukrainian wine production and demonstrate that high-quality wine can be produced in the country. While climatic conditions were favourable for such production, legislative simplifications were required to facilitate business operations. The lack of effective financing mechanisms and government programs to support the wine production industry significantly constrained its development. Additionally, tax regulations and high entry barriers to the market further hindered progress in wine production. Ukrainian wine remained largely unknown abroad, and Ukraine's reputation as a wine-producing country was underdeveloped (Why wine doesn't sparkle, 2023).

Since 2014, Ukrainian viticulture has experienced a clear downward trend, evidenced by the reduction of vineyard areas by 14.0 thousand hectares and a decrease in the gross production of grapes by 171.5 thousand tonnes (Official website of the State..., n.d.). This decline is primarily linked to the annexation of the Crimean wine production region. In addition to geopolitical shifts, the development of wine production was hampered by bureaucratic procedures. Until 2018, obtaining a wine production licence required collecting 160 permits. However, this procedure was simplified in 2018 (Between Barcelona and Ochakiv..., 2021).

Despite losing such a significant wine production region, Ukraine's wine production sector has seen dynamic development in recent years. Since 2015, the direction of Ukraine's viticulture and wine production has shifted, with the emergence of numerous small producers who could potentially serve as the foundation for larger enterprises. Ukrainian wine began receiving international recognition, and craft producers started to encourage local consumers to favour domestic winemakers. Grape growers, winemakers, oenologists, and sommeliers significantly improved their professional skills, contributing to the industry's development. By 2021, there were about 266 enterprises in Ukraine involved in grape growing and wine production, including 125 wine production enterprises and 29 small wine producers. Each hectare of vineyards employed an average of 33 permanent workers, with the average number of employees per enterprise at 255, demonstrating high employment levels in this economic sector compared to others (Discussion of Ukraine's wine..., 2023). However, in February 2022, the dynamic development of Ukraine's wine production industry was interrupted. Since the start of the full-scale war, Ukraine's wine

production industry has suffered significant losses. Many vineyards and production facilities fell under occupation or were threatened by shelling, and some were contaminated with hazardous materials. A significant number of industry workers, winemakers, were forced to leave their homes (Ukraine needs a state program..., 2023). Russian shelling, the looting of wineries, the mining of vineyards, and the destruction of wine warehouses have inflicted irreparable damage on the sector. Roman Zayats, founder of the media project "Sertsevin" and the special project "Svoye Vino," was among the first to document Ukrainian wineries after the full-scale invasion began (Wine among mines and rockets, 2023). In April 2022, he and his team conducted a two-week expedition, resulting in the documentary film "Wounded Land," produced in collaboration with Ukrainian, American, and Polish partners. Initially planned as a series on Ukraine's wine culture, the project shifted its format due to the war. The first location documented was the wine warehouse of the Goodwine store in Stoyanka, which had been shelled, leaving only a few hundred charred bottles. The team also visited Wineldea winery in Yasnohorodka, which had been struck just a week before filming, but the wine remained intact. As a result of Russian actions, the Kherson Chateau of Prince Trubetskoy, with over 120 years of history, was severely damaged. Although the area where the winery is located has been de-occupied, it is currently impossible to resume production due to extensive damage from the fighting and the ongoing threat of shelling.

Russian aggression has also complicated the supply of components, which are now imported from abroad. The closure of the bottling plant in Hostomel forced producers to purchase bottles from Moldova and other countries. Logistical issues have also complicated orders for corks from Portugal, necessitating the use of intermediaries (Development of viticulture in Odesa region..., 2023). Due to the fighting, the area of fruit-bearing vineyards in Ukraine has decreased by one-third, posing serious challenges for winemakers. Overall, Ukraine's wine production sector may lose nearly half of its vineyards due to Russia's invasion, as most vineyards are located in the southeastern regions of high risk. Restoring destroyed perennial plantings will take considerable time, as it takes five years from planting to the first harvest. The production of grape seedlings has also decreased.

Let us take a closer look at the statistical information on the area of fruit-bearing vineyards (Fig. 1). The graph illustrates the dynamics of vineyard areas (all categories of farms) in Ukraine from 1990 to 2023. The categories examined include all farms, agricultural enterprises, and household farms. In 1990, the total area of vineyards (across all categories of farms) exceeded 143 thousand hectares. From 1990 to 2010, there was a sharp decline to approximately 68 thousand hectares. The area then stabilised, but from 2014, following the annexation of the Autonomous Republic of Crimea, there was another significant decline, reaching below 44 thousand hectares, and subsequently dropping further to 25.2 thousand hectares by 2023 (Official website of the State..., n.d.). In the period from 1990 to 2023, the area of fruit-bearing vineyards decreased by 82.4%. Compared with 2010, the decline is 62.7%, with 2015 – 39.7%, and with 2021 – 27.4%.

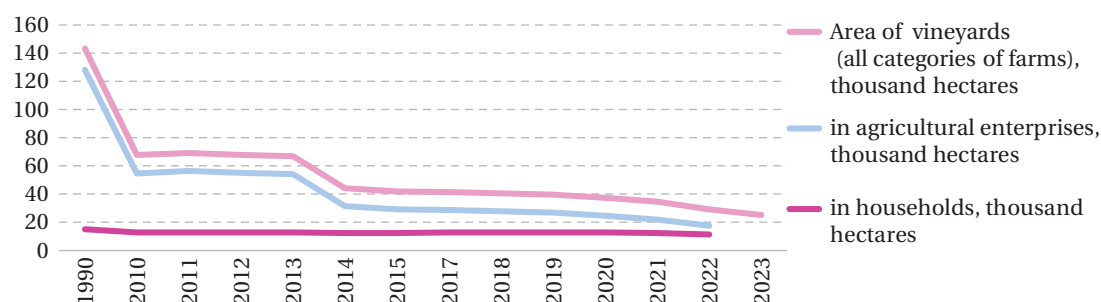


Figure 1. Area of vineyards in bearing age, thousand hectares

Source: Official website of the State Statistics Service of Ukraine (n.d.)

The area of vineyards in agricultural enterprises has significantly decreased since 1990. In 2014, there was again a notable decline, consistent with the overall trend. By 2023, the area had reached only 17.6 thousand hectares. Analysis of the vineyard area in household farms indicates that this category has the smallest vineyard area compared to other categories. From 1990 to 2010, the area declined from approximately 15 thousand hectares to around 11 thousand hectares by 2023.

From this figure, the main conclusions are that the reduction in the vineyard area began in the 1990s and significantly intensified after 2014. The most substantial decrease is observed in agricultural enterprises, reflecting the overall trend of loss of industrial vineyards. While vineyards in household farms have also diminished, the rate of this decline has been less steep. The annexation of

Crimea (2014) and the full-scale invasion (2022) have significantly impacted the overall area of vineyards, posing a considerable challenge for the Ukrainian wine production industry. This data highlights the significant challenges faced by the industry in Ukraine over the past decades.

Overall, during the period from 1990 to 2022, there has been a positive trend towards increased grape yields, which may indicate producers' adaptation and the implementation of new technologies. Increasing yields requires investment in new technologies, state support, and the modernisation of production processes (Topov, 2017). The adoption of modern agro-technologies and improved management could help enhance production efficiency and stabilise the sector. Regarding agricultural enterprises, there was an increase in yields until 2018, followed by a significant downturn (Fig. 2).

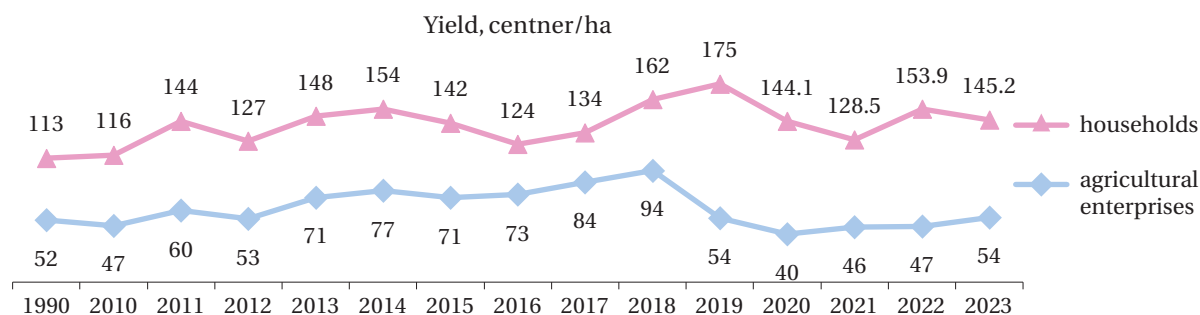


Figure 2. Yield per hectare of plantings, centners

Source: Official website of the State Statistics Service of Ukraine (n.d.)

From 1990 to 2023, there has been a significant decline in grape production in Ukraine. The total volume of grape production (across all categories of farms) was 836 thousand tonnes in 1990; by 2010, this had decreased dramatically to 408 thousand tonnes (a reduction of half). Following this, production volumes fluctuated, peaking in 2011 (522 thousand tonnes), 2013 (575 thousand tonnes), and 2018 (468 thousand tonnes). A certain upward trend in this indicator was disrupted from 2010 to 2013. In 2014, compared to the previous year, grape production decreased by 34% of the total volume. This was caused by the occupation of the territory of the Autonomous Republic of Crimea, where a significant number of agricultural enterprises specialised in grape cultivation were located. The market supply structure for grapes has also been impacted, which has increasingly

been shaped by household farms in recent years. Since 2018, production has gradually decreased again, reaching 232 thousand tonnes by 2023.

Analysing grape production in agricultural enterprises, it should be noted that agricultural enterprises produced a significant portion of the grapes in 1990, but their contribution has gradually declined since that time. In 2018, the share of production from agricultural enterprises still accounted for more than half of the total volume, after which a decrease was observed.

Grape production in household farms: household farms made a significant contribution to grape production, especially from 2010 to 2018. During the period from 2010 to 2013, the share of grapes grown in household farms was about 35%, increasing to 44.7% in 2014, and reaching 70% by 2023 (Fig. 3).

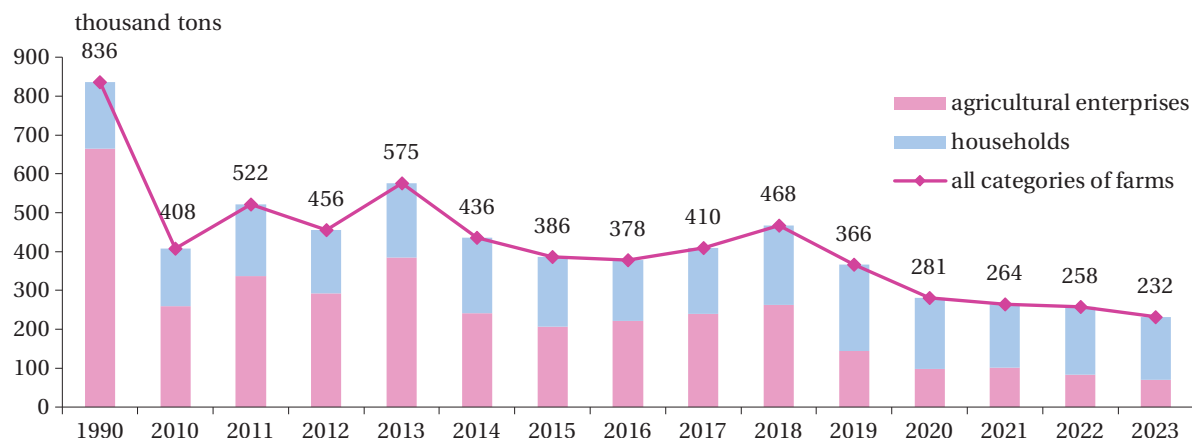


Figure 3. Grape cultivation in Ukraine, thousand tonnes

Source: Official website of the State Statistics Service of Ukraine (n.d.)

It is important to note that viticulture and wine production are vital sectors that contribute to job creation, especially in rural areas. For example, in the rural areas of Odesa region, viticulture provides between five to seven thousand permanent jobs, and during the harvest season,

this number doubles. Regarding processing, similar declining trends were also observed here (Fig. 4). The graph illustrates the changes in the volumes of grape processing into wine materials and the production of wine materials in Ukraine from 2018 to 2023.

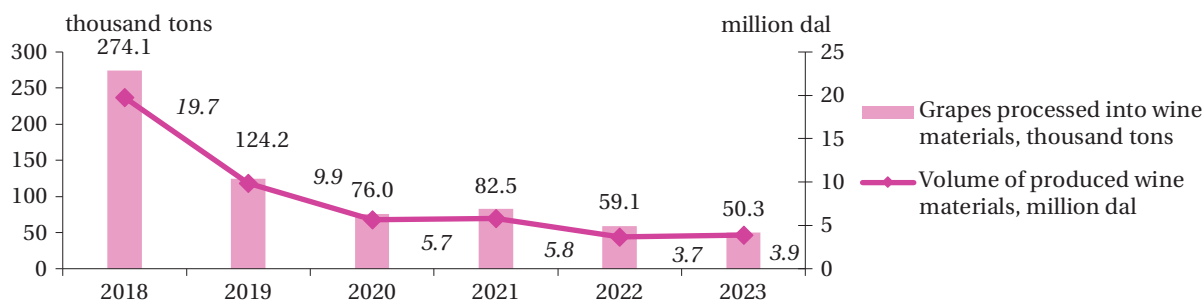


Figure 4. Dynamics of grape processing and production of wine materials in Ukraine

Note: excluding the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol

Source: Official website of the State Statistics Service of Ukraine (n.d.)

Let us examine the trends in more detail: 2018-2019: a sharp decline is observed in grape processing volumes (by 149.9 thousand tonnes) and the production of wine materials (by 9.8 million dals); 2019-2020: the decline in grape processing continues (by 48.2 thousand tonnes) and in the production of wine materials (by 4.2 million dals), although the rate of decline is slowing down; 2020-2021: a slight increase in grape processing volumes is noted (by 6.5 thousand tonnes) and stabilisation in the production of wine materials (an increase of 0.1 million dals); 2021-2023: the trend of decreasing grape processing volumes continues (from 82.5 thousand tonnes in 2021 to 50.3 thousand tonnes in 2023). Production of wine materials also decreases (from 5.8 million dal in 2021 to 3.9 million dals in 2023).

The reduction in grape processing volumes and production of wine materials may be linked to several factors:

primarily, the decrease in vineyard area as a result of economic and political factors; economic difficulties, leading to reduced demand for wine materials in both domestic and international markets; and geopolitical factors, including the annexation of Crimea, military actions in eastern Ukraine, and the full-scale invasion.

Full-cycle production enterprises, which encompass all stages from raw material cultivation to wine production and sales, ensure the independent functioning of their production capacities. In contrast, farming enterprises face challenges in selling the technical grape varieties they cultivate. In Ukraine, technical grape varieties are predominantly grown, and there is a shortage of table grape varieties, particularly raisins. Leading varieties include Aligoté, Cabernet Sauvignon, Muscat (white, pink, Ottonel, etc.), Rkatsiteli, and Chardonnay (Table 1).

Table 1. Grape processing into wine materials, t

	2018	2019	2020	2021	2022	2023
Total grape processed	274,052	124,227	75,982	82,464	59,121	50,333
by variety						
Aligoté	29,001	14,056	7,204	10,180	9,722	7,461

Table 1, Continued

Total grape processed	2018 274,052	2019 124,227	2020 75,982	2021 82,464	2022 59,121	2023 50,333
Bastardo Magaracha	7,772	2,874	2,321	2,082	κ	κ
Cabernet Sauvignon	25,939	12,891	9,862	11,084	5,244	5,394
Merlot	14,803	6,662	3,459	4,862	3,620	2,493
Muscat (white, pink, Ottonel, etc.)	19,789	8,392	7,942	6,788	4,402	4,825
Odesa Black	7,462	3,110	2,416	1,705	1,956	2,086
Pinot (white, black, grey)	12,123	5,061	4,598	3,282	1,903	2,883
Riesling (Rhine, Italian)	12,401	8,484	5,342	4,833	3,777	2,161
Rkatsiteli	15,396	5,459	3,831	4,741	3,856	3,385
Pervenys Magaracha	... ²	κ	-	-	-	-
Podarok Magaracha	... ²	κ	-	-	-	-
Saperavi (Northern)	10,746	4,353	3,302	4,095	3,772	2,610
Sylvaner	... ²	κ	κ	-	-	-
Sauvignon (white, green)	12,249	6,031	4,131	4,224	3,700	2,420
Sukholimansky	4,464	954	1,148	1,351	716	460
Traminer Rosé	4,783	1,893	1,198	979	1,063	1,055
Feteasca (Leanka)	4,242	2,005	κ	κ	κ	κ
Citronny Magaracha	... ²	κ	κ	κ	-	-
Chardonnay	23,757	11,357	7,537	10,934	5,612	4,486
Others	64,751	30,281	10,749	9,726	7,054	6,705

Note: κ – data not available

Source: Official website of the State Statistics Service of Ukraine (n.d.)

Varietal analysis indicates that different grape varieties exhibit a similar downward trend, although there are some exceptions. For instance, the varieties Aligote, Cabernet Sauvignon, Muscat, and Chardonnay maintain relatively high processing volumes compared to other varieties. A comparative analysis of 2018 and 2023 showed that the varietal structure of grape processing in Ukraine has changed, specifically with increases in the processing volumes of popular grape varieties such as Aligote (up by 5% from 11% in 2018 to 16% in 2023, indicating a rise in its

popularity and processing), and Muscat (up by 3% from 7% in 2018 to 10% in 2023). The share of the Others category decreased from 24% in 2018 to 14% in 2023, suggesting a concentration of processing on more popular or economically viable varieties. The shares of Cabernet Sauvignon, Merlot, Sauvignon, Riesling, Pinot, and Chardonnay remained relatively stable with minor fluctuations. The varieties Bastardo Magaracha and Feteasca were no longer mentioned in 2023, which may indicate a reduction in their processing or exclusion from industrial use (Fig. 5).

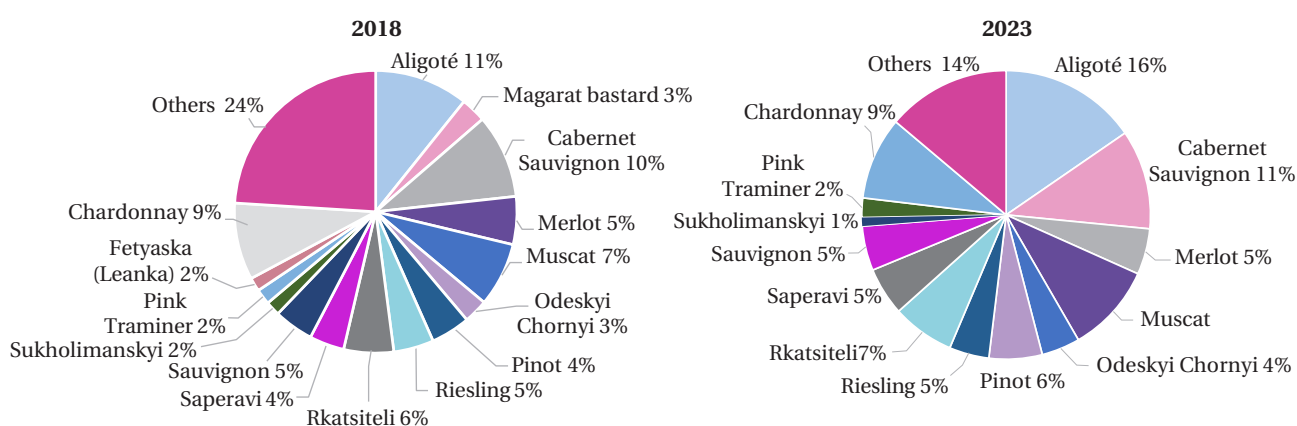


Figure 5. Grape processing varietal structure in Ukraine, %

Note: excluding the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol

Source: Official website of the State Statistics Service of Ukraine (n.d.)

The highest volume of wine material production was observed in 2018 (19,750 thousand dal). After this, production gradually declined, reaching a minimum in 2022 (3,671 thousand dal). In 2023, a slight recovery was noted, rising to 3,861 thousand dals. The distribution by category shows that: the production volumes of champagne and

sparkling wines significantly decreased from 5,079.9 thousand dal in 2018 to 1,157.2 thousand dals in 2023. For brandy wine materials, the highest production volume was in 2018 at 4,990.2 thousand dals, but it sharply declined to 267.4 thousand dals in 2023. Table wines remain the most significant category in terms of volume, but also show a

downward trend, falling from 9,279.1 thousand dal in 2018 to 2,381.9 thousand dals in 2023. Fortified wines experienced fluctuating production, peaking at 614.8 thousand dals in 2021, before decreasing to 328.1 thousand dals in

2023. The use of rectified spirit reached its highest level in 2018 (67.6 thousand dal), after which it fell to 21.8 thousand dals in 2021. Data for 2022-2023 was unavailable at the time of the publication (Table 2).

Table 2. Production of wine materials by product assortment, usage, and stocks of rectified spirit

	The volume of produced wine materials, thousand dal					
	2018	2019	2020	2021	2022	2023
Total wine materials	19,750	9,883	5,683	5,815	3,671	3,861
Of which:						
For champagne and sparkling wines	5,079.9	18,95.2	1,360.6	1,873.0	888.3	1,157.2
Cognac	4,990.2	24,43.7	230.8	211.8	k	267.4
Table wines	9,279.1	50,85.9	3,585.8	3,092.9	2,686.6	2,381.9
Fortified wines	279.9	311.7	464.8	614.8	k	k
For maturation (table wines)	k	118.9	k	k	k	k
For maturation (fortified wines)	k	-	-	-	-	-
Other	66.3	k	k	-	k	k
Rectified spirit used	67.6	58.0	51.3	21.8	k	k
Availability of rectified spirit as of 1 December 2023	k	-	k	-	k	-

Note: k – data not available

Source: Official website of the State Statistics Service of Ukraine (n.d.)

The Odesa region is the leader in wine production in Ukraine, with a production volume of 2,320 thousand dal of wine and the processing of 67,037 thousand tonnes of grapes in 2021. The region was home to 49 wineries and 200 enterprises, engaged in grape processing and cultivation, accounting for over 60% of the country's wine production. The largest vineyard areas are concentrated in Bessarabia. Odesa wines, due to the unique climate, can resemble French, Italian, and Spanish wines. Currently, negotiations are underway for the export of Odesa sparkling wine to the USA and European countries (Official website of the State..., n.d.).

The average purchase price of grapes for processing generally showed a trend of increasing from 2018 to 2023, reflecting the overall rise in prices in the industry (from 5,463.3 UAH per tonne to UAH 7,622.4 UAH/tonne in 2021

and to 8,337.7 UAH/tonne in 2023), although price reductions were observed in 2019 (5,453 UAH/tonne) and 2022 (7,531.4 UAH/tonne).

Price increases by variety: Traminer Rosé – the price rose from 6,164.9 UAH per tonne in 2018 to 10,619.3 UAH per tonne in 2023; Pinot (white, black, grey) – the price increased from 5,706.0 UAH per tonne in 2018 to 9,689.6 UAH per tonne in 2023; Odesa Black – the price rose from 5,280.1 UAH per tonne in 2018 to 9,033.1 UAH per tonne in 2023; Sauvignon (white, green) – the price rose from 5,745.1 UAH per tonne in 2018 to 8,384.1 UAH per tonne in 2023; Riesling (Rhine, Italian) – the price rose from 5,338.0 UAH per tonne in 2018 to 8,241.2 UAH per tonne in 2023; Sukholimansky – the price rose from 4,446.9 UAH per tonne in 2018 to 7,716.2 UAH per tonne in 2023 (Table 3).

Table 3. Average purchase price, UAH per tonne

	2018	2019	2020	2021	2022	2023
Total grape processed	5,463.3	5,453.7	6,608.4	7,622.4	7,531.4	8,337.7
by variety						
Aligoté	5,695.6	4,973.7	6,689.0	9,176.6	7,233.2	8,018.1
Bastardo Magaracha	5,720.7	7,012.8	8,506.5	9,652.3	k	k
Cabernet Sauvignon	5,890.8	4,951.9	7,026.9	7,663.7	7,793.0	8,477.8
Merlot	5,612.8	4,760.7	7,499.9	6,247.9	7,103.1	8,396.9
Muscat (white, pink, Ottonel, etc.)	5,927.3	5,821.3	6,665.2	8,153.6	7,358.2	7,639.6
Odesa Black	5,280.1	5,107.7	6,035.3	7,483.7	7,453.3	9,033.1
Pinot (white, black, grey)	5,706.0	5,923.4	6,386.4	11,037.3	8,780.6	9,689.6
Riesling (Rhine, Italian)	5,338.0	4,113.0	5,566.6	5,980.1	5,027.1	8,241.2
Rkatsiteli	5,049.3	5,638.6	7,887.3	7,554.2	7,222.7	8,627.9
Pervenets Magaracha	-	k	-	-	-	-
Podarok Magaracha	-	k	-	-	-	-
Saperavi (Northern)	4,705.0	5,697.5	7,720.1	6,875.9	8,401.0	8,635.0
Sylvaner	k	k	-	-	-	-
Sauvignon (white, green)	5,745.1	4,758.1	6,439.8	6,825.1	7,169.9	8,384.1
Sukholimansky	4,446.9	3,895.5	4,655.6	4,222.5	5,569.1	7,716.2

Table 3, Continued

	2018	2019	2020	2021	2022	2023
Total grape processed	5,463.3	5,453.7	6,608.4	7,622.4	7,531.4	8,337.7
Traminer Rosé	6,164.9	6,071.5	6,482.4	6,608.3	8,647.2	10,619.3
Feteasca (Leanca)	4,436.5	2,957.6	k	k	k	k
Citronny Magaracha	-	-	-	-	-	-
Chardonnay	5,721.1	5,302.5	7,221.0	7,426.6	7,783.5	8,583.4
Others	5,119.1	6,057.9	5,259.0	7,502.5	7,377.9	6,834.9

Note: k – data not available

Source: Official website of the State Statistics Service of Ukraine (n.d.)

Thus, prices for all major grape varieties have significantly increased over the analysed period, which might be related to inflation, rising production costs, increasing demand for wine materials, and other economic factors. The most substantial price increases were observed in varieties of high demand or less common. As for technical grape varieties, Aligoté, Cabernet Sauvignon, Muscat, Saperavi, Merlot, Chardonnay, Rkatsiteli, and Riesling, their selling price ranges from 8 to 12 UAH per kilogram. Regarding the export of grape wine from Ukraine under

code 2204 “Grape wines, including fortified wines; grape must”, there is a trend of fluctuation from 2010 to 2018, when an average of 48 million litres was exported. This trend was disrupted in 2019, leading to a collapse in export volumes. Over the next five years, a total of 48 million litres were exported only, averaging 9.6 million litres per year. In 2022, the onset of the full-scale invasion resulted in a further halving of export volumes; however, in 2023, Ukrainian producers began to restore pre-war export levels (Table 4).

Table 4. Dynamics of grape wine export and import

	Export			Import		
	Volume, million litres	Value, thousand USD	Price per litre, USD	Volume, million litres	Value, thousand USD	Price per litre, USD
2010	63.65	63	1.00	32.8	69	2.11
2011	33.23	45	1.36	50.0	106	2.12
2012	44.85	51	1.14	33.3	106	3.17
2013	60.98	71	1.16	34.7	127	3.66
2014	45.41	35	0.77	27.3	96	3.50
2015	61.23	38	0.62	23.3	56	2.41
2016	31.57	25	0.78	43.2	85	1.98
2017	44.29	36	0.81	37.9	104	2.75
2018	46.93	40	0.85	37.9	125	3.31
2019	6.83	12	1.75	45.0	147	3.26
2020	14.4	13.1	0.91	53.2	179.2	3.37
2021	10.4	16.4	1.58	64.0	215.4	3.37
2022	5.7	8.7	1.52	36.9	117.8	3.19
2023	10.7	8.8	0.83	51.4	180.1	3.50

Source: Official website of the State Statistics Service of Ukraine (n.d.)

A negative trend is observed as export volumes continue to decline, while imports have reached record highs in recent years: 53.2 million litres valued at USD 179.2 thousand in 2020, 64.0 million litres valued at USD 215.4 thousand in 2021, and 51.4 million litres valued at USD 180.1 thousand in 2023. Additionally, wine is exported at an average price of 1 USD per litre, which is half the cost of imports. Export prices have varied, with the lowest recorded in 2015 (USD 0.62) and the highest in 2019 (USD 1.75). For imports, the price per litre ranged from USD 1.98 to USD 3.66 in 2013, and USD 3.50 in both 2014 and 2023.

The peak volumes and values for export were recorded in 2010 (63.65 million litres worth USD 63 thousand) and 2013 (60.98 million litres worth USD 71 thousand). The lowest export volumes occurred in 2019 (6.83 million litres worth USD 12 thousand) and 2022 (5.7 million litres worth USD 8.7 thousand). There was a notable increase

in both volumes and values of exports in 2023, reaching 10.7 million litres and USD 8.8 thousand. The minimum import volumes and values were in 2015 (23.3 million litres worth USD 56 thousand) and 2014 (27.3 million litres worth USD 96 thousand). Throughout the entire period, import volumes have consistently exceeded export volumes, indicating Ukraine's dependence on imported wines. Imported wine is significantly more expensive than exported wine.

Let us examine these issues in more detail. Grape and wine producers in Ukraine face numerous economic challenges, including competition from imported wines and fluctuations in the market. The high volume of imports compared to exports highlights the need to enhance the competitiveness of wines produced in Ukraine, both in the domestic market to reduce dependence on imports and in international markets.

Pricing policy also plays a crucial role; since the cost of imported wine is significantly higher than that of exported wine, there are opportunities to increase the added value of Ukrainian wine products. This data underscores the importance of developing strategies to support and grow the wine industry, particularly through improving product quality and expanding export markets. In 2023, the main countries importing Ukrainian wine were Romania, accounting for 62% of the total export volume, followed by Moldova (14.6%), Kazakhstan (3.5%), Poland (2.6%), Turkey (2.2%), Latvia (1.6%), the USA (1.4%), and Israel (1.1%). The share of exports to other countries was less than 1%, and these countries were not included in the sample.

For leaders of the wine industry, such as France, Italy, and Spain, Ukraine is a relatively young wine producer. However, historically, viticulture in Ukraine has roots that span several millennia (Development of viticulture in Odesa region ..., 2023). Modern Ukrainian wines are already

gaining recognition and awards in international competitions, attesting to their high quality and competitiveness.

The biggest challenge facing Ukrainian agriculture at present is logistics. The blockade of maritime routes has made global exports impossible, forcing reliance on road transport, which faces difficulties at borders and delays (Development of viticulture in Odesa region..., 2023). In 2023, the primary suppliers of grape wine to Ukraine were Italy (36.7% of total imports), Spain (16.9%), Georgia (13.7%), France (11.6%), Germany (4.4%), Moldova (3.6%), Portugal (3.1%), and Poland (2.3%) (Official website of the State..., n.d.).

There is a risk that the Ukrainian market will continue to be filled up with imported products. However, given the low purchasing power of the population and military actions within the country, other developments are also possible, including a likely decline in wine consumption, as this beverage is not a necessity (Fig. 6).



Figure 6. Wine Import forecast using exponential smoothing

Source: Official website of the State Statistics Service of Ukraine (n.d.)

Supporting the assertion that Ukraine produces wines that can compete with those from France, Italy, and Spain, and sometimes even surpass them, are expert tastings. "Ukrvinprom" in collaboration with the State Consumer Service, as well as the representatives from the Antimonopoly Committee of Ukraine (AMCU), the State Tax Service (STS), the Ministry of Agrarian Policy, the Ministry of Economy, and the Association of Sommeliers of Ukraine, has repeatedly organised meetings of the tasting commission. At these events, samples of both Ukrainian and imported wines purchased from retail chains in Ukraine are tested. These tasting events are unprecedented for the Ukrainian wine market and hold significant importance for quality control and enhancing the competitiveness of Ukrainian wine products. As the results of the meetings have shown, 30% of imported wine products and 90% of imported wine-based beverages exhibited various violations, unlike the Ukrainian samples. This underscores the importance of such initiatives in ensuring high-quality standards in the Ukrainian wine market and confirms the competitiveness of Ukrainian wines on the global stage (Wine production in Ukraine..., 2023). Currently, Ukraine needs to seek new markets for its products globally, considering that the European wine market is highly competitive, and the significant volumes of supply complicate the entry of Ukrainian producers into it.

The current state of viticulture in Ukraine does not favour the development of local wine production. The

viticulture industry in Ukraine is currently facing several significant issues (Kirillova, 2015). The mismatch between the production volumes of table grapes and the needs of the population, as well as between technical grape varieties and the requirements of wine production, negatively impacts the industry's development. Planting vineyards with lower-quality planting material reduces productivity, while old and sparse plantations increase production costs, lowering its competitiveness. The insufficient number of equipped wineries and storage facilities limits production scale and product quality, while the lack of an adequate logistics system complicates the effective delivery of wine to consumers. Low consumer awareness and the absence of a wine culture restrict demand for Ukrainian wine, and inadequate branding identity and advertising hinder its promotion in the market. Additionally, a significant labour shortage due to the military situation creates further difficulties for enterprises. Despite these challenges, wine production in Ukraine has the potential for development due to its favourable climate and the diversity of grape varieties. Significant government support is needed to address the industry's issues and ensure its sustainable development (Why wine doesn't sparkle, 2023).

To support wine production, the government can implement a range of measures, including introducing effective funding programs and encouraging investment in the sector. The introduction of a favourable tax regime and the simplification of the registration process for wine

production companies are also important. To support the development of wine production, it is necessary to construct modern wineries and storage cellars, as well as improve the logistical infrastructure for the effective supply of wine to consumers. Financial support should focus on these key aspects to ensure stable growth and competitiveness for Ukrainian wine production. To adapt to EU requirements, it is essential to patent new names for borrowed wine and other beverage names (such as champagne, cognac, sherry, and khorosh), and to create a wine cadastre to monitor wine quality (Davydenko, 2023).

It is worth noting that the wines produced in Transcarpathia received an official geographical indication (GI), which enhances their competitiveness in the international market and contributes to the economic potential of the relevant region. The granting of this status by the Public Union "Transcarpathian Grapegrowers and Winemakers" is an important economic event that protects local wines as unique products and promotes them beyond Ukraine's borders. The document was presented to the founder of the union, Hennadiy Hutman, by the First Deputy Director of the Ukrainian National Intellectual Property and Innovation Office, Bohdan Paduchak (Chateau Chizay's official..., n.d.). The GI, analogous to the European PGI system, regulates production practices while maintaining high product quality. This ensures added value for grape products and supports the economic development of the region. The author of this study believes that a similar practice should be applied to other Ukrainian wines.

Regarding investment, despite the martial law, risks in Ukraine are the primary concern for investors in the viticulture and wine production sector. The owner of the wine production company Vinos de La Luz and an investor in Ukrainian wine production, Ricardo Núñez, sees his mission as teaching Ukrainians to drink native wine, which he believes will most significantly contribute to the development of the industry (How to support winemakers..., 2023).

The author of this research believes that it is necessary to raise public awareness about wine, its quality, and value through the organisation of events to promote Ukrainian wine – such as wine festivals, food, cheese, and wine festivals, masterclasses and tastings, and information campaigns (organisational and educational support). There have already been some achievements in this direction, including the initiation of the Day of Odesa Black – a grape variety (Ukrainian wine production should ..., 2023). Wine producers in Ukraine should establish a clear brand identity and develop an effective marketing strategy for promotion. It is important to ensure quality packaging and highlight the product's origin, as this can positively influence consumer perception.

The next issue to consider is the existing support from the government, particularly for enterprises that grow and process grapes. The government has introduced several programs, available through a unified state agricultural register. In 2022, within the framework of the state support program for the development of horticulture, berry farming, and viticulture, financial assistance from the World Bank provided funding amounting to UAH 322 million, which allowed for the creation of approximately 400 permanent and 9,000 seasonal jobs. This support has continued into 2023, with a plan to allocate about UAH

1 billion. As of 4 April 2024, according to the report, UAH 694.2 million has been allocated for the development of horticulture, berry farming, and viticulture (Grants for horticulture..., 2024).

In turn, the Verkhovna Rada of Ukraine has adopted amendments to the legislation that simplifies the registration and operation of the wine production business, including Bill No. 9030 dated 9 August 2023. Accordingly, the adopted Law "On Amendments to the Tax Code of Ukraine and Certain Laws of Ukraine on the Development of Wine Production and Simplification of Economic Activities for Small Wine Producers" No. 3303-IX dated 9 August 2023 (Law of Ukraine No. 3303-IX..., 2023). The main changes in the legislation include several key aspects. Firstly, for small wine producers producing up to 10,000 decalitres per year, the process of obtaining a license has been simplified. They can now apply for a license along with a payment receipt, conduct wholesale trade without a separate license, and carry out retail trade without a retail license. Secondly, tax benefits and simplified reporting have been provided for small producers. The license for wholesale trade now costs 30,000 UAH instead of the previous 500,000 UAH. Reporting is required to be submitted annually rather than monthly as before. Thirdly, there is the possibility of using modern packaging materials, including bottling wine and wine beverages in metal cans and kegs.

These changes are aimed at stimulating the development of small wine production, optimizing the requirements for the material and technical base, simplifying the licensing procedures, and enhancing the competitiveness of Ukrainian wines. Industry associations believe that deregulation will contribute to an increase in the number of winemakers and an expansion of the range of wines in Ukraine (Davydenko, 2023).

The growth in the number of wine production enterprises will increase competition, stimulating the production of new, unique wine blends to satisfy consumer demand. This will foster the development and cultivation of various grape varieties across different regions. The simplification of bureaucratic procedures for obtaining permits, licenses, and certificates generally makes it easier for winemakers to operate.

The draft law "On Grapes and Viticultural Products" (No. 9139), which is preparing for its second reading, includes the unification of terms and definitions, the classification of grape varieties, and requirements for the production of viticultural products (The Parliament adopted..., 2024). It establishes principles for the inspection of wine production, recognition of controlling bodies and their powers, and specifies penalties for violations of the law's requirements. This law introduces definitions of the mechanism for protecting GI within Ukraine. It also envisages the creation of a unified state information system called the "Viticultural and Wine Production Register," supports viticulture and wine production, and introduces new terms and definitions under European standards. Additionally, it anticipates the possibility of state support for viticulture and wine production.

Moreover, there are plans to expand the grape and wine production zones, as theoretically, grapes could be cultivated across a larger part of Ukraine's territory, along with diversification (searching for new recipes and wine

flavours by consumer demand) (Ukrainian wine production should..., 2023). For example, there is a shift in consumer preferences from port wine to youth-oriented drinks based on wine in metal cans. Rosé wines have attracted increased attention globally, particularly associated with the Barbie style, especially following the release of the respective film that became an information catalyst for many producers to present their new wines. This has boosted consumption and attracted new consumers to producers who previously specialised in port wine. The combination of Croft Pink and tonic was a natural fit, as it is a refreshing drink, providing convenience for consumers (single serving). For example, due to its ease of serving, this mix has become popular among airlines (Adrian Bridge..., 2024).

There are already specific regional programs aimed at developing viticulture. In the Odesa region, in particular, the "Agrarian of Odesa" program includes funding the creation of a vineyard cadastre for the region. Recently, approximately 5 million UAH has been allocated from the regional budget for the development of wine production (Winemakers and viticulturists of ..., 2023; Development of viticulture in Odesa region ..., 2023).

With Ukraine achieving candidate country status for EU membership, new prospects have arisen in agriculture, particularly in the viticulture and wine production sectors. The European Parliament has recently decided to abolish the EU import tariff on all Ukrainian exports, which presents a historic opportunity for Ukrainian agriculture, especially viticulture. This decision is particularly significant for regions where viticulture and wine production play an important social role by providing employment (Current issues of viticulture..., 2023; Winemakers and viticulturists of ..., 2023).

The European Union countries are actively assisting Ukraine. In 2023, the USAID program "Competitiveness of the Ukrainian Economy" supported the participation of 10 Ukrainian winemakers in the ProWein exhibition in Düsseldorf, promoting the development of exports under the brand Wines of Ukraine. Ukrainian wines are gaining international recognition thanks to this support (Wines of Ukraine..., 2023).

The renewal of Ukraine's membership in the International Organisation of Vine and Wine (OIV) is also a significant step for Ukrainian viticulture development. This event symbolises the integration of the state into the global community. The OIV, the legal successor to the International Bureau of Vine and Wine, which operated from 1924 to 2001, unites 49 countries and serves as the main organisation that sets wine production standards at a global level. It comprises four committees: viticulture, oenology, economics and law, and health and safety. The organisation includes 85% of the world's experts in the field of wine production and represents the interests of 80% of wine consumers. Ukraine's participation in the OIV provides access to modern knowledge and innovations, which are essential for the development of the national wine industry in the context of European integration. It also creates opportunities for the exchange of experience, which aids in promoting Ukrainian wines in international markets (Rejoining the International Organisation..., 2023). Membership in the OIV opens access for Ukrainian winemakers

to international databases and cutting-edge technologies, contributing to the creation of competitive products and expansion into new markets, including the EU. It also helps to raise production standards in line with European requirements, particularly regarding GI. Membership will enhance awareness of Ukrainian wine and showcase its potential on the world stage. However, dynamic economic changes, war, competition from imported wines, a lack of harmonisation of legislation with EU directives, and a low level of wine consumption culture pose obstacles to the industry's development that must be overcome.

Despite these existing challenges, Ukrainian wine production has significant potential for growth. With 15 natural viticultural macro-zones and 58 micro-zones, Ukraine, with favourable government policies, has every chance of becoming a global leader in wine and wine product production. This is one of the key areas for creating added value, the potential of which the author of this study aims to increase (Discussion of Ukraine's wine..., 2023).

With the development of digitalisation, information about wineries spreads rapidly. The COVID-19 pandemic stimulated interest in local wines, while domestic tourism contributed to their popularity. Successful cases, such as the craft winery Kalyus Winery, demonstrate that most wines are sold during tastings and through Instagram. Since the beginning of 2022, the winery has signed dozens of contracts with restaurants, bars, and wine boutiques. Small wineries like Kalyus Winery also show a social focus in their business, donating 10% of sales to support the army and various projects. For instance, they purchased meat and made canned goods for the military (Wines of Ukraine. Podillia..., 2023).

Another example of craft production that has grown into a larger operation is Beykysh Winery, which opened tasting tours and created a wine club to promote its products. In 2022, plans were underway to open a small hotel to attract tourists and expand the business (Between Barcelona and Ochakiv..., 2021).

The owner of Bohdan's Winery also emphasises the importance of educational work that small wine production enterprises must conduct to attract consumers. He believes that financial assistance from the government and a simplified mechanism for obtaining support from investors are essential for the development of the wine industry in Ukraine (Wines of Ukraine. Podillia..., 2023).

To ensure the effective use of aid from Western countries, it is necessary to develop a clear government program for agricultural development. For the wine production sector's development, it is important to create a special government program aimed at elevating the wine industry to a new level. The program should include the identification of development priorities for viticulture, taking into account regional and zonal characteristics, improving the mechanism for state support for enterprises, individual entrepreneurs, and household farms in the field of viticulture, as well as ensuring the development of wine production.

Measures must also be taken to develop the infrastructure of the wine production market, diversify sales channels, and ensure product quality. This includes regulating supply and demand and protecting the market from low-quality imported products and raw materials. It is vital to increase the capacity of the grape market and its

processed products, considering the population's needs, purchasing power, and export opportunities. Furthermore, collaboration between scientists and practitioners is necessary to improve the quality and recognition of Ukrainian wine products. Finding methods to enhance competitiveness through the implementation of modern technologies and attracting investments in the wine production sector will positively impact the promotion of wine brands, expansion of sales markets, and the formation of a positive image of Ukrainian products.

► Discussion

The article by K. Jesiotr & E. Szymanska (2016) discusses the development of enotourism in Poland, confirming that appropriate promotion is the most significant factor in its success. The authors employed a survey method, the results of which corroborated the initial hypothesis. An important contribution of the work is the recommendations for changes in Poland's wine production legislation, support from local authorities, and measures to promote wine culture. The author concurs with the findings, recognizing the importance of these factors for the development of enotourism in Ukraine as well. It is also worth agreeing with the conclusions of L.M. Sheridan *et al.* (2009) regarding the development of wine tourism and its impact on rural communities, as their ideas are relevant to Ukrainian wine production. The article emphasises the importance of connections between wineries and local communities, which is particularly pertinent for the rural regions of Ukraine, where viticulture and wine production have deep-rooted traditions.

As in the Canary Islands, many wine production regions in Ukraine host small and medium-sized wineries, that are closely linked to local communities. These wineries can be vital sources of employment and stimulate economic activity through participation in cultural events and initiatives that promote the preservation of local traditions and culture.

Given the challenges faced by both Ukrainian wineries and communities, such as generational changes and economic pressure, it is essential to maintain and develop these connections. Strengthening cooperation between wineries and local communities can help preserve local wine production culture, foster sustainable development in rural areas, and bolster economic ties. Thus, Ukrainian wineries can leverage the findings of this research to develop growth strategies that take into account the needs and interests of local communities, thereby ensuring sustainable development and enhancing their competitiveness in the market.

In the context of Ukrainian wine production, it is worth agreeing with the conclusions of G.A. McDermott & R.A. Corredoira (2011) regarding the importance of establishing new public-private institutions to transform the sector. Similar to the Argentine example, the development of the wine production sector in Ukraine could gain significant benefits from close cooperation between public and private organisations. Such collaboration would facilitate the unification of various producer groups that previously operated in isolation or even competed with each other.

The establishment of new institutions that act as "social bridges" and "knowledge bridges" could promote

more effective dissemination of knowledge and resources, which, in turn, would enhance the competitiveness of Ukrainian wineries on the international stage. An approach that combines institutional and network analysis, as demonstrated in the Argentine experience, could be employed to support innovative development strategies in Ukraine, particularly through the development of new products and services and the improvement of management practices.

The findings of J. Simpson (2011) may be beneficial for Ukrainian wine production in several aspects, particularly concerning the organisational structure of the wine production industry and vertical integration. In particular, Simpson notes that the quality of grapes and the nature of market demand significantly influence the structure of wine production enterprises. This can be applied to the Ukrainian context, where the quality of local grapes and market requirements are also critical factors determining the success of wine production enterprises. The experience of New World countries such as Argentina, Australia, and California shows that vertical integration (meaning the combination of grape growing, wine production, and sales within one company) can contribute to the creation of large wine production factories capable of producing branded wines. In Ukraine, this approach could be employed to establish more efficient and competitive wine production enterprises that could better control the quality of their products and more effectively enter international markets. The results of this research correlate with data highlighting the importance of integrated development strategies for enhancing the competitiveness of the Ukrainian wine production sector. Similar to Simpson's studies, the importance of understanding local and international markets for shaping production and marketing strategies in wine production is emphasised.

The findings of M. Thorpe (2009) regarding the globalisation of the wine industry are also relevant to the Ukrainian wine production sector. In particular, Ukraine is part of the global wine market, where competition is increasing among traditional European producers, "New World" producers (such as Chile, Argentina, and Australia), and emerging markets like China. Like China, Ukraine has the potential for increased wine consumption, as well as the opportunity to strengthen its position as a producer in the global market. In the context of globalisation and changing consumer habits, Ukrainian wine production enterprises can benefit from expanding their markets and improving product quality, which will aid in competing with other major producers.

Furthermore, the restructuring and modernisation of the Ukrainian wine industry, as highlighted in the article regarding the Chinese experience, may become a key factor for adapting to changes in the global market and meeting the growing demand for quality wine. Thus, the author agrees that the globalization of the wine industry presents both threats and opportunities for developing countries, including Ukraine.

The article by D. Aylward & M. Clements (2008) examines the strategies employed in the Australian wine industry, particularly in the commodity wine market, and analyses their effectiveness in responding to contemporary challenges and opportunities. Several valuable

lessons can be gleaned for Ukrainian wine production; however, there are also aspects with which one may disagree. It is essential to emphasise the need for product and market differentiation, the creation of regionally identified products, and an understanding of global trends. At the same time, a diverse approach to market price segments should be maintained, rather than limiting oneself solely to the premium segment, to maximise all development opportunities.

Several important lessons from the studies mentioned below can be applied to Ukraine. The integration of wine tourism with the promotion of wine on online platforms, as suggested by V.J.P.D. Martinho (2021), could significantly enhance the recognition of local brands and stimulate demand. The research by G. Chen *et al.* (2022) demonstrates that data analysis from trading platforms enables the examination of consumer preferences, including product characteristics and service quality, which can be utilised to improve the marketing strategies of Ukrainian producers. J. Shen (2019) emphasises that online platforms facilitate price transparency and reduce marketing costs, which is crucial for expanding sales channels in conditions of limited resources. Additionally, employing modern models, as utilised by the authors, such as hedonic regression and machine learning for price prediction, could contribute to a more accurate understanding of market trends and optimise the sales strategy of Ukrainian wine.

► Conclusions

In Ukraine, viticulture continues to face serious challenges that adversely affect production. Since 2014, there has been a reduction of 14,000 hectares in vineyard areas, with total production decreasing by 171,500 tonnes. The main reasons for this are the annexation of the wine production region of Crimea and bureaucratic obstacles that complicated the acquisition of licences until 2018. Despite numerous challenges, Ukrainian wine production has continued to develop, and some positive trends have already emerged, thanks to small producers who may later form the foundation for larger enterprises. There has been a growing interest in local wine, and domestic tourism has contributed to the popularisation of this beverage. The

professional level of grape growers and winemakers has also improved, facilitating the development of the industry.

However, with the onset of the full-scale war in 2022, the wine production sector has suffered significant losses, as a large portion of vineyards have found themselves under occupation or threatened by shelling. Statistical data indicates a decline in grape production from 836,000 tonnes in 1990 to 232,000 tonnes in 2023, particularly due to an 82.4% reduction in the area of productive vineyards since 1990. The market is dominated by technical grape varieties, including Aligoté, Cabernet Sauvignon, and Muscat; however, there is a shortage of table varieties. Overall, viticulture and wine production remain important sectors of the economy, but modernisation of production processes, investment, and government support are necessary for their recovery and development, as existing problems such as the decrease in vineyard areas, an increase in imports, a decline in purchasing power, and a lack of modern infrastructure remain pressing issues.

The practical significance of this work lies in establishing a foundation for strategies and policies aimed at implementing innovations, expanding vineyards, enhancing wine consumption culture, and developing branding and marketing strategies to improve the competitiveness of Ukrainian wines in domestic and international markets. Prospects for further research may include analysing the effectiveness of various models of government support for wine production, exploring opportunities for integrating wine tourism into the overall development strategy of the industry, and assessing the impact of modern technologies on the quality and yield of vineyards.

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► Conflict of interest

None.

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Виноробство в Україні: виклики, можливості сьогодення

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► **Анотація.** Актуальність дослідження зумовлена необхідністю подолання викликів, що стоять перед виноградарством та виноробством України, таких як відсутність послідовної державної політики, високі податкові бар'єри, конкуренція з імпортною продукцією та негативний вплив військових дій, для забезпечення їхнього сталого розвитку та відновлення. Метою дослідження був аналіз сучасних тенденцій у виноградарстві та виноробстві України, визначення основних проблем та розробка пропозицій щодо їх вирішення для стимулювання розвитку галузі в умовах євроінтеграції та воєнного стану. Дослідження зосереджено на оцінці сучасного стану виноградарства та виноробства в Україні з використанням статистичних методів для аналізу виробничих показників та структурних змін у галузі. У ході дослідження було виявлено значне скорочення площ виноградників у плодоносному віці та зниження обсягів виробництва винограду з 1990 по 2023 роки. Було встановлено, що воєнні дії призвели до додаткових втрат виноградників та виноробних потужностей, що негативно вплинуло на розвиток галузі. Також було проаналізовано структурні зміни у виноробній галузі та узагальнено їх наслідки для національної економіки. Незважаючи на труднощі, в 2014-2023 рр. спостерігається зростання інтересу до українського вина на внутрішньому ринку та початок відновлення експорту, що свідчить про потенціал галузі до відновлення та розвитку. Результати роботи можуть бути використані органами державної влади та підприємцями для розробки політики підтримки виноградарства та виноробства, спрямованої на зниження імпоротної залежності та підвищення конкурентоспроможності української винної продукції

► **Ключові слова:** вино; державна підтримка; євроінтеграція; економічні виклики; розвиток галузі; інноваційні технології