State of the German and International Wine Markets at the **Beginning of 2022**

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International Wine Markets

1.1 Volatile Production and **Declining Consumption Trend**

The global wine production in 2021 is estimated at 250 million hectolitres, which is below the long term average and close to the long term minimum from 2017 (Table 1 and Figure 1). The year 2021 saw two extremes in the north and in the south. With 59 million hectolitres the southern hemisphere recorded its highest wine production ever, an increase of 19% compared to the small 2020 harvest. Wine volumes in Chile, Australia and Argentina increased strongly by between 30% and 16%, while South Africa was at average levels. In 2021 the southern hemisphere represented 23% of world wine production.

Overall, the northern hemisphere saw a decline in harvest volume of -13% against 2020. The world's largest three wine producing countries Italy, France and Spain all had small harvest volumes. Losses were most significant in France, where a strong late frost event in April affected 80% of vineyards. April frosts with temperatures as low as -8 degrees Celsius in the Rhône valley were followed by heavy summer rains which increased the risk for mildew fungus disease. These extreme weather events and volatile production patterns are in line with expectations for climate change (LOOSE and PABST, 2020). The French wine volume fell 22% short of the five years average (Table 1).

Contrary to highly volatile production volumes, global wine consumption generally is more stable (Figure 1). The pandemic resulted in a decline of wine consumption in 2020 that is stronger than the effects

300 280 260 240 220 Diference World wine production 200 Consumption 180 53.6 51.3 51.5 50.0 48.0 160 41.3 39.1 38.3 35.5 34.0 140 29.0 27.0 26.0 25.0 24.9 24.5 21.0 18.0-19.0 120 17.0 16.0 1.3 100 2002 2003 2004 2009 2005 2006 2001 2008

Figure 1. World wine production and consumption in millions of hectolitres (excluding juice and musts)

Source: OEMV (2022a) based on data from OIV

Table 1. Wine production 2016–2021 in millions of hectolitres (excluding juice and musts)

Rank		2016	2017	2018	2019	2020*	2021**	21/20 variation in %	21 vs. 5-year average variation in %
1	Italy	50.9	42.5	54.8	47.5	49.1	44.5	-9%	-9%
2	France	45.4	36.4	49.2	42.2	46.7	34.2	-27%	-22%
3	Spain	39.7	32.5	44.9	33.7	40.7	35.0	-14%	-9%
4	United States	23.7	23.3	24.8	24.3	22.8	24.1	6%	-3%
5	Argentina	9.4	11.8	14.5	13.0	10.8	12.5	16%	5%
6	China	13.2	11.6	9.3	8.3	7.0	n.a.		
7	Chile	10.1	9.5	12.9	11.9	10.3	13.4	30%	23%
8	Australia	13.1	13.7	12.7	12.0	10.6	14.2	30%	14%
9	Germany	9.0	7.5	10.3	8.2	8.4	8.8	4%	1%
10	South Africa	10.5	10.8	9.5	9.7	10.4	10.6	2%	4%
OIV World Total		270	249	294	256	258	250	-4%	

* 2020 provisional data, ** 2021 forecasts

Source: OIV (2021)

of the 2008 recession. Precise global consumption volumes from 2020 are still unavailable and data shown in Figure 1 is based on estimates. The downfall of the global wine production in 2021 matches a global consumption climate that still faces a high degree of uncertainty and volatility.

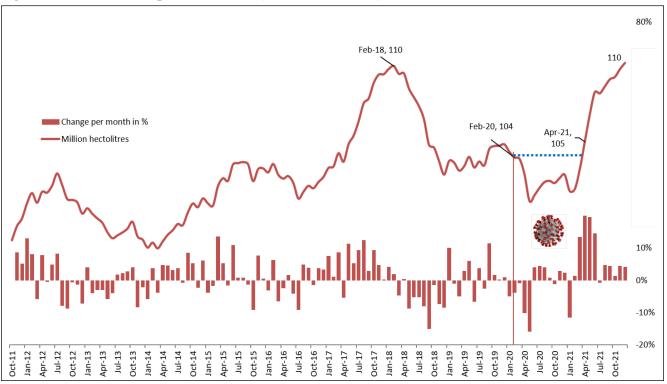
1.2 Impact of Covid-19 on International Wine Trade

The pandemic resulted in a shift of global wine consumption. On-premise and touristic consumption decreased strongly, while in-home consumption increased in some countries (LOOSE and NELGEN, 2021a). The risk and uncertainty related to the lockdowns resulted in a decline in global wine trade that was particularly steep in March and April 2020 (Figure 2). Interestingly this Covid-related decline in volume was less severe than the reduction in late 2018. During the pandemic trade volume remained at a lower level until early 2021, when a global recovery set in with hopes for normal touristic activities during summer 2021. Pre-Covid level of trade volume was attained in April 2021. The strong growth in global trade volume suggests that trade and gastronomy had reduced their inventories and refrained from new orders during the uncertain year of 2020. With positive expectations and many countries indeed opening again after vaccines became available, empty storage had to be refilled in 2021. This fast recovery and overcompensation of low trade from 2020 is typical for many industries and led to overstraining the global transport capacities available. By November 2021 global trade volume for wine had slightly surpassed the latest record in February 2018.

In value terms the sharp decline of global wine trade was more severe (Figure 3). While trade volume is generally more volatile, trade value had consistently increased over the last decade since the 2009 global recession. The pandemic resulted in the first severe and historically steep decline in trade value for more than a year before recovery set in. OEMV (2022a) estimates this gap to represent a value of 2 billion €. With monthly growth rates of more than 40% recovery in value terms was considerably stronger than in volume terms (up to 20% increase). The trade value level in November 2021 significantly surpasses the pre-Covid peak by 8% and reached new record levels.

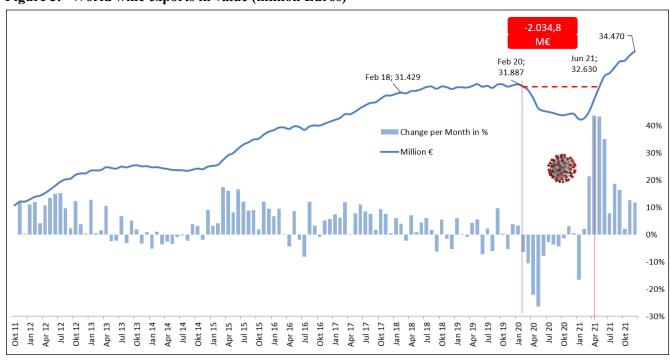
By the outbreak of the Ukrainian war in February 2022 the recovery did still continue. The war will strongly effect imports to Russia, which had been falling over the last years when Russia changed wine regulation to become less dependent on imports. Most European wine businesses stopped trade with Russia. Wine exports to the Ukraine had been increasing over the last years and also came to a halt. The global economic effects of the war and energy crisis are still to be foreseen.

Figure 2. World wine exports in volume (million hectolitres)



Source: OEMV (2022a) based on data from GTA and OeMv. Data for 2021 includes estimates for Italy, Germany and some other countries were only year-on-year figures are available up to November.

Figure 3. World wine exports in value (million Euros)



Source: OEMV (2022a) based on Data from GTA and OeMv. Data for 2021 includes estimates for Italy, Germany and some other countries were only year-on-year figures are available up to November.

1.3 The Effect of Chinese Regulations on Global Wine Trade

Over the last decades wine consumption had decreased in most traditional wine countries like France, Italy and Spain. Global wine production could only be sustained at an almost constant level because the lifestyle of wine consumption was exported globally (LOOSE and PABST, 2019). Non-producing countries approached wine and the export share of wine production increased over time from 18% in 1986-1990 to 44% in 2020.

Particularly China played a major role in fuelling global wine trade. Wine was propagated officially in China as a healthy alternative to spirits with lower levels of alcohol. Wine consumption had a strong symbolic meaning for the rising middle-class and expensive imported brands, such as famous Bordeaux châteaux, played an important role for conspicuous consumption at official banquets and for gift-giving. Although China also started to grow wine domestically, imported wine volume grew strongly between 2005 and 2014, when it reached a plateau. Imports then accelerated further and reached its peak in 2017 (Figure 5). During that year new anticorruption laws regulated wine spending for gifts and banquets. This made wine imports to China fall by 18% until 2019 before the pandemic hit.

Covid-19 and China's strong zero-Covid strategy reduced imports further by 38% by the end of 2021.

This new level of 287 million litres equals the Chinese import volume from 2014, before the strong import boom set in. It is an overall decline of 48% compared to the peak in 2017. The future development of the volume of Chinese wine imports is uncertain considering China's continuing zero-Covid strategy and the global economic risks related to the Russian war in the Ukraine.

Chinese trade regulation had a major impact on the structure of wine imports and global wine trade. "Strong demand in China for Australian bottled wine coincided with the phased removal of import tariffs on Australian wine, which commenced in 2015 under the China-Australia Free Trade Agreement. On 1 January 2019, the tariff on Australian wine fell to zero, giving Australia a 14% tariff advantage over [international] competitors. Under zero tariff, Australia's share of China's total bottled wine imports increased from 28% in 2018 to 37% in 2019 in value terms." (GLEESON et al., 2021) This sudden growth of Australian wine exports to China had resulted in a high dependency. In 2020 China stood for 24% of export volume and 40% of export value of Australian wine (GLEESON et al., 2021).

In August 2020 China's Ministry of Commerce announced anti-dumping and countervailing investigations. In November 2020 it imposed anti-dumping tariffs of between 116.2% and 218.4% on bottled Australian wine. As a consequence, imports of Australian wine to China reduced by 91% or 95 million

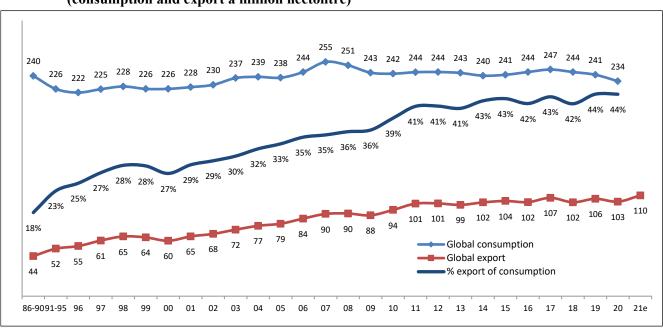
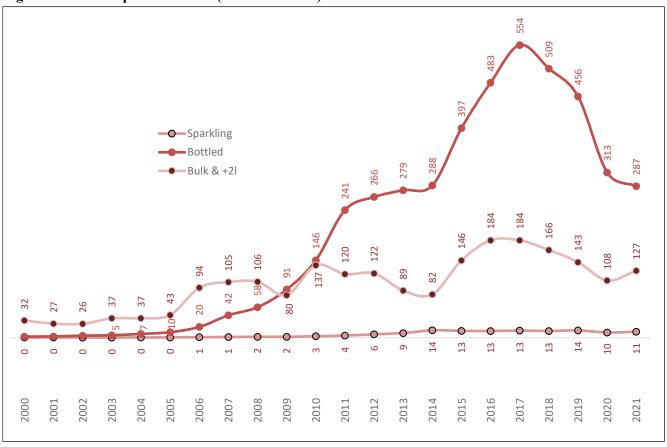


Figure 4. Globalisation of wine trade - global consumption increasingly driven by export (consumption and export a million hectolitre)

Source: OEMV (2022a

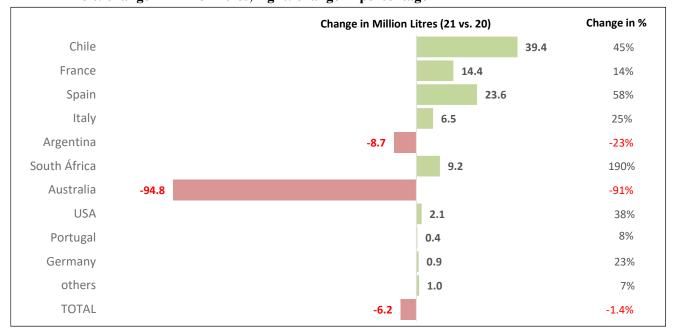
litres (Figure 6). This had a major impact on demand for Australian wine that could not be diverted to other markets quickly enough and resulted in a sudden oversupply. China substituted Australian wine by other wine origins, such as Chile, Spain, France and Italy, for which exports to China increased (Figure 6).

Figure 5. Wine imports to China (in million litres)



Source: OEMV (2022b)

Figure 6. Change of wine imports to China (ordered by rank and volume), left: change in million litres, right: change in percentage



Source: OEMV (2022b)

1.4 Threats and Challenges for the Global Wine Industry

On behalf of ProWein each year the Geisenheim University polls the global wine sector for the most important threats and challenges the industry faces. At the end of 2021, overloaded supply chains and rising prices were the key challenges facing the sector (Figure 7). The concurrent economic recovery occurring on a global scale after the Covid-19 crisis led to strong cost increases for energy, raw materials and transport as well as to long delays in global merchandise shipping and, hence, also for wine shipments. Cost increases endanger the profitability of international wine transactions. The wine sector is, therefore, faced with the challenge of factoring in these cost increases and of passing them on in the supply chain. Since consumer budgets are subject to significantly larger burdens in this inflationary climate in general, the sector is worried about wine consumers' reactions to price increases. It is, therefore, uncertain how strongly the current trend of premiumisation of wine can be continued in the near future.

Covid-19 continues to restrict wine trade. Tourism, hotels and restaurants as well as specialist wine dealers were still suffering from the Covid -19 induced sales restrictions. Consequences of the pandemic rank third in the list of current challenges. After an initial recovery in summer 2021 the new Covid variants have again heavily constrained tourism and the meetings industry worldwide. Although it is hoped that summer 2022 will bring marked improvement and normalisation, it is not safe to say what the "new normal" in social life will look like after the pandemic. Wine dealers and food service providers have so far felt less of the effects of climate change and environmental regulations than the producers. This goes hand in hand with a lower awareness of sustainability among wine traders as well as a low willingness to honour the higher cost of sustainable wine and to communicate it to consumers.

Climate change and stronger environmental regulations paired with concurrent lower profitability face wine producers with major challenges. The pandemic and the less extreme last summer have weakened the public perception of climate change. The process of

■ Producers
■ Trade 77 Cost increases (energy, etc.) 63 60 Climate change 34 Disruption of supply chains 48 Increasing environmental regulations 45 Low profitability of wine industry 43 Health policy 42 Covid-19 Global economic downturn 32 Decreasing wine consumption International trade war Demand for low or no alcohol wine

Figure 7. Challenges to the wine sector, share of producer and trade industry experts who expect strong or very strong expected effect 2021 (n = 2,880)

Source: LOOSE (2022)

Increasing competition to wine through spirits and craft beer

Competition to wine through soft drugs like cannabis

climate change, however, continues unabated and also in the current survey constituted a strong or very strong threat for six out of ten wine producers, making costly adaptation measures necessary. At the same time, wine producers are faced with the challenge of complying with increasing environmental regulation by means of investment. Considering the low profitability of most wine producers, coping with environmental challenges proves an economic burden especially for many smaller outfits and will further accelerate the concentration process.

Wine producers also face more challenges on account of price increases in general. In France and Germany the European health policy to reduce alcohol consumption is felt particularly strongly (OIV, 2022). Producers in new world countries, the USA, Australia and South Africa perceived the international trade war as well as competition through other beverages (Hard Seltzer, Craft Beer) and the legalisation of cannabis as particular challenges.

1.4 Economic Condition of Wine Producers

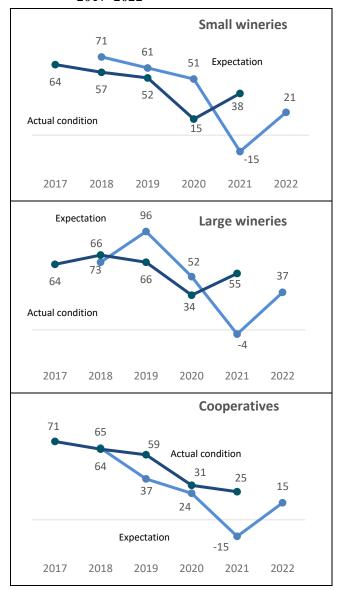
The wine industry's economic situation and business expectations were measured by global surveys of 1,500 to 3,000 international experts by the ProWein business report (LOOSE, 2022). In 2020, the first year of the pandemic, the sector still looked to the future with great pessimism. Contrary to expectations, however, 2021 saw a clear recovery in the wine trade. This recovery of business sentiments mirrors the U-shaped recovery in international wine trade (Figure 3 and Figure 5). However, the good economic climate prevailing prior to the pandemic has not been reached yet. Expectations for 2022 are cautiously positive, which is most likely related to the current threats of cost increases and delays in supply chains (Figure 7).

Spanish and Italian wine producers hope for the strongest post pandemic improvement of wine demand. French producers are slightly less optimistic because of the high crop losses due to late frost, while German producers are generally more reserved. Wine trade and hospitality expect the situation in 2022 to hardly change against 2021.

1.5 Development of Bulk Wine Prices

The development of bulk wine prices of the most important old and new world grape varieties are shown in Figure 9. Since the year 2020 prices were influences by four main drivers.

Figure 8. Economic condition and expectations index by global wine producers 2017–2022



Source: LOOSE (2022)

1. Covid – fall and recovery

Prices reduced significantly when the lockdown set in in many countries in early 2020. As global wine trade fell (Figure 3 and Figure 5) so did the demand for bulk wine reflected by lower prices. Particularly prices for red wines from the new world countries Chile and South Africa as well as Spanish wines reduced in March 2020. Also prices for French and Italian reds softened slightly during 2020.

2. Chilean wines substituted Australian wines With the Chinese tariffs for Australian wines prices for Australian Cabernet Sauvignon and Merlot fell significantly. The substitution of Australian

Chardonnay bulk wine prices in \$/Litre - New world Chardonnay bulk wine prices in \$/Litre - Europe 1.50 2.00 1.50 1.00 1.00 0.50 0.00 0.00 12/19 3/20 12/20 3/21 12/21 3/22 12/19 3/22 3/20 12/20 3/21 12/21 California · · · · Chile South Africa France (VDF) ••••• Italy (varietal) Sauvignon blanc bulk wine prices in \$/Litre - New world Sauvignon blanc bulk wine prices in \$/Litre - Europe 2.00 2.00 1.50 1.50 1.00 1.00 0.50 0.50 0.00 0.00 12/19 3/20 12/20 3/21 12/21 3/22 12/19 3/20 12/20 3/21 12/21 3/22 Cabernet Sauvign. bulk wine prices in \$/Litre - New Cabernet Sauvign. bulk wine prices in \$/Litre - Europe world 2.00 2.00 1.50 1.50 1.00 1.00 0.50 0.50 0.00 0.00 California · · · · · Chile France (VDF) · · · · · Italy (varietal) — — Spain South Africa Australia Merlot bulk wine prices in \$/Litre - New world Merlot bulk wine prices in \$/Litre - Europe 2.00 2.00 1.50 1.50 1.00 1.00 0.50 0.00 0.00 12/19 3/20 12/20 3/21 12/21 3/22 12/19 3/20 12/20 3/21 12/21 3/22 California · · · · Chile South Africa France (VDF) ••••• Italy (varietal) Shiraz bulk wine prices in \$/Litre - New world Shiraz bulk wine prices in \$/Litre - Europe 2.00 2.00 1.50 1.00 1.00 0.50 0.50 0.00 0.00 12/19 3/20 12/20 3/21 12/21 3/22 12/19 3/20 12/20 3/21 12/21 3/22 California France ····· Italy -Spain Australia

Figure 9. Development of bulk wine prices for international grape varieties of different origins

Source: CIATTI (2019, 2020, 2021, 2022)

wine by imports from Chile either increased the price for Chilean bulk wine (e.g. Chardonnay and Sauvignon blanc) or made it decline less severe than that of Australian wine (Cabernet Sauvignon and Merlot). The relative price positioning of both wine producing countries reversed. While they were at par in mid-2021, Chile later on overtook Australia, which still requires time to adjust its export program to other markets than China.

3. Record low harvest in France

The late frost damages in France resulted in less bulk wine available and increased prices, more so for white wine than for red wine. Bulk wine prices for French Sauvignon blanc almost doubled, while reds increased by 30-40%. Also prices for Italian bulk wine increased to a similar extend and Spanish wines could recover slightly from the Covid depression.

4. Higher demand for white wines

There is a global oversupply of red wines and a shortage of white wines, particularly after the small harvest of New Zealand in 2021. During Covid-19 Chardonnay and Sauvignon blanc did not soften in price to a similar extend like red grape varieties. Also the late frosts in France in 2021 had a slightly higher impact on white grape varieties. The international oversupply of red bulk wine together with limited growth perspectives of US wine demand also reduced the price for Californian Cabernet Sauvignon which so far had remained rather stable (MCMILLAN, 2022).

2 The German Wine Market

2.1 German Wine Production

After four hot years, 2021 was an average year for German wine growers. After a cold spring budding of vines occurred in mid-June, normal compared to long-term weather records but late compared to the above-average warm years of 2018-2021. The high and very frequent precipitation during the summer weeks of 2021 brought particular challenges for plant protection in Germany. Especially organic wine growers had to increase the number of application of non-synthetic crop protection products (mainly based on sulphur and copper) that have lower effectiveness in wet conditions. Organic producers reported about twice the number of applications required, up to 18-20 treatments for some wine growers. Crop was negatively affected if treatments could not be performed fre-

quently enough, for instance due to wet soil conditions in sloped terrain. Many organic wine producers reported reduced yields in 2021 accordingly. Because organic wine production represents only about ten percent of German wine acreage, this shortfall did not strongly affect overall wine volume. With 8.8 million hectolitres German wine production was in line with the long term average. Because of the colder summer at time of harvest the grapes had lower levels of ripeness and higher level of acidity. Must often had to be treated with salt to reduce acidity. This was opposite to the hot years 2018-2021 when acid had to be added frequently.

2.2 German Producers

German wine producers benefited from the pandemic through increased domestic tourism and reduction of wine purchases abroad (LOOSE and NELGEN, 2021b). Wine sales in Germany shifted to retail and home consumption, suppliers of on-premise venues lost sales. The increase of wine sales in food reteail is strongly reflected in bottlers' sales (Figure 10, bottom chart), which reached its peak in early 2021 and reduced to normal levels thereafter. Also wine estates and cooperatives recovered quickly after the first shock of the pandemic in March 2020 and shifted their sales to shipping wine, to their own online shops, to online trade and to food retail (Figure 10). Direct sales and wine tourism were slightly less important in 2021, when international tourism started to recover.

The unexpected increase in the domestic sale of German wine also affected wine stocks. As discussed in LOOSE and NELGEN (2021b) stocks of wine estates increased at the onset of the pandemic when usual routes to market were affected by lockdown. Contrary stocks of bottlers, which had to cater food retail, decreased sharply in March 2021 and later recovered with the average sized harvests in 2020 and 2021. The limited supply of French bulk wine increased bottlers' demand for German Pinot-style wines (Pinot Gris, Pinot blanc) and increased prices (Figure 12). Also the bulk wine price for the red German grape variety Dornfelder increased, because it was more heavily affected by the mildew fungus reducing the supply of good quality wine. Bulk wine prices for Riesling and base wine remained constant.

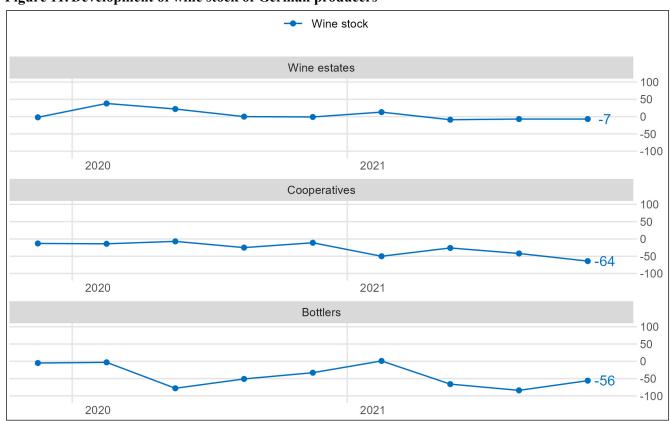
Business sentiment of German cooperatives and bottlers started to dim in autumn 2021, when prices for energy, glass and paper increased drastically. Some glass producers closed down their factories or brought forward maintenance closures because of

Figure 10. Development of sales volume of German producers



Source: Loose, Wetzler und Rohrmüller (2022)

Figure 11. Development of wine stock of German producers



Source: LOOSE, WETZLER and ROHRMÜLLER (2022)

200 Euro per hectoliter = Euro cents per Litre 180 160 140 120 Pinot gris 100 Dornfelder 80 Riesling Table wine (white) 60 40 20

Figure 12. Development of German bulk wine prices (example of the Palatinate wine growing region)

Source: LWK Weinbauamt Neustadt, retrieved from DLR (2022)

higher energy prices. Waiting time for the delivery of glass bottles increased from few weeks up to several months, closures made of aluminium were partially not available at all. The wine sector competes for materials with other beverage producers such as beer, which are more profitable for glass producers. Up to March 2022 producers reported of trade's unwillingness to accept higher prices to compensate for higher material and energy costs. The looming increase of German minimum wages to a level of 12€ per hour will further increase the cost pressure for German wine producers, particularly those with limited mechanisation in steep slopes (STRUB und LOOSE, 2021).

2.2 German Consumption, Imports and Exports

On-premise wine consumption is not officially tracked and measured in Germany, its precise reduction through the pandemic is unknown (LOOSE and PABST, 2018). For the first year of the pandemic in 2020 Nielsen home panels and scanner data reported a strong increase of off-premise wine sales, mainly through food retail (Table 2). Sales declined subsequently in 2021, partially because of a re-opening of gastronomy, but also because international travel and tourism revived. Overall off-premise sales volume has not yet fallen to pre-pandemic levels, particularly value has almost remained stable. Consumers traded-up to higher value wines when they could not spend their income on travel and leisure activities during lockdowns. The Nielsen data suggests that consumers remained loyal to their slightly more expensive wine choices in 2021. The effect of surging inflation and energy prices on wine purchases remains to be seen. It could be expected that consumers might trade down again to lower-level price points.

Exports of German wine and imports to Germany developed synchronically with the global wine trade (Fig. 3 and Fig. 5). After exports fell to a record low in 2020 the increased by an estimated 28% of volume and value in 2021 (DWV, 2022). Particularly the repeal of US wine tariffs helped to increase value to the

Table 2. Change of in-home wine consumption in Germany

		1	•			
		Value change				
	19 vs. 18	20 vs 19	21 vs 20	19 vs. 18	20 vs 19	21 vs 20
Wine total	0,3%	7,2%	-4,7%	1,0%	8,5%	-1,5%
German wine	7,4%	10,3%	-3,6%	5,1%	8,9%	0,5%
Imported wine	-4,6%	4,9%	-5,7%	-2,4%	8,1%	-3,3%

Source: DWI (2022), based on Nielsen

most important export destination by 24 %. Also export value of German wine to Poland, the UK, and Benelux increased significantly. Wine imports to Germany increased by 9% in value and 4% in volume (DWV, 2022). Particularly wine from France and Italy increased in value (23% and 15%, respectively), while Spanish wine increased in volume (+22%). The import of wine from outside the European Union decreased, which could be related to the problems of supply chains and transport price increases.

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