

## WINE IMPORT IN THE CONTEXT OF TRANSFORMING GLOBAL CONSUMPTION

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**Abstract:** Global wine consumption has declined since 2018, while imports have reshaped who drinks what. The study evaluates structural shifts between wine-self-sufficient countries and import-reliant markets. We aim to identify drivers of import share, map consumption–production dynamics, and project trends to 2030. We compiled multi-source statistics (OIV, WTO, World Bank, ITC, GTA) for 2000–2023. Countries consuming  $\geq 0.5\%$  of global volume in 2023 were grouped as self-sufficient ( $n=12$ ) or import-reliant ( $n=15$ ). We analysed multi-year averages, per-capita use, import price/value, and performed Pearson correlations. A sensitive-interval (2020–2022) trend model was extrapolated to 2030 for consumption and imports. We also assessed tariff and non-tariff regimes, logistics factors, and producer support policies. Production exceeded consumption annually, cumulating  $\sim 717$  mhl surplus since 2000. Since 2018, global consumption fell  $\sim 1.75\%$ /year; imports dropped in 2022–2023 despite record 2022 values. The import share of consumption rose to  $\sim 45\%$  by 2023, then dipped with shocks and rising costs. Self-sufficient countries produced  $\sim 78\%$  yet consumed  $\sim 40\%$  in 2023, importing  $\sim 16\%$  of what they drink. Import-reliant countries consumed  $\sim 45\%$  and accounted for  $\sim 66\%$  of import volume and  $\sim 68\%$  of value. In group 1, substitutes, health trends, and quality-driven prices depress per-capita consumption. In group 2, broader choice and income effects lift per-capita use, but growth is volatile (e.g., PRC retrenchment). Non-tariff measures proliferated while tariffs are mostly nuisance-level; demand is the binding constraint. Forecasts indicate average 2010–2020-level imports through 2030, with marginal gains in group 1. Group 2 shows mild import declines; global import share is projected near  $\sim 42\%$ , akin to the early-2010s. Strategically, exporters should target group-2 markets with low wine shares and rising per-capita potential. Absent demand renewal, overproduction and softer imports will continue to weigh on the sector.

**Keywords:** global wine consumption, export of wine, restrictions on wine trade, wine-producing countries

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### INTRODUCTION

The wine industry has changed drastically in recent decades, with changes accelerating since the turn of the century. At the same time, the total production capacity of wine-producing countries has not changed significantly: they can produce and export the same volumes of wine. Significant changes have occurred in the structure of demand for wine and its consumption in the world based on international trade. The role of import in shaping trends in the wine market, our study is devoted to.

Wine is no longer a substitute for water at meals, as it was at the beginning of wine history. Wine has become a hedonistic and highly differentiated commodity that determines a consumer's status (Carbone, 2021). Furthermore, the consumer anywhere in the world is no longer limited in shaping wine preferences by what grows in their region/country. The whole world is a supermarket shelf. In the world, about 0.5% of the total area of agricultural land is occupied by vineyards. Of the world's 7279 Kha, the largest areas of vineyards are: Spain, France, the People's Republic of China (hereinafter the PRC), Italy, Turkey, and the USA (OIV, 2023a). All the countries in this group, except Turkey, constitute the core of global wine consumption. Turkey demonstrates an example of one of the base factors determining world wine consumption: cultural and religious values. This factor can lead to partial or complete restriction of wine consumption (small volumes of consumption in such countries are formed by tourist flows).

Spain, France and Italy are representatives of the Old-World countries, where the culture of wine consumption has been formed over centuries and is an integral part of their common culture. Since the 1860s, wine consumption in the world has gradually increased, falling during the World Wars, the main actions of which unfolded in the territory of European countries, forming the main share of world consumption in that period. In the 1980s, there was a long-term

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trend towards a decrease in wine consumption (Anderson, 2020). And, although since the beginning of the 21st century, wine consumption has slightly increased, but has not returned to the consumption volumes of the 1970s (Figure 1).

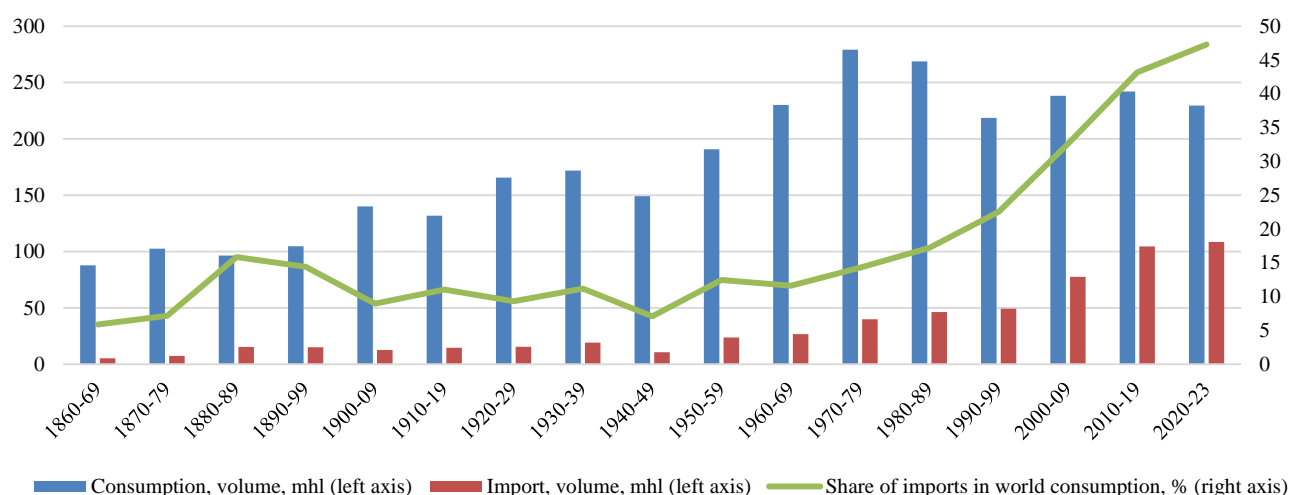


Figure 1. Dynamics of world wine consumption and imports, mhl (Source: Snoussi-Mimouni, Wijkström, & Meier-Ewert (2023))

World wine consumption is not directly related to the dynamics of its production. This is due, among other things, to the dependence of production on weather conditions over which man has no control, to the spread of and susceptibility to pests and diseases (a striking example is the damage caused to wine production by *phylloxera*), and to the different times required to produce wines of different quality (ageing). Even the disappearance from the market of the world's leading producers does not affect world consumption. Algeria, for example, produced up to 10% of the world's wine between the 1930s and 1950s and exported 50% of the world's wine in the 1950s. Today, the country produces virtually no wine.

Mass consumption and production of wine were relatively localised until the early 1990s, when the share of imports in consumption began to increase drastically. Researchers believe that in recent years, the development of demand for wine has been linked to the entry of consumers living in countries where wine was not a traditional and widespread alcoholic beverage. Thus, the growth of the wine trade in the 1990s was caused by the growth of wine consumption in Northern Europe and North America. In the 2000s, the international wine trade was boosted by an increase in demand, mainly in Asian countries, which had previously been marginally involved in wine imports (Ritchie & Roser, 2024; Jawabreh et al., 2025). Conversely, in traditional wine-producing countries, globalisation is enabling consumers to drink less wine and more other alcoholic beverages. To date, wine is one of the most globalised products in the world (OIV, n.d.). In the 1960s, the share of imports in global wine consumption was about 11%, and increased to 22% in the 1990s, 32% in the 2000s and 42% in the 2010s (Figure 1). In 2023, it was 45%, i.e., about half of the wine consumed is imported (Figure 1). This article aims to identify the factors influencing the increase in the share of imported wine in consumption; to analyse the structural changes in wine consumption since the beginning of the century through the prism of international trade; and to assess the trends in consumption and imports.

### Literature Review and Theoretical Framing

An important factor influencing wine demand and consumption is its price. Moreover, it is a determining factor for the relatively cheap segment of wines, which is commonly referred to as table wines. As it is known, all wines are divided into two main categories: wines with geographical identification (GI) (quality wine) and wines without GI (table wine). A change in the price of wine leads to an inverse change in consumption, especially in low-income populations (Mugoša et al., 2024). For higher-income populations who consider wine a “status symbol,” the impact of price may be reduced, in line with the Veblen effect. For wine in general, the price elasticity of demand is -0.65. A similar conclusion was reached in a study conducted on the basis of more recent data (Mugoša et al., 2024).

Castriota (2020) identifies the following factors that influence the price of wine: product quality, type of wine, vine, vintage, ageing, ageing potential, technology, hiring a famous external oenologist, quality expectations, belonging to an appellation/geographical area, official classification system, organic/biodynamic production, and company size. The “quality” factor has internal and external aspects, consisting of objective (grape variety, terroir, production technology [Goldstein & Almenberg, year missing]) and subjective quality factors (expert evaluations). In recent years, there has been a significant increase in microeconomic studies of consumer behaviour in the selection of wine characteristics and willingness to pay a higher price for wine (Shepel et al., 2024). The emotional domain of consumer behaviour in the wine market has also been reflected in modern scientific works (Calvo-Porrall et al., 2020; De Toni et al., 2021). In addition to its utilitarian value, wine has an important symbolic meaning for consumers, which influences their purchase intention.

A country's consumers make up its total demand for wine, which in turn is divided into domestic wine consumption and imported wine consumption (Figure 1). In open economies, wine imports expand consumer choice in countries that produce wine, and enable the consumption of this product in countries that do not produce wine in sufficient quantities (Agnoli et al., 2025; Dzyad et al., 2024; Galán et al., 2024; International Trade Centre, 2024a, 2024b).

As the availability of substitutes also affects consumption, if the quality of wine produced domestically is relatively low, consumption may shift to imports. The modern demand for wine has many characteristics, among which it is worth mentioning the globalisation of demand and the spread of so-called international grape varieties, accompanied also by reverse trends of rediscovery of traditional local varieties (Jauregui-García et al., 2024; Krasnikova et al., 2023; Schamel & Ros, 2021). Global trends in the international alcohol market have been examined in a series of papers by He found that alcohol consumption patterns have changed significantly over the last two centuries and are converging across countries as globalisation and associated intercultural interactions intensify. Mueller Loose & Del Rey (2024), in their work, emphasise the importance of looking at the problems of international wine trade from the consumer's perspective (Figure 2).

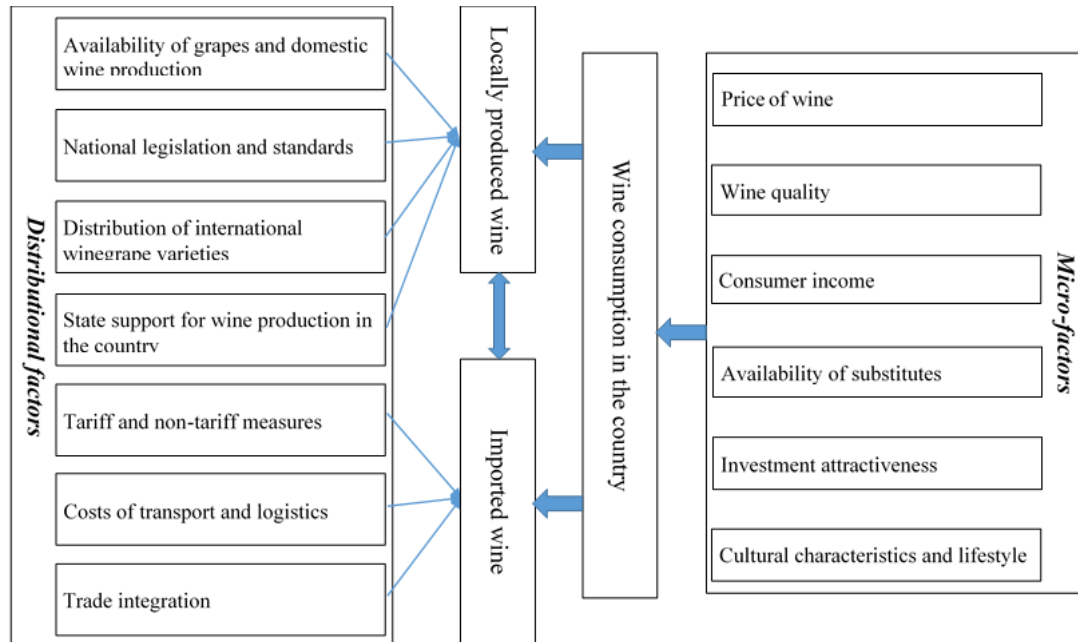


Figure 2. Factors affecting wine imports (Source: Authors, 2024)

In Table 1, we have summarised the research on the role of factors influencing wine imports. We have divided these factors into 1) micro-factors that influence the consumer's basic decision to consume wine and its quantity (these factors form the basis of total wine consumption in the country: consumption of wine produced in the country plus imports) (Table 1); 2) distributional factors that determine the share of imports in the country's wine consumption (these factors influence the distribution of demand for wine: what part of it is satisfied by imports and what part by domestic production) (Table 2, Figure 1).

Table 1. Studies on micro-factors affecting wine imports (Source: Calvo-Porrall et al., 2020)

	Factors	Explanation and authors
1	Price of wine	A change in the price of wine leads to an inverse change in consumption, especially in low-income segments of the population (Mugoša et al., 2024; Castriota, 2020).
2	Wine quality	The internal aspect of quality consists of objective components (grape variety, terroir, production technology, aroma, taste, aftertaste). Improving the quality of wine is a critical factor in increasing its appeal in domestic and international markets. Consumers, especially in mature markets, prefer higher-quality wines and are willing to pay a higher price for them. For the premium wine segment, quality is the determining factor in consumer choice (Calvo-Porrall et al., 2020). The external aspect of quality consists of subjective components (expert assessments, opinions). They form a wine's reputation, which significantly affects its market value and consumer choice. Quality-based reputation increases consumers' willingness to buy and pay more, even without a direct tasting experience. High-quality wines can create emotionally charged experiences that drive loyalty and repeat purchases (De Toni et al., 2021).
3	Consumer income	A certain increase in consumer income causes relatively stronger growth in wine consumption, which consists of domestic production and imports. In Asia, rising incomes are driving wine imports as consumers seek new flavours and associate wine with a higher social status (Grear, 2020; Galati et al., 2020).
4	Availability of substitutes	The decrease in wine consumption is accompanied by an increase in beer consumption in these countries. Alcohol consumption patterns have changed significantly over the past two centuries and are converging across countries (Galati et al., 2020). Increasing the range of wines has a wide range of effects: from improving the consumer's experience by being able to satisfy their most demanding taste in wine to overchoice, when consumers have difficulty making a decision or refuse to buy at all.
5	Investment attractiveness	The investment appeal of wine can stimulate consumption, as consumers who regularly drink wine are more likely to view it as an investment asset (Mugoša et al., 2024).
6	Cultural characteristics and lifestyle	Religion is a powerful constraint on wine consumption in certain regions. Culture determines how much wine is integrated into the daily life of the population. Globalisation is changing traditional patterns, stimulating the growth of wine consumption even in places where it had no cultural significance before (Grear, 2020; Galati et al., 2020).

Table 2. Studies on distributional factors affecting wine imports (Source: Bian &amp; Wang (2025); Greear (2020); Harada &amp; Nishitatenno (2021); Liu &amp; Song (2021); Rossokha &amp; Petrychenko, 2020)

	Factors	Explanation and authors
1	Availability of grapes and domestic wine production	Lack of domestic grapes forces imports to close the gap between consumption and production (Bian & Wang, 2025).
2	National legislation and standards	Implementation of new wine laws protects quality and increases the attractiveness of local brands (Liu & Song, 2021).
3	Distribution of international winegrape varieties	Countries are becoming more similar in terms of the composition of grape varieties grown, in particular due to the spread of international varieties. This may lead to a reduction in imports of wines from these varieties as domestic production meets demand (Rossokha & Petrychenko, 2020).
4.	State support for wine production in the country	The amount of state support for the expansion of land, irrigation systems, etc., creates the conditions for increasing domestic production and reducing import dependence (Liu & Song, 2021).
5	Tariff and non-tariff measures	Non-tariff measures, such as technical regulations and standards, can either deter or facilitate wine imports depending on their nature and application. For example, harmonisation of standards can facilitate market access, while complex certification procedures can create barriers (Harada & Nishitatenno, 2021; Liu & Song, 2021)
6	Costs of transport and logistics	Transport costs are decreasing over time. The choice of route and packaging method has a significant impact on transport costs (Harada & Nishitatenno, 2021)
7.	Trade integration	The conclusion and implementation of Trade Agreements between countries lead to lower barriers to imports and encourage supplier diversification (Greear, 2020; Bian & Wang, 2025).

Figure 1 shows that some factors of the second group influence the increase of domestic wine consumption by expanding the possibilities of its production in the country. Other factors of the second group influence the expansion/reduction of the possibility of importing wine. Micro-level factors influence wine imports by expanding or contracting the total demand for wine. Moreover, imports, in turn, influence micro-level factors by expanding the range (in terms of price, quality, investment attractiveness, etc.) available to consumers (Gómez-Carmona et al., 2023).

Most studies of international wine trade are based on the gravity model and consider traditional explanatory variables related to the economic mass of trading partners and the geographical, cultural and commercial frictions existing between them (Liu & Song, 2021). The positive effect of a country's per capita income growth on the consumption of imported wine was demonstrated in a landmark study by Macedo et al. (2020).

They showed that alcohol expenditure increases with income at low-income levels, but does not decrease with income at higher-income levels. Consumption peaks at a real per capita income (in 1990 dollars) of USD 16,900 for all alcohol (Macedo et al., 2020). These studies support the conclusion that there is a high potential for increasing wine consumption in fast-growing countries and during periods of economic growth (Ritchie & Roser, 2024; Cunha et al., 2024). The results of a study based on 1999–2014 data, which applied a two-part fractional regression model, also show that for importing countries, an increase in per capita income has a positive effect on the probability of importing wine. The presence of its own production as well as EU membership also has a positive effect on wine imports. The abovementioned factors tend to develop inversely with market share as the taste for variety becomes more important (Yang et al., 2022).

Several groups of scientists have studied the impact of import restrictions on wine consumption and concluded that the role of non-tariff restrictions in the wine trade is significantly increasing. However, for the expensive, high-quality wine segment, non-tariff restrictions are less significant. The fact that most non-tariff restrictions do not have a statistically significant effect (for the expensive segment) rules out the possibility that they were introduced to protect domestic production (Macedo et al., 2020). Accordingly, both groups of factors influencing wine imports form the current trends of world consumption.

## MATERIALS AND METHODS

In our study, the dataset was derived from statistics provided by the International Organisation for Viticulture and Wine (OIV), the World Trade Organisation (WTO), Global Trade Alert (GTA) and the World Bank.

Historical summary statistics from Anderson were also used to conduct long-term analyses and identify trends in global wine consumption and imports (Harada & Nishitatenno, 2021).

Using the OIV data, the data on global wine production, consumption and imports for the years 2000–2023 were analysed, and the relationships between these indicators were established. Also, changes in the price of imported wine were analysed, and periods of decreasing share of imports in global wine consumption were identified (Statista, 2023; World Bank (n.d.))

Multi-year averages were calculated for wine consumption, and imports were recorded for each country to identify the potential for the prospective impact of groups of countries on world demand. The robot comprehensively assessed structural changes in the behaviour of two groups of wine-consuming countries in the world: group 1 - wine self-sufficient countries (12 countries); group 2 - countries that cannot meet domestic wine needs (15 countries). Temporal data for each country were used to analyse trends in wine consumption, production and imports. Pearson correlation was performed to analyse the relationship between wine production and consumption globally and for groups of countries. The robot comprehensively assessed structural changes in the behaviour of two groups of wine-consuming countries in the world.

Prospects for changes in the indicators of consumption and import of wine in the two groups of countries up to 2030 were determined. In order to build a forecast, the parameters of changes in the corresponding indicators for each country were calculated with the subsequent generalisation by groups, determination of the sensitive interval and extrapolation up to 2030. As a sensitive interval was chosen, the time interval 2020–2022, which is characterised by the greatest volatility of

imports and consumption of individual countries. This time interval includes the period of shock on the international wine market caused by the pandemic and the period of its adjustment and normalisation. Also, tariff and non-tariff restrictions on wine imports in the countries forming the basis of modern import flows have been analysed. Logical generalisations have been made based on import shares of countries and coefficients calculated based on interrelationships of certain factors.

## RESULTS AND DISCUSSION

### 1) Trends in wine consumption, production and imports

Analysis of statistics shows that the total alcohol consumption in the world is gradually decreasing from a historical maximum in 2013 (6 litres of pure alcohol per person) to less than 5 litres in 2020. The highest amount of net alcohol consumption per capita in the world in 2023 was consumed by: Romania - 17 litres, Georgia - 14.4 litres, Latvia - 13.7 litres, Czech Republic - 13.3 litres, Seychelles - 12.3 litres, Germany and Bulgaria - 12.2 litres, Austria, Laos and Poland - 11 litres, Uganda and Ireland - 11.6 litres, Luxembourg - 11.4 litres, Moldova and Spain - 11.3 litres, France and the UK - 11 litres. Alcohol consumption in France has halved in the last 100 years. The availability and distribution of alcoholic substitute products lead to a decrease in the share of wine in global alcohol consumption.

Whereas in 1960 it exceeded 30%, by 2014 it was 12.5%. The countries that prefer wine in alcohol consumption include an increasingly smaller number of countries: France, Italy, Portugal, Argentina, Switzerland, Sweden, Greece, Great Britain, etc. Wine consumption was relatively stable at the beginning of the century (225.7 mhl in 2000), reached a historic high in the pre-crisis year 2007 (250.1 mhl), fell during the global economic crisis in 2008-10 and then stabilised, reaching by 2017. 246 mhl. Since 2018, global consumption has only declined (Figure 3).

Consumption in 2020 was affected by the disruption of the HoReCa trade channel and the near shutdown of the tourism industry due to epidemiological restrictions. In 2022, there was a record decline in global wine consumption by 3% (7 mhl) and continued in 2023 by 2.6% (6 mhl). In total, from 2018-2023, wine consumption fell by an average of 1.75% per year, production fell by 0.3% per year, and imports decreased by 0.5% per year.

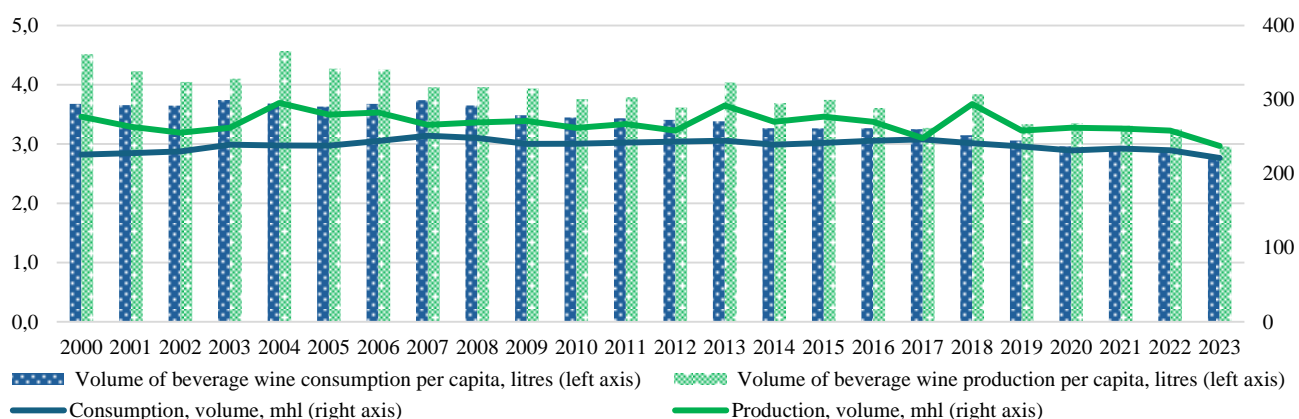


Figure 3. Dynamics of world wine consumption and production (Source: Alston & Gaeta, 2021)

The data analysis of global wine production and consumption from 2000 to 2023 predictably showed no significant correlation (correlation coefficient = 0.31). Additionally, during this period, annual wine consumption was always lower than production, sometimes significantly so: in 2004 by 57.5 mhl. Over the 23 years, the cumulative overproduction of wine worldwide totals 717 mhl, exceeding three years of consumption. The volume of wine production per capita has been declining since the beginning of the 21st century, decreasing from 4.5 litres to 3 litres, while wine consumption per capita has also declined from 3.7 litres in 2000 to 2.8 litres in 2023 (Figure 3). In contrast to consumption dynamics, total wine imports increased in volume from 1995 to 2021 by a factor of 2 (from 55 to 112.2 mhl) (Figure 4). In addition, the share of imports in global wine consumption has increased significantly (Figure 5).

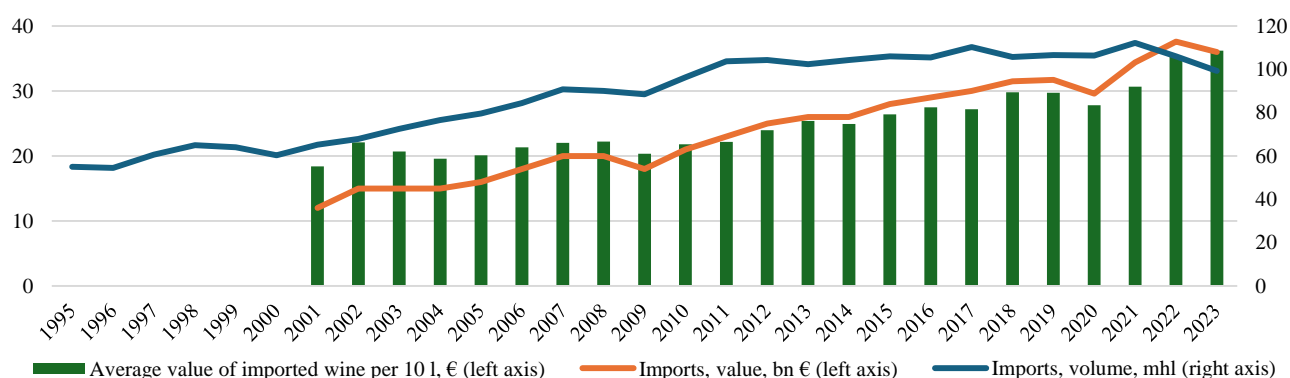


Figure 4. Trends in the volume and value of global wine imports, average price of imported wine (Source: Alston & Gaeta, 2021)



However, 2022 and 2023 saw the largest drop in imports since 1995: by 5.5 and 6.3 % respectively (6.2 to 6.7 mhl). This corresponds to the fall in total global wine consumption in these years, as in 2018, and led to a reduction in the share of imports in global consumption (Figure 5). A slight decrease in imports also occurred in the crisis years 2008 and 2009 by 1 % and 1.7 % respectively, amounting to 1 and 1.5 mhl. However, the decrease in total global consumption in the crisis years by 3 and 5 mhl was more due to a decrease in the consumption of domestically produced wine than to a decrease in imports. In 2010 and 2011, a significant increase in imports (by 7.8 and 7.4 mhl) occurred against the background of a slight increase in world consumption (0.2 and 1.7 mhl, respectively) [40].

There was an active substitution of a part of domestic wine consumption by imports. The decrease in the share of imports in 2022 was due to the war in Ukraine, the energy crisis and disruptions in global supply chains. These events led not only to a significant reduction in imports but also to a sharp increase in the price of imported wine (by 15% compared to 2021), due to an increase in the costs of wine production and distribution (Figure 4). The total value of imports in 2022 became a record high, exceeding the value in 2021 by more than 10%. In 2023, the value of imports in monetary terms decreased for the first time (by 4.7%) amid continued growth in the average import price (by 2%) (Figure 4).

Over the specified period (1995-2023), the fall in the value of imports occurred only in 2009 and 2020 (by 10% and 6.6%) and only against the background of a decrease in the average price of imported wine (by 8.5% and 6.4%).

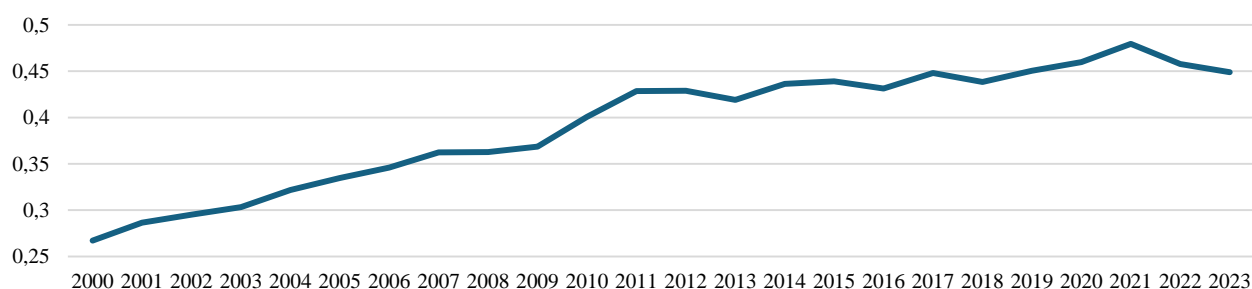


Figure 5. Change in the share of imported wine in total world wine consumption (Source: Alston & Gaeta, 2021)

## 2) Analysing the impact on world consumption and imports of two groups of countries

To further analyse the impact of imports on global wine consumption, we selected 27 countries that have a volume consumption of more than 0.5% of global consumption based on country wine consumption data for 2023. Countries that consume more than 0.5% in value but less than 0.5% in volume (e.g., New Zealand and Hong Kong) were excluded from the analysis. Data for Russia was not included, as the reliability of the figures for this country is questionable and the country's prospects are bleak. The 27 countries analysed in 2023 consumed 86% of the global wine volume and imported about 80% of the global import volume. We divided the countries into 2 groups:

*Group 1* included countries that are self-sufficient in wine by volume: 12 countries: France, Italy, Portugal, Greece, Romania, Austria, Argentina, Hungary, Australia, South Africa, Chile, and Spain.

*Group 2* included countries that cannot meet their domestic wine demand through their own production or do not produce wine at all, and where wine imports significantly exceed exports – 15 countries: USA, PRC, Germany, Brazil, Switzerland, Sweden, United Kingdom, Canada, Japan, Netherlands, Belgium, Czech Republic, Denmark, Poland, Mexico. Until the 1980s, the USA, and until 2010, Mexico were self-sufficient in wine due to low consumption before these dates.

In the historical retrospective since the 1950s, the consumption of the first group exceeded the consumption of the second group by more than 10 times in volume. In the zero years, this excess decreased to 27 per cent, and in the 10s, the second group gained an advantage in consumption (Figure 6). The figure also shows the forecast of consumption until 2030 by groups of countries if the current trends in consumption are maintained. To construct the forecast, the parameters of consumption change in each country were calculated and then summarised by groups. The total consumption of the countries of the first group will decrease by 10% compared to the indicators of 2010-2020, and of the second group by 8%. The total consumption will be 186.5 mhl on average until 2030, while the average consumption for 2010-2020 will be 204.5 mhl.

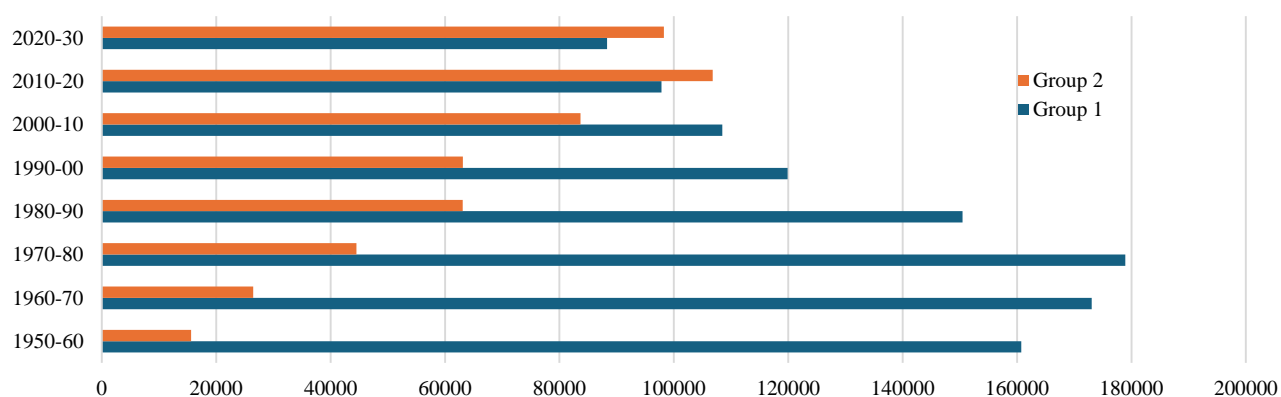


Figure 6. Historical dynamics and forecast of wine consumption by country groups, 1000 hl (Source: Alston & Gaeta, 2021)

Let us consider this transformation in more detail in Figure 7. Until 2007, the decrease in consumption in the first group of countries overlapped with the increase in consumption in the second group. From 2013 to 2017, consumption in the groups stabilised, and since 2018, it has been decreasing in both groups. At the same time, in 1995, the first group consumed 2 times more wine by volume compared to the second group, and since 2010, they have been practically equal, with a slight advantage already in favour of the second group. Thus, in the countries of the first group the effect of micro-factors leads to a decrease in the total consumption of wine: the availability of substitutes (other alcoholic beverages) leads to a reduction in the share of wine in the consumption of alcoholic beverages; the fashion for a healthy lifestyle affects the tradition of wine consumption and contributes to a more moderate consumption of wine; the increase in the quality and, consequently, the increase in the price of wine also leads to a reduction in its consumption (Figure 8).

For the countries of the second group, the effect of micro-factors leads to an increase in total wine consumption: the possibility of purchasing wines of higher quality, relatively cheap, and other varieties from other countries (not cultivated in the countries of the second group) leads to an increase in wine consumption per person (Figure 9).

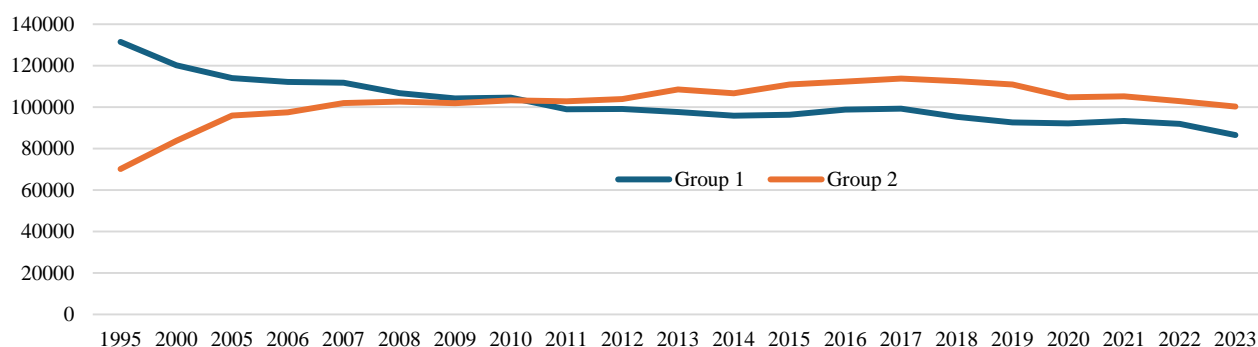


Figure 7. Change of leader in world wine consumption, 1995-2023 (1000hl) (Source: Alston & Gaeta (2021))

Among the countries in the first group, France, Italy, Spain, and Argentina showed the largest decrease in total consumption (Figure 8). In South Africa, total consumption increased by 9% (377000 hl), and in Australia, by 65% (2125000 hl). In the second group, the largest increases in consumption occurred in the USA, United Kingdom, Canada, Czech Republic, Mexico and Japan. Stable consumption was demonstrated by Germany and Denmark. In the PRC, consumption managed to increase threefold over the period and returned to the 1995 figures. In Switzerland and Belgium, consumption decreased due to a reduction in per capita consumption (Figure 9).

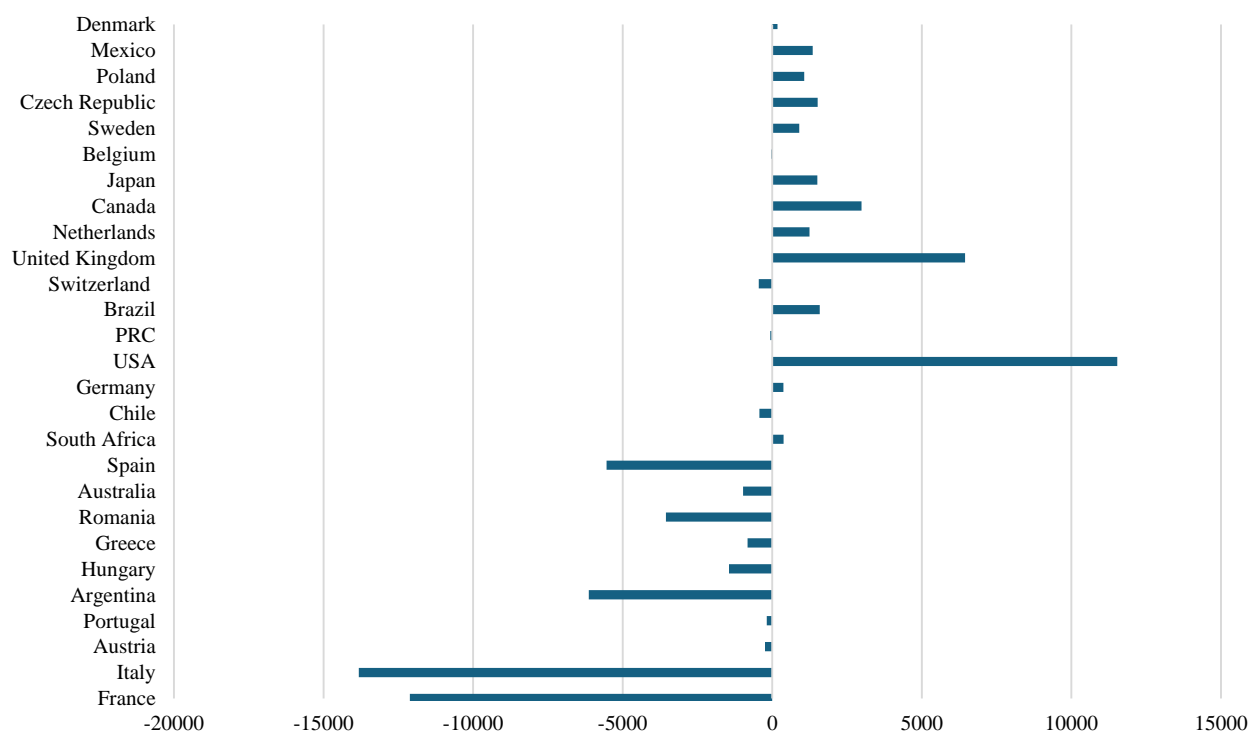


Figure 8. Change in wine consumption in the two groups of countries from 1995 to 2023 (1000hl) (Source: Alston & Gaeta, 2021)

The countries in the first group consumed 40% of the total volume of wine consumed in the world in 2023 (while producing 78%). They imported 14.5% of total imports and 9% by value. This group included countries with a high share of wine in the alcohol consumed. The average level for the countries was 40%, with a minimum of 18% in Spain

and South Africa and a maximum of 64% in Italy. Also, the countries in the group consumed a large amount of wine per person a year (the minimum value in 2022 belonged to South Africa - 10.8 litres per person). However, consumption per person has been decreasing significantly fast: on average, for the countries of the group, since 1995, consumption has decreased by almost 15 litres per person a year (in France, Italy and Argentina, consumption has decreased by more than 30 litres per person over this period) (Figure 9). The countries in the second group for 2023 consumed 45% of the total wine (producing 16%). They imported 66% of total imports and 68% by value. This group included countries with a relatively low share of wine in the alcohol consumed. The average level for the countries was 23%, the lowest in PRC, Mexico and Brazil, and the highest in Sweden and Switzerland (table. 2). The countries in the group, consumed less wine per person a year than the first group (the maximum value in 2022 belonged to Denmark and Switzerland - 31 and 32 litres per person respectively). Consumption per person has been increasing: on average, for the countries in the group, consumption has increased by almost 2,5 litres per person per year since 1995 (in the Czech Republic, consumption has increased by more than 17 litres per person over this period, in the UK by 10 litres) (Figure 9).

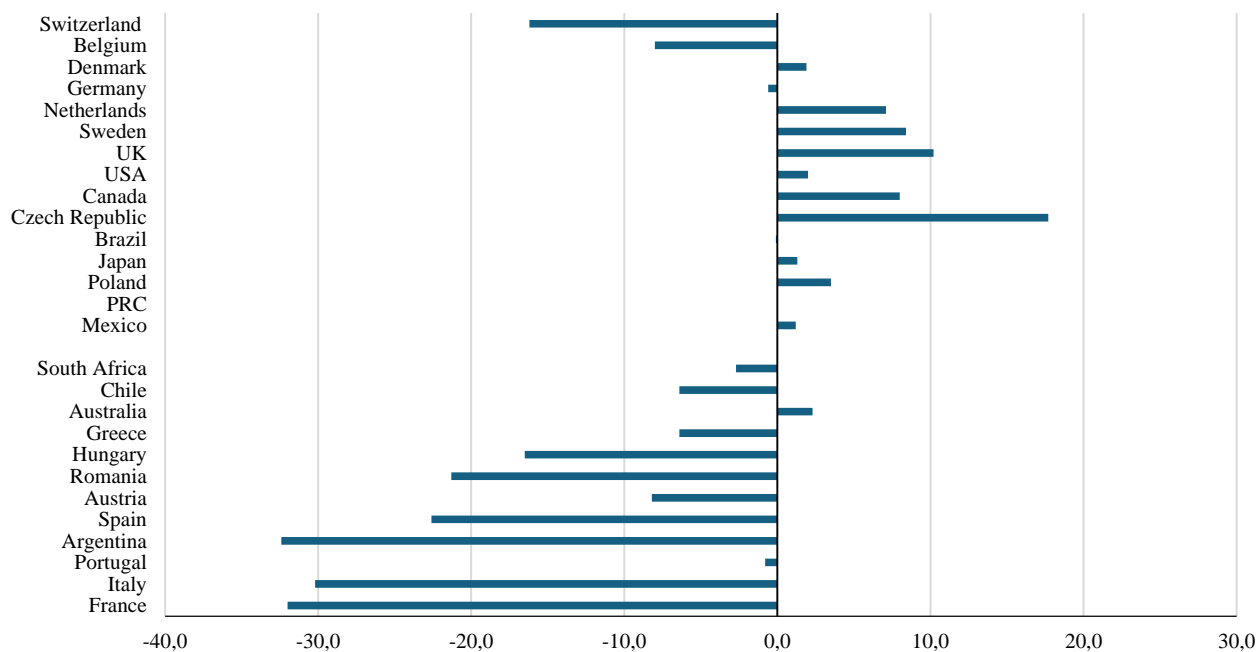


Figure 9. Change in wine consumption per person per year for 1995-2022 (l) (Source: Alston & Gaeta, 2021)

Most imports now go to countries in the second group. Until the late 1970s, most of the world's wine imports were consumed by the first group (Figure 10). The figure also shows the forecast of imports up to 2030 by groups of countries if the current trends in consumption are maintained. To build the forecast, the parameters of import change in each country were calculated and then summarised by groups. The total imports of the countries of the first group will increase by 1,5% compared to 2010-2020, while those of the second group will decrease by 2,5%. Total imports will average 78,6 mhl until 2030, with average imports for 2010-2020 of - 80 mhl. The share of wine imports in world consumption will decrease to 42% (indicator of 2013). The share of imports in the consumption of the first group will slightly increase and will return to the figures for 2021 (16,8%). The share of imports of the second group will remain practically unchanged (65%).

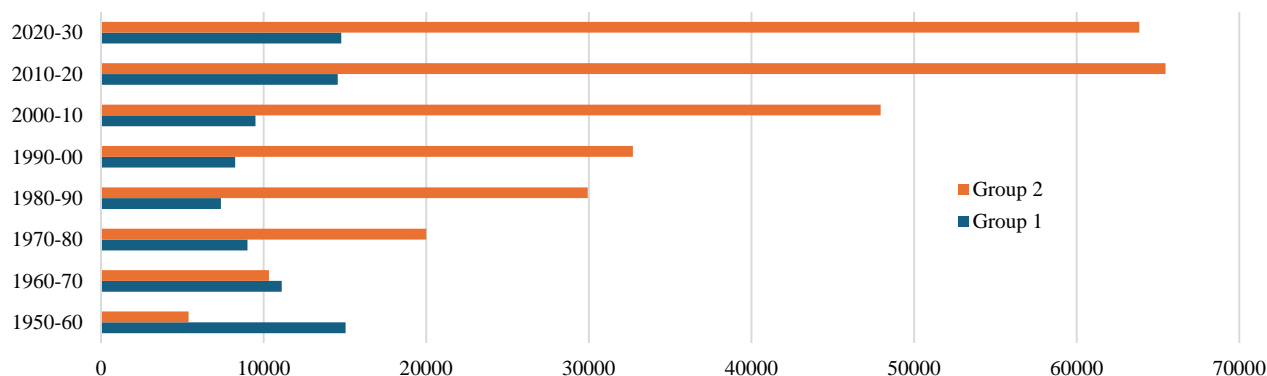


Figure 10. Historical dynamics and forecast of wine imports by country groups, 1000 hl (Source: Alston & Gaeta, 2021)

The share of Group I imports in own wine consumption increased from 8% to 16% over the period 1995-2023 (Figure 11); in volume terms, imports increased from 10 million hl in 1995 to 14 million hl in 2023 (by 40%). As of 2018, imports of the first group have a long-term downward trend. In the first group, only 4 countries participated in shaping world imports in 2023



(importing more than 1% of world imports): France – 6.3% (less than 2% in import value), Portugal – 2.9%, Italy – 2%, Australia – 1.1% (in 1995 it was: France – 5.3%, Italy – 1.6%, Spain – 1.3%). In the 1950s, France imported 62% of world imports in volume and 50% in value. Bulk wines dominated the import structure of the countries of the first group.

The share of imports of the second Group II in its own consumption of wine in the period 1995-2023 increased from 44% to 65%, in volume imports from 31 million hl in 1995 to 65 million hl in 2023 (more than 2-fold). Imports of the second fell sharply in 2023. In the 1950s, these countries imported about 20% in both volume and value of world imports, and by the 1980s had more than tripled this indicator. During the specified period, the growth of wine consumption worldwide was driven by the consumption of the second group of countries, both through domestic production and imports. In the import structure of the second group of countries (except for Germany), bottled wines prevail.

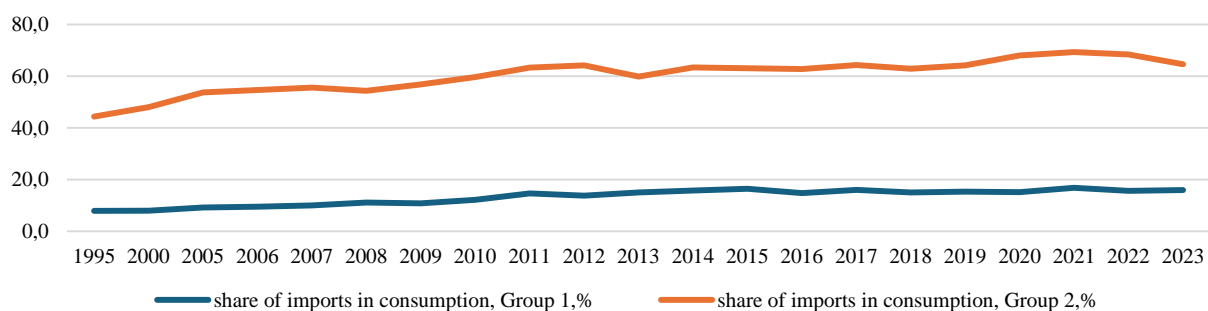


Figure 11. Change in the share of imports in wine consumption by groups (Source: Alston & Gaeta, 2021)

Since 2009, only imports into the countries in the second group have provided growth in global consumption. And since 2022, even this driver of global consumption has ceased to function: imports to the second group of countries have been declining at a significant rate.

### 3) Import performance of the countries in the second group

Imports of the countries of the second group are characterised by a high coefficient of value, calculated as a country's share in the world value of imports per a country's share in the world volume of imports, and for 2023, the average for the group is 1 (Table 3). The similar indicator for the countries in the first group is 0.6.

Table 3. Dynamics of import indicators of the countries in the second group (Source: Alston & Gaeta, 2021)

Country	Share of the country's imports in the volume of world imports, %				Value factor, 2023	Share of the country's imports in the value of total imports, %, 2023	Share of imports in the country's consumption, 2023	Share of wine in alcohol consumption, %	Applied import duty (MFN), %
	1960-70	1990-00	2010-20	2023					
USA	2	6	9	12,4	1,4	17,2	37	65,2	1,5
PRC	0	0	1	2,5	1,2	3	28	47,4	24,7
Germany	19	21	17	13,7	0,54	7,4	70	46,1	2,3
Netherlands	2	4	4	4,5	0,93	4,2	122	0,3	2,3
Switzerland	6	4	3	1,7	0,94	1,6	71	41,8	10,7
UK	5	15	16	12,4	1,05	13	96	0,7	1,4
Belgium	3	5	4	3,1	1,06	3,3	133	5,1	2,3
Denmark	1	3	3	1,8	0,9	1,6	116	0,1	2,3
Sweden	1	2	2	2	1,15	2,3	99	0,1	2,3
Canada	1	3	4	3,8	1,34	5,1	89	15,6	0,3
Brazil	0	0	1	1,5	0,5	0,7	40	89,1	24
Mexico	0	0	0	0,9	0,89	0,8	58	26,9	16,1
Japan	0	2	2	2,3	2	4,6	79	27,3	8,4
Czech Republic	0	0	0	1,4	0,8	1,1	93	26,8	2,3
Poland	0	0	0	1,5	1,06	1,6	108	0,4	2,3
Total	40	65	66	65,3	1,03	67,5	65		

Wine imports are weakly restricted by customs duties (Table 3). Although the simple average level of MFN applied tariff in the WTO countries is quite high at 47.6% in 2022, it is characterised as a tariff peak (more than 15%). However, the import volume-weighted average tariff was only 8.8% in 2022 for all WTO countries. This means that a significant part of wine is imported with relatively low tariffs, while high prohibitive tariffs led to the cessation of imports and, therefore, did not impact the import volume-weighted average tariff. In addition, imports within regional trade blocs are subject to preferential duty rates, which in some cases dropped to zero (e.g., within the EU).

In the second group, all EU countries have a duty for third countries (non-EU members) of 2.3%, which, like the duties of the USA, Canada and UK, is characterised as nuisance rates.

Switzerland has its own wine production and is developing it: about 1500 winemakers produce wine in 6 wine regions, which accounts for about 40% of domestic consumption. Since 2011, wine consumption in Switzerland has been decreasing, imports have been declining, and the share of domestic production has been increasing. Wine production in the

country is relatively expensive, so the government protects domestic producers. Switzerland has a customs quota of 1.7 mhl per year, within which wine is imported at a specific duty rate of 1 franc per liters. The overquote duty is 3 francs per liters. Until 2023, imports exceeded the quota, and the ad valorem equivalent of the import half-tax on wine from EU countries is approximately 18%. 86% of all wine imports into Switzerland come from France, Italy and Spain.

In Mexico, 90% of wine is imported from France, Italy, Spain, Chile and the United States at zero duty; 9% from Argentina and New Zealand, with a duty of about 20%. Domestic wine production accounts for about 40% of the country's consumption. Overall wine consumption is growing, while domestic production has significantly decreased and equalled the production level of 2008. Wine consumption in Mexico is only 2.1% of total alcohol consumed and 1.5 litres per person, and has significant potential for growth (Mueller Loose & Del Rey, 2024).

Japan imports 86% of its wine at 0 rate of customs duty from France, Italy, Chile and Spain and about 8% from the USA at a rate of 16.7%. Japan has been steadily importing about 80% of its stable domestic wine consumption.

Brazil imports 57% of its wine duty-free from Chile, Argentina and Uruguay, with the rest at a rate of 25.1%. Brazil has a very volatile production that covers about 60% of domestic consumption.

The PRC has the lowest share of imported wine duty-free (23% from Chile, New Zealand, Georgia and Australia), with the rest imported at a rate of 14.7%. Since 2011, the PRC has been the world's largest producer of grapes, but only about 10% of it goes into wine production, which peaked in 2012 (16.065 mhl). From 2013 to 2018, the average annual decline in wine production was about 7.5 %, although in 2018, wine production in China still reached 9.1 mhl per year, ranking 10th in the world. According to analysts, the main reason for the decline was that the cost of producing wine was higher than imported wine. In addition, wine in the PRC is a product of light industry rather than agriculture, as in the classification of other countries, which leads to a greater tax burden on its producers (13% value-added tax and 10% consumption tax) (Macedo et al., 2020). In general, tariff protection in wine-importing countries is rather low. However, non-tariff restrictions in the wine trade are applied quite actively (Figure 12).

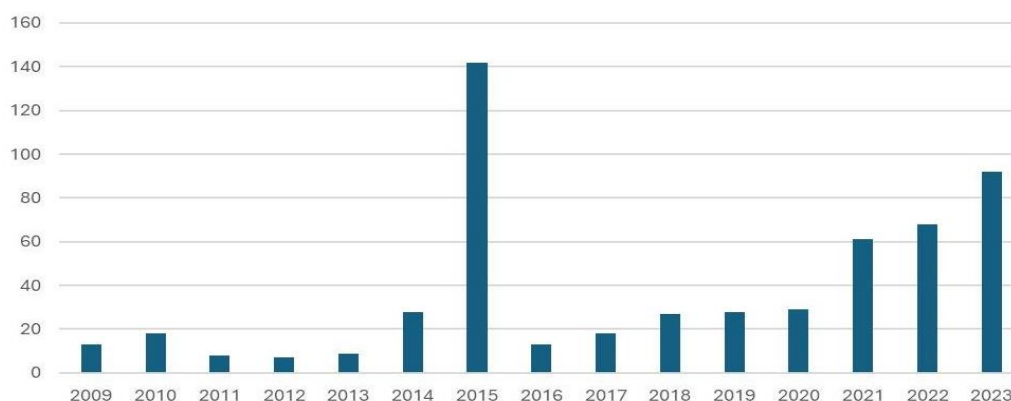


Figure 12. The number of discriminatory restrictions on the international wine trade  
(Source: Organisation internationale de la vigne et du vin [OIV] (n.d.)

There are significant fluctuations related to the introduction of new restrictions in the wine trade. The year 2015 (the year when many countries tightened sanitary and phytosanitary requirements to the quality of imported products, including wine) stood out in particular, in which the number of interventions reached a maximum of more than 140 cases. In the following years, from 2016 to 2023, there was a gradual increase in the new restrictions imposed, indicating the continuation of the active practice of imposing non-tariff restrictions.

Thus, despite the low level of tariff protection in wine-importing countries, the use of non-tariff barriers remained a significant practice in regulating the wine trade. However, in modern protectionism, non-tariff barriers have a greater impact not on limiting imports, but on stimulating exports. In addition, the countries of the second group have moderately used measures to develop production and improve the national standards of grape production.

The countries of the first group do not use strict tariff and non-tariff measures to restrict imported wine, but actively support their wine producers. For quite a long period of time, wine-producing countries supported the production of table wines by maintaining prices above the market level. This type of support gradually exacerbated the problem of the gap between overproduction and underconsumption of such wine. Modern wine policy in many countries of the world, for example, in the EU, is reoriented to increase demand by improving the quality and promotion of products.

And the continuing decline in wine consumption in the world forces the countries - leaders of production to support wine producers in their countries or even to compensate for the strategic reduction of vineyards. Thus, in France in 2024, it was decided to reduce 30 thousand hectares of vineyards (4% of the total area of vineyards in the country), at which winemakers will receive a one-time compensation of 4 thousand euros per hectare from the EU.

#### 4) Changing import trends of the leading countries

For about 20 years, the USA, Germany and the UK have been the top 3 importers and have imported about 40% of the world's wine since the 1980s. In the early 2000s, the USA replaced France in the top 3, the import leader until 1970 and the runner-up until 1990. Analysts attributed the drop in consumption from 2018 to a decrease in consumption in

the PRC. And it did occur in 2018 by 1.7 mhl, 2019 by 2.6 mhl in China. The drop in consumption in China continues to 2023 and has decreased from 2017 by almost 3 times (from 19.3 mhl in 2017 to 6.8 mhl in 2023). Once again, we note that wine consumption per person in the PRC, even at its peak in 2017, was very low (1.7 litres per person a year), which is commensurate with Muslim Turkey (1.2 litres per year). Furthermore, in the PRC, wine accounts for only 3% of total alcohol consumption. Thus, the PRC has attempted to create demand in a country with non-traditional wine consumption by popularising it. This attempt led to a doubling of wine consumption in 20 years but failed to change the PRC's policy towards foreigners. The PRC's national strategy to strengthen control over foreign influences is part of the country's overall policy to protect its national interests, sovereignty, and social stability.

This strategy includes economic, political, cultural, and technological aspects and reflects the PRC's desire to limit foreign influences that could be perceived as a threat to domestic stability and development. Several countries' laws affecting the spread of foreign lifestyle fashions and wine consumption were passed or updated in 2017. In addition, since 2020, due to the COVID-19 pandemic, the number of tourists who contributed to the increase in wine consumption within the PRC by their consumption of wine has decreased more than 5-fold (to 27.5 million people).

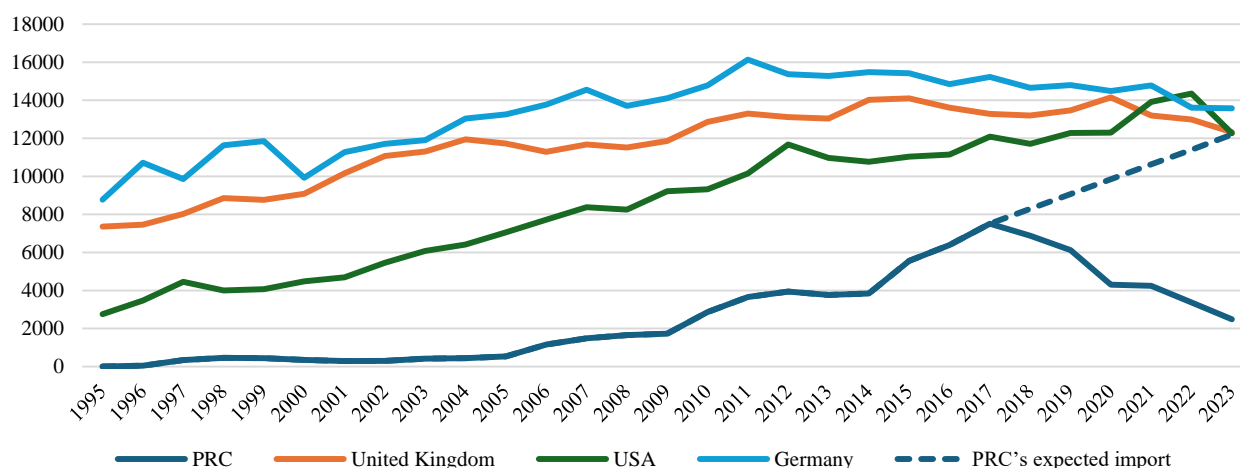


Figure 13. Import volumes of selected countries of the second group (Source: Organisation internationale de la vigne et du vin [OIV] (n.d.))

In 2023, tourist arrivals increased to 82 million, but wine consumption and imports continued to decline. The fashion has passed. The PRC's share of total wine imports at the peak of consumption in 2017 was around 7%, and a continuation of the 2005-2017 trends to 2023 could see import volumes increase to levels comparable to the top three (Figure 13). But even with this increase in PRC imports, world imports and world wine consumption would still be on a downward trend (Figure 14). Thus, the dynamics of China's wine indicators demonstrate a high degree of instability of consumption and imports in this country. It also shows a low degree of possibility to increase wine consumption in the world on the basis of new countries in the world wine market.

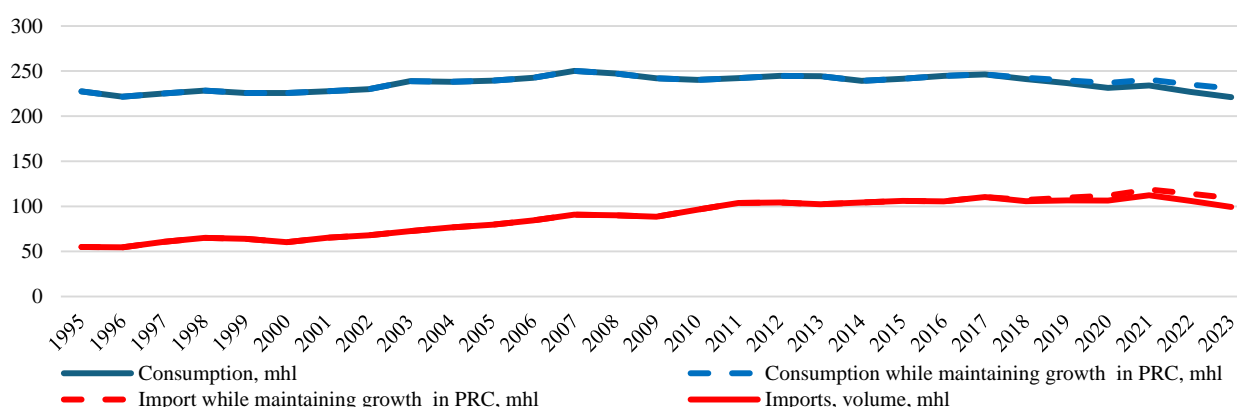


Figure 14. Dynamics of global wine consumption and imports, while maintaining growth in the PRC (Source: Organisation internationale de la vigne et du vin [OIV] (n.d.))

## CONCLUSION

The paper provides a comprehensive assessment of structural changes in the behaviour of two groups of wine-consuming countries in the world: Group 1 - countries that are self-sufficient in wine; Group 2 - countries that cannot meet their domestic wine needs. Also, the factors affecting wine imports were systematised into micro-factors and distributional factors. For the countries of the first group, the effect of micro-factors leads to a decrease in total wine consumption, while for the countries of the second group, to an increase. Distribution factors contributed to the increase in the share of imports in the consumed wine of both groups until 2022.

World wine consumption, relatively stable for the last 30 years, recovering from the 2008-2009 global crisis, has been actively declining since 2018. The largest decline in wine consumption is observed in countries with historically high consumption levels, such as France, Italy and Spain, while growth in new markets (e.g., China and the US) shows a high degree of volatility. From 2000 to 2023, annual wine production has always exceeded consumption, resulting in a cumulative overproduction of wine equal to three years of consumption over 23 years.

Wine imports have long remained a key driver of global consumption by supplying wine to wine-producing countries to meet and expand their consumption. In years of economic recovery, a portion of domestic consumption was replaced by imports. However, from 2022 onwards, imports began to decline sharply. In 2022, 2023, the decrease in wine consumption was entirely due to the reduction of imports and their share in consumption, while in crisis years, the share of imports in consumption continued to increase. In the 1950s, the consumption of wine of the first group was more than 10 times higher than that of the second group; in the 2010s, the second group gained the advantage in consumption. At the same time, in 1995, the first group consumed 2 times more wine by volume compared to the second group, and since 2010, they have been almost equal, with a slight advantage in favour of the second group. Since 2009, only imports into the countries of the second group have driven the growth of world consumption. And from 2022, this driver of world consumption is no longer valid: imports to the countries of the second group are falling and falling at a significant rate.

The countries of the second group, with low or no domestic wine production, consume 45% of total wine, import 66% in total imports and 68% in value equivalent for 2023. Until the late 1970s, most of the world's wine imports were consumed by the first group. The second group includes countries with a relatively low share of wine in alcohol consumption and relatively low wine consumption per person per year. It is the potential for growth of wine consumption in the countries of the second group based on the factors influencing imports that, in our opinion, form the opportunities for world producers to increase imports. The share of imports of the second group in the own consumption of wine has increased since 1995 in physical volume by more than 2 times. Imports of the countries of the second group are characterised by a high value coefficient. Despite the low level of real tariff protection in wine-importing countries (taking into account trade agreements and preferences), the use of non-tariff barriers remains a significant practice in the regulation of wine trade. The volume of imports today is not subject to significant restrictions, but is determined by demand in the importing countries. Under current conditions, distribution factors in both groups of countries have a greater impact on stimulating domestic production rather than on restricting imports.

If the current trends in the world wine market are maintained, according to our calculations, up to 2030, the import of the second group of countries will stabilise at the level of 2010-2020, and the import of the first group of countries will decrease. Changes in imports will take place against the background of decreasing wine consumption in both groups.

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