agribusiness handbook

Grapes
Wine

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This handbook is part of a series of agribusiness manuals prepared by the FAO Investment Centre Division, in collaboration with FAO's Rural Infrastructure and Agro-Industries Division. It was prepared for the EBRD Agribusiness team, under the FAO/EBRD programme of cooperation. The production of the manuals was financed by FAO and by the EBRD multidonor Early Transition Countries Fund and the Western Balkans Fund. The purpose of this handbook is to help agribusiness bankers and potential investors in the Early Transition countries (ETCs) and Western Balkan countries (WBCs) to acquire basic knowledge about the wine sector and to become acquainted with recent economic trends in the sector around the world, with a special focus on the ETCs and the WBCs. This volume was prepared by Frederic Julia, Wine Expert, and reviewed by Emmanuel Hidier, Senior Economist, FAO, as well as by members of the EBRD Agribusiness team. Electronic copies can be downloaded from www.eastagri.org, where a database of agribusiness companies, including wineries that operate in the ETCs and the WBCs, is also available. Please send comments and suggestions for a future edition of the manual to TCI-Eastagri@fao.org.

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ACRONYMS

Abbreviation	Meaning
AOC	Appellation d'Origine Controlée (Controlled Term of Origin)
AVA	Approved Viticultural Area
AWBC	Australian Wine and Brandy Corporation
CEE	Central and Eastern European (countries)
CIS	Commonwealth of Independent States
CMO	Common Market Organization
EC	European Community
ETCs	Early Transition countries
EU	European Union
EUR	Euro
f.o.b.	Free on board
GEL	Georgian lari
GDP	Gross domestic product
GI	Geographical Indications
HACCP	Hazard Analysis and Critical Control Points
hl	hectoliter
IFAD	International Fund for Agricultural Development
MDL	Moldovan leu
MKD	Macedonian dinar
OIV	Organisation Internationale de la Vigne et du Vin (International Organisation of Vine and Wine)
ppm	parts per million
SAA	Stabilization and Association Agreement
SWOT	Strengths, Weaknesses, Opportunities and Threats
UK	United Kingdom
US	United States
USD	US dollar
UZS	Uzbek som
VAT	Value Added Tax
VDQS	Vins Délimités de Qualité Supérieure
WBCs	Western Balkan countries

1.1 Key aspects of grape cultivation

1.1.1 An overview of grape cultivation

In most countries, the grapes grown today are varieties of just one vine species, Vitis vinifera. However, in some Central and Eastern European (CEE) countries, *Vitis rupestris, Vitis berlandieri* and *Vitis amurensis* species can be found. These species produce poor-quality grapes but can be used for producing rootstocks. Hybrids (for example, crossing *Riparia* and *Rupestris*) are forbidden for use in wine production in most countries.

The production of wine grapes, in terms of quantity and quality, is highly influenced by three key factors:

1) Climate

Grape growing is limited by certain climatic conditions:

- A reasonably long growing season (150–180 days) with relatively low humidity (less than 800 mm per year) but sufficient soil moisture is necessary.
- The temperatures from April to September are crucial for reaching good development of the vine and ripening of the fruits. When temperatures are below 10 °C, vines are dormant. The optimum temperature is between 25 and 30 °C. Temperatures higher than 38 °C will stop growth.
- Frosts (–1 °C and lower) occurring after vine growth has started in spring could kill off most of the fruitful shoots and reduce the harvest to nil.
- Variations in the microclimate, location and topography of individual vineyards contribute to the diversity of wines and their respective quality.

2) Soils

Grapes can be produced on a number of soils – fertility is not as important as soil structure:

- Sandy or gravelly clay loams are most desirable; differing soil attributes are reflected in wine diversity.
- Alkaline soils must be avoided.
- Good drainage is very important.

In most countries, vines are grafted on rootstocks that are carefully selected depending on the characteristics of the soil (and on resistance to phylloxera) in order to control development of the vine.

3) Viticulture practices

Parameters for growing grapes (depending also on whether they are used for making wine, raisins or as table grapes) include:

- spacing of vines in uniform rows for easy cultivation;
- propagation through cuttings, buds or grafts (propagation from seeds is only done for producing new varieties);
- planting, usually of one-year-old vines of desired fruiting variety and with sufficient vine support for satisfactory vine growth;
- pruning and thinning, the removal of vegetative parts to establish and maintain the vines in a form that will reduce labour, facilitate cultivation, help control insects and diseases, expedite harvesting and improve quality; and
- cultivation and irrigation, depending on climate topography and soils.

1.1.2 Key grape cultivation parameters

Average number of vines per ha:

- The density of plantation per ha will be determined by the space between rows (1–3.6 m) and the space between vines (1–2 m).
- The density can vary from 3,000 vines (table wine) per ha to 10,000 vines (Margaux appellation) per ha.
- High density will favour concentration of aromas in the berries and better quality of the wine produced. However, it will also increase the cost of production and require specially adapted equipment and additional labour.
- To maximize yields, the Soviet school recommended a density of between 2,800 and 3,500 vines per ha, which is usually not compatible with the production of high-quality wines.

Average yield of grapes per ha:

- Depending on the vine variety, density of plantation and pruning scheme, harvest could yield between 5 and 20 tons of grapes per ha.

1.2 The winemaking process

1.2.1 A description of the winemaking process

The steps involved in the processing of grapes into wine vary depending on whether the wine produced is to be white or red. White winemaking requires extracting the juice from the berries (skin and seeds are separated from the juice) as quickly as possible and transforming the grape juice into wine through a temperature-controlled fermentation. Red winemaking requires a period of maceration of the juice, skin and seeds to extract

not only colour but also the tannins that will contribute to the structure and body of the final wine. The different phases of the process can be summarized as follows:

Crushing, macerating, pressing

Depending on the variety of grape, the water content of a ripe berry will range between 70 and 80%. In any crushing, macerating and pressing operation applied to a mass of berries, there is an inevitable mixing of both solid and liquid components. A reasonably complete separation of liquid (juice) components from the grapes, therefore, requires more than one crushing or squeezing operation. The amount of components picked up from skins and stems has a marked effect on the wine's characteristics, sometimes beneficial, sometimes detrimental.

Musts and marc

Grape juice and/or the mass of crushed grapes produced in the processing of winemaking are called “must”. Grape pressings (the mass of skins and seeds left after the juice is obtained from the first pressing) are known as “marc” or “pomace”.

Sulphiting of musts

Sulphide dioxide (SO_2) is used for its antiseptic and antioxidant properties in the treatment of must (dosage usually 100–200 ppm). For red wines, small quantities are added to fully eliminate spoilage bacteria and unwanted yeast. In white wine, the functions of SO_2 are similar and in addition, SO_2 prevents the development of a brownish colouring.

Amelioration

To deal with a lack of uniformity of raw material from one season to the next with regard to sugar content and acidity, the sugar and acidity levels are sometimes purposefully altered by adding sugar, water or acid. This practice is frowned upon, and in some regions even outlawed completely if not warranted by natural causes (i.e. disadvantageous weather conditions).

Fermentation (2-20 days)

1. Initial slow stage: yeast cells multiplying.
2. Vigorous stage: gas "bubbling", temperature rising.
3. "Quiet fermentation" that can proceed for a long period at increasingly lower rates.
4. For red wine and some white wine, a second fermentation (resulting from the action of lactic bacteria) is desirable.

Drawing off

Depending on factors such as the type of wine, the size of winery and traditional practices, wine may go to large or small storage tanks/casks or it may remain in the fermentation tanks for several days.

Maturing and ageing

In various stages, "green" wine matures into an acceptable market product: settling of finely divided solid particles and colloidal materials and the subtle and slow chemical reactions involving aldehydes and esters that enter into the ultimate bouquet of a wine. Before bottling the wine, SO_2 is added to stabilize the final product.

1.2.2 Conversion factors and other technical parameters

One kilogram of grape will produce, after fermentation, around 0.7 litres of finished wine.

The quality of wine is established by tasting and chemical analysis. The usual criteria analysed are:

- total alcoholic content (can vary from 9 to15%);
- total acidity (can vary from 3.5 to 5.5 g/litre of sulfuric acid (H_2SO_4));
- total residual sugar;
- volatile acidity (should be lower than 0.5 g/litre of H_2SO_4 for white wine and 0.9 g/litre of H_2SO_4 for red wine);
- pH (could vary between 2.8 and 3.8);
- total SO_2 content (should be around 70–120 mg/litre for dry wines); and
- free SO_2 content (should be around 25–40 mg/litre for dry wines).
- In most of the Western Balkan Countries (WBCs) and the Early Transition Countries (ETCs), as well as in the United States, total acidity in wine is expressed in tartaric acidity and volatile acidity is expressed in acetic acidity. In the European Union (EU) and numerous countries, total acidity and volatile acidity are expressed in sulphuric acidity.

Conversion factors:

- 1 g tartaric acid/l = 75/49 g H_2SO_4/l = 1,000/49 mEq/l
- 1 g acetic acid/l = 30/24.5 g H_2SO_4/l = 3/50 mEq/l

1.2.3 The various systems used for the labelling of wine

There are two main systems used for wine labelling, with a large number of variations:

- The **French system for labelling** is according to the geographic origin of the wine. The origin of a vintner and the adherence to certain standards and practices in the production of the wine are documented by the *Appellation d'Origine Controlée* (AOC). The AOC also sets out standards for the quality of wine that range from *Vins Délimités de Qualité Supérieure* (VDQS – the best quality) to *Vins de Pays* ("country wines") to *Vins Ordinaires* (“ordinary wines”). With variations, the AOC system is used throughout Europe. In Germany, detailed origin, the type of grape, and sometimes also a reference

to the taste characteristics of the wine appear on the label. French bordeaux is made from a blend of grapes. It might contain, for example, Cabernet Sauvignon, Merlot, Cabernet Franc and Malbec grapes. The amounts of each kind of grape differ from one bordeaux to another; for example, in the Bordeaux appellations St Emilion and Pomeral, Merlot grapes tend to be dominant, while in the Medoc (Paulliac, St Esteph, Margaux and St Julien), Cabernet Sauvignon grapes are dominant.

- The **American system for labelling** is based on the grape variety (the most common varieties are Cabernet Sauvignon and Chardonnay) that is used for wine production. In the United States, a wine cannot be called by its grape varietal name unless a minimum of 75% of the wine consists of one particular grape. As a merchandising tool, a new name has reached the marketplace. Producers in the United States, who create blended wines (usually with less than 75% of any particular grape), have agreed to use the term “Meritage” to designate a high-quality wine that is made using a bordeaux-style blend of grape varieties. Winemakers may also indicate on the label a very specific area from which their grapes are harvested. Often (but not always) "better" (or at least more expensive) wine comes from a "better" vineyard. In the United States, there are areas called Approved Viticultural Areas (AVAs). If 75% of the grapes used for a wine are grown in an AVA, the AVA may be indicated on the label.

1.3 Prices, production costs and margins

1.3.1 Planting costs in various countries

The first harvest after the planting of vines can be done in year four. Grapes usually have high levels of acidity and a low dry extract. It can take between five and ten years for the vines to produce grapes of an optimum quality.

Costs of planting 1 ha, including all operations for the first four years and including grafted materials, can vary significantly from one country to another, depending on the type of soil, landscape and irrigation requirements. The examples given below demonstrate these fluctuations:

Europe	EUR 20,000–25,000
Uzbekistan	USD 2,680 (UZS 2,100,000)
FYR of Macedonia	EUR 7,000–7,500
Georgia	USD 6,400. Maintenance costs per year can vary from USD 340–670, depending on the operations performed.
Armenia	USD 8,000. Cost of planting and irrigating 1 ha is around USD 5,000–6,000 for the first year.

1.3.2 Costs of winemaking

Costs of processing grape juice into wine can vary significantly depending on the style of wine produced, e.g. early bottled wine, long-ageing wine, wine aged in barrels, etc.

On average, it is estimated that producing 1 litre of wine sold in a 75 cl glass bottle costs around EUR 0.5–1.2/litre. Ageing wine in new barrels would increase this cost by EUR 1/litre.

Costs of barrels are:

EUR 600–700 for a French oak barrel
EUR 300–500 for a Russian oak barrel
EUR 150–300 for an American oak barrel

Barrels can be used from one to four years. After the fourth year, they do not add any taste to the wine and can be used only as mere recipients.

2. AN OVERVIEW OF THE GLOBAL WINE MARKET

The world's wine market has changed dramatically over the last five years. In 2004 and 2005, a situation of wine overproduction prevailed: the spread between global production and consumption exceeded 64 million hl in 2004 and 49 million hl in 2005. Despite the fact that demand for wine used for industrial purposes (to produce vinegar, 90% alcohol, etc.) fortunately absorbed 40 million hl of this surplus, there were still at least 20 to 30 million hl of wine produced in excess of the demand, generating a strong downward pressure on prices. Most companies rethought their strategies in the direction of adapting their production and marketing to better fit consumer demand. Europe was far behind in adapting to this new environment and lost market share in almost all of its traditional export markets. The "new world", with a wine marketing based mostly on varietals and brands, was very effective in gaining the attention of new young consumers, while the "old world", with a wine marketing based on a sophisticated system of appellation and terroir, was struggling to keep its attractiveness.

The record low levels of the 2007 and 2008 harvests (268.4 million hl and around 270 million hl, respectively) completely changed this picture: the spread between production and consumption is now less than 25 million hl, not even enough wine to supply industrial requirements. Because a growing number of producers and experts attribute diminishing production to the instability of world climatic conditions and the subsequent increased frequency of catastrophic climatic events (such as violent storms, hail, droughts and fires), some governments (in Europe but also in new-world countries like Australia) are pushing producers to uproot their vines and redirect their activities toward production of less risky commodities. As demand now exceeds production, prices are increasing and experts are predicting that in five years the world will experience a shortage of wine. In such a changing context and in light of the increasing prices, the old world is demonstrating a greater capacity to justify higher added value on its production and is regaining market share.

2.1 Vineyard and grape production

The world's total vineyard surface area in 2007 was estimated at around 7.5 million ha and has slightly decreased after the peak in 2002, mostly due to uprooting of vines in Europe, which has taken place faster than new planting in the new world. However, the EU–27 still occupies a leading position in the global wine market. Globally, it accounts for 49.9% of cultivated areas and 39.1% of grape production, with Spain being by far the leading country in vineyard surface area (Table 1).

Given the current economic situation in the global wine sector, as well as the effects of the implementation of the new Wine Common Market Organization (CMO) reform in the EU, it is anticipated that Western European countries will continue to experience a decrease in the sizes of their vineyards. By contrast, in the Southern Hemisphere and in the United States, new planting should continue, albeit at a slower rate because recent difficulties experienced by producers in selling their wines have also been experienced by producers in new-world countries (mostly Australia). The slowdown in new planting in the Southern Hemisphere is not enough to stabilize production levels in the short run because for some countries (mainly in Oceania), the number of vines not yet in production is significantly higher than the number needed to maintain the overall size of the vineyard.

In this overall context, it would appear that the future development worldwide of vineyards for wine production will be determined by the magnitude of new planting in Asia, with China largely influencing the direction of this development.

Table 1: Surface area of the vineyards in major wine producing countries (ha)

Country	2000	2001	2002	2005	2006	2007
Spain	1,180,800	1,235,000	1,228,000	1,161,411	1,200,000	1,200,000
France	915,000	914,000	912,000	854,824	842,026	830,000
Italy	830,000	825,000	848,000	754,987	786,300	770,000
United States	356,500	415,000	412,000	378,320	379,271	380,000
Portugal	253,000	250,000	262,000	222,517	222,528	222,600
Romania	250,000	247,000	250,000	170,975	187,094	184,310
China	205,000	n/a	210,000	411,300	484,000	503,500
Argentine	209,392	205,000	207,000	211,838	218,991	220,000
Australia	139,861	148,000	159,000	153,204	158,167	163,951
Chile	103,876	105,000	110,000	178,000	180,000	182,000
South Africa	105,566	106,331	107,000	112,589	112,717	115,000
Germany	104,724	103,605	104,000	98,875	99,172	99,500
Hungary	127,000	125,000	93,000	86,028	75,634	86,800
Bulgaria	81,281	80,000	97,200	126,842	128,857	120,341
Total World OIV	**7,913,000**	**7,918,000**	**7,950,000**	**7,340,758**	**7,520,595**	**7,501,872**

Source: Organisation Internationale de la Vigne et du Vin (OIV)

2.2 Wine production

Since 2004, wine production worldwide has remained in the range of 270 to 287 million hl, except for 2004 when production edged to just over 300 million hl (Table 2). In the three years following the peak of 2004, wine production worldwide declined at a compound rate of 4%. However, this decline was halted in 2008, when wine production increased marginally by 0.3% to 270 million hl.

This marginal increase in world wine production in 2008 was the result of a slight decrease (–1%) in the overall EU-27 production that was offset by a small increase in production in wine-producing countries outside the EU-27, and mainly due to the recovery of Australian production.

The top five wine producers in the world in 2008 were Italy (46.9 million hl), France (42.95 million hl), Spain (34.9 million hl), the United States (20.6 million hl) and Argentina (14.7 million hl). Italy surpassed France as the largest wine producer in the world in 2008. Poor weather conditions (mild winter, late spring frost and excessive humidity in spring and summer) and decreased land under vine are largely responsible for the drop in production in France. By contrast, the good weather conditions that prevailed in Italy helped vineyard yields improve after having fallen significantly in 2007.

Table 2: Global wine production, 1994-2008, and estimates for 2007 and 2008 (million litres)

Wine production (M l)[2]	Harvest period						Wine compendium history												Estimate	
							1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Northerm Hemisphere	J	A	S	O	N	D															
Italy							5,928	5,620	5,877	5,056	5,714	5,807	5,409	5,229	4,620	4,665	5,500	5,056	5,203	4,660	4,690
France							5,464	5,560	6,004	5,510	5,427	6,294	5,754	5,339	5,197	4,749	5,885	5,331	5,340	4,692	4,400
Spain							2,078	2,104	3,040	3,322	3,022	3,266	4,179	3,094	3,642	4,037	4,191	3,977	4,010	3,610	3,664
United States of America							1,755	1,867	1,888	2,618	2,050	2,075	2,660	2,300	2,540	2,350	2,242	2,546	2,338	2,417	2,471
Germany							1,041	836	864	850	1,083	1,229	1,008	898	998	819	1,011	915	900	1,026	1,050
Portugal							635	706	948	591	358	760	784	671	779	715	677	705	715	573	512
Romania							537	672	766	669	507	566	545	546	546	546	617	473	589	622	741
China							402	396	437	401	439	489	534	559	561	600	656	734	690	n/a	n/a
Southern Hemisphere	J	F	M	A	M	J															
Argentina							1,817	1,644	1,268	1,350	1,267	1,589	1,254	1,584	1,270	1,323	1,546	1,522	1,540	1,505	1,468
Australia							587	503	673	617	742	851	806	1,077	1,220	1,086	1,471	1,434	1,430	962	1,303
South Africa							720	845	899	881	816	914	837	747	834	956	1,016	905	1,013	1,044	1,093
Chile							360	317	382	455	548	481	667	565	574	687	655	805	845	882	786
New Zealand							n/a	n/a	n/a	n/a	n/a	n/a	n/a	53	89	55	119	102	120	148	206
Other countrries							5,097	4,330	4,212	4,300	4,016	3,897	3,938	4,061	3,854	4,158	4,471	4,289	3,711	4,820	4,604
Total							**26,422**	**25,400**	**27,260**	**26,620**	**25,989**	**28,218**	**28,376**	**26,722**	**26,725**	**26,745**	**30,055**	**28,795**	**28,443**	**26,906**	**26,987**

Source: Wine Compendium time series data to 2006. Data for 2007 and 2008 reflect Australian Wine and Brandy Corporation (AWBC) estimates based on the October 2008 OIV State of Conditions Report, except where more reliable data (bolded) is available

2.3 Wine consumption

After five straight annual gains in wine consumption earlier in the last decade, the global wine market failed to register any growth for the three consecutive years 2006–2008, as declines in the mature wine-producing nations of Western Europe negated any gains in emerging markets. The global financial crisis certainly did not help the situation. The world's wine consumption level in 2008 ranged between 240.1 and 246.9 million hl. The worldwide recession negatively impacted the global alcoholic beverage industry in 2009 and will possibly impact the industry in 2010 as well.

People are drinking wine at a lower rate and the global recession appears to have accelerated the trend. Worldwide per capita wine consumption fell in 2008 for the third consecutive year and is projected to fall even further, at least until early in this new decade. In 2007, world consumption averaged 3.5 litres per capita, a full litre less than in 1990, according to The Global Drinks Market: Impact Databank Review and Forecast, 2008 edition. Current worldwide per capita consumption is at its lowest level in at least four decades.

Much of the blame can be placed on the mature wine markets of the EU, where lifestyle changes have been a major factor in the decline, particularly in France and Italy, where wine has traditionally been consumed with meals. For Europeans with increasingly fast-paced lifestyles, soft drinks, juice and bottled water have taken over important roles at drinking occasions, particularly among younger drinkers. In 1980, France and Italy combined accounted for 45% of global wine consumption; however, by 2007, their aggregate share was down to 24%, according to The Global Drinks Market review.

At the beginning of the millennium, the existing 15 members of the EU combined for a total wine consumption of 126 million hl, or 57% of world volume. The admittance of 12 new member nations has since added a demand for nearly 13.5 million hl of wine to the size of the wine market in that geopolitical region, but per capita wine consumption continues to decline in the EU, from 30 litres in 1995 down to 28 litres in 2007[1].

Until recently, overall wine consumption was growing thanks to consumption in the emerging markets but the global recession has depressed total consumption as well. The United States still represents tremendous potential for giving impetus to the global wine market – Americans consumed an average of only 9 litres of wine per capita in 2007, compared with 51 litres and 44 litres, for the French and the Italians, respectively. Canada, Chile, South

[1] *Source: IMPACT Databank.*

Africa, and Australia have experienced steady growth in wine consumption, as have the emerging markets of India, Taiwan Province of China, the Republic of Korea and Norway. However, China will probably account for much of the future growth in global wine consumption, as the Chinese currently drink less than a bottle of wine per capita annually. The financial crisis has slowed down this growth momentum somewhat, but huge opportunities still abound, especially for large multinational wine companies doing business in China. Table 3 shows per capital wine consumption in 2008 in selected countries.

Table 3: Wine consumption in selected countries, 2008 (litres/capita)

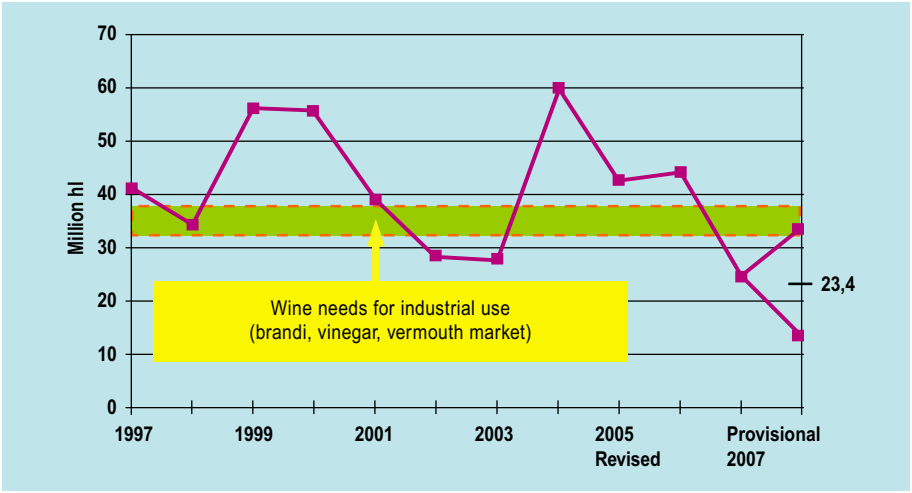
Country	Litres per capita
France	51
Italy	44
Portugal	43
Croatia	40
Spain	36
Germany	25
United Kingdom	20
Canada	11
United States	9
Russian Federation	7
Japan	2.5
China	1

Source: Shanken Communication, 2007

The market demand for wine, spirits and brandies and the continuing growth in wine consumption, and considering the modest carryover in wine stock, should continue to strain the global wine market supply overall, but to varying degrees depending on geographical zone and wine type. Figure 1 and Table 4 show the spread between wine production and wine consumption.

By contrast, in the EU, according to current trends, excess wine production will surpass annual consumption by 10–15% in 2010, although the EU spends around EUR 500 million every year to resolve the problem of its wine surplus.

Figure 1: The spread brtween wine production and wine consumption (million hl)



Source: OIV/FAO for 1997–2007, diverse for 2008 (PA)

Table 4: The spread between wine production and wine consumption (million hl)

												Estimate 2008	
	1997	1998	1999	2000	2001	2002	2003	2004 revised	2005 revised	2006 to be pubblished	prov. 2007	Low hypothesis	High hypothesis
Wine production	266.4	262.1	280.8	280.4	265.6	257.0	263.8	296.8	280.0	284.8	266.1	260.4	273.4
Wine consumption	225.2	227.8	224.7	224.8	226.9	228.6	235.9	237.4	237.7	241.2	242.2	240.1	246.9
Difference Production Consumption	41.2	34.3	56.1	55.6	38.7	28.4	27.9	59.4	42.3	43.7	24.1	13.5	33.3
						Mid-range estimated mean		Production Consumption Difference					266.9 243.5 23.4

Source: OIV in collaboration with FAO

2.4 Wine trade

2.4.1 Wine Exports

All large world exporters saw their operations grow in 2007 compared with 2006. Since the recovery of normal wine production levels in 2004, Italy has once again regained its position as the world leader in wine exports after the 2005/2006 harvests. In 2007, with nearly 18.5 million hl of wine exports

(+0.18 million hl/2006), Italy represented 21% of world trade, ahead of Spain and France (15.4–15.2 million hl, respectively, exported in 2007: 17% of world volume traded) (Table 5). Following measures taken in 2006 in the Russia Federation and following its decrease in exports to world markets, the Republic of Moldova saw its exports increase in 2007, although not to previous levels.

Table 5: Largest wine exporting countries, in 2006 - 2007, and estimated exports for 2008 (million hl)

Country	2006	2007	Estimated 2008
Italy	18.30	18.48	17.80
France	14.66	15.48	15.00
Spain	8.21	15.44	n/a
Australia	7.62	7.82	7.60
United States	3.78	4.24	4.30
Chile	3.50	n/a	n/a
Portugal	3,33	3.41	n/a
Germany	3.20	n/a	n/a
Argentina	2.99	3.62	3.50
South Africa	2.73	5.01	5.00
Republica of Moldova	1.95	1.05	n/a
Bulgaria	1.13	1.14	n/a
FYR Macedonia	0.83	0.93	n/a
New Zealand	0.65	0.84	0.77

Source: FAOSTAT. © FAO Statistics Division 2008

2.4.2 Wine Imports

Germany used to be the largest wine importer in the world but was outpaced by the United Kingdom in 2007 (Table 6). The United States also has a very dynamic wine imports market and experts are predicting that it should reach the same level of wine imports as the United Kingdom by 2010.

Table 6:The top 15 wine importing countries, 2006 - 2007 (million hl)

Reporter	2006	2007
Germany	13.81	n/a
United Kingdom	12.84	12.97
United States	7.82	8.45
Russian Federation	5.59	6.43
France	5.35	5.37
Netherlands	3.42	3.80
Belgium	3.00	3.12
Canada	3.00	3.12
Czech Republic	1.38	3.02
Switzerland	1.77	1.87
Sweden	1.66	1.78
Italy	1.48	1.75
Japan	1.73	1.74
China	1.16	1.48
Portugal	0.28	1.28

Source: FAOSTAT. © FAO Statistics Division 2008

3. THE SITUATION IN THE WINE INDUSTRIES IN THE WESTERN BALKAN COUNTRIES (WBCs) AND THE EARLY TRANSITION COUNTRIES (ETCs)

3.1 The outlook in the WBCs and the ETCs

In spite of heavy debates in some countries, most of the WBCs and ETCs have decided to place the wine sector under the supervision of their Ministry of Agriculture. The intervention of government authorities is required to develop a long-term strategy for the grape and wine sector and also to allow necessary laws and regulations to enter into force. Intervention is also essential for countries that have adopted Geographical Indications (GIs) and are engaged in fighting against counterfeit wines.

Most of the WBCs have decided to align their wine regulations with those of the EU. For instance, pursuant to the Protocol on Wine and Spirits to the Stabilization and Association Agreement (SAA), the former Yugoslav Republic of Macedonia adopted the EU rules on oenological substances and practices, as an indispensable precondition for exporting Macedonian wines to the EU under preferential zero-duty tariff quotas.

With the exception of Georgia, which adopted wine legislation inspired by both EU and United States rules[2], other ETCs still follow regulations adopted before 1990 during the Soviet period.

3.1.1 Vineyards in the WBCs and the ETCs

The WBCs and the ETCs are historical but very small players in the global wine arena. In 2007, total area in vineyards in these regions was estimated at around 500,000 ha, i.e. less than 7% of total area in vineyards worldwide. Among the ETCs, the Republic of Moldova is by far the country with the largest area planted in vineyards (Table 7).

[2] *On 4 July 2002, Georgia adopted the Law of Georgia on Geographical Indications and Denominations of Origin of Products and, on 4 February 2003, the Law of Georgia on Vine and Wine*

Table 7: Area of vineyards harvested (ha)

Country	2003	2005	2007
WBCs			
Serbia & Montenegro	68,592	71,510	n/a
Serbia	n/a	n/a	63,000
Montenegro	n/a	n/a	10,000
Bosnia & Herzegovina	5,200	5,000	3,600
ETCs			
Republic of Moldova	142,798	140,205	145,800
Uzbekistan	97,500	99,200	99,200
Tajikistan	29,957	31,500	35,000
Georgia	62,000	63,000	30,000
Armenia	11,301	13,475	13,000
Azerbaijan	7,356	7,173	7,496
Kyrgyzstan	6,525	6,549	6,500
Albania	5,741	6,637	6,200

Source: FAOSTAT. © FAO Statistics Division 2008

In most of the WBCs and the ETCs, the area of land planted in vineyards does not fully reflect the wine production potential. Official statistics do not make distinctions between vineyards producing wine grapes and those producing table grapes, productive and abandoned vineyards, and family and industrial vineyards.

The development of new vineyards in the ETCs and the WBCs is slow due to three major factors:

- Scarcity and weak control of local nurseries

  Encouraged by the government authorities, vineyard owners in the WBCs and the ETCs are restructuring their vineyards, uprooting vines except for *Vitis vinifera*, and planting varieties that are better adapted to current consumer taste preferences and market demand. Therefore, the demand for rootstocks and European grape varieties is growing. However, in most of the WBCs and the ETCs, the suppliers of rootstocks and grape varieties are poorly organized, the control of virus-free materials is not efficient, and the risk of falsification of rootstock types and grape varieties is high. The former Yugoslav Republic of Macedonia, Georgia, and the Republic of Moldova have passed decrees to regulate the nursery industry and encourage sales of approved rootstocks and grape varieties.

  Most of the ETCs and the WBCs are facing difficulties in regulating local nurseries. Investment in vineyards where rootstocks and grape varieties

of local origin are being planted is risky. To reduce this risk, the use of rootstocks and grapevine varieties imported from reliable sources (with a certificate of origin and virus-free analysis) is preferable, although more costly.

- Lack of new planting due to the difficulties of borrowers in providing collateral to banks

  In some countries, local authorities are encouraging the planting of new vineyards by providing subsidies for that purpose. For instance, the Ministry of Agriculture of the former Yugoslav Republic of Macedonia decided to provide financial assistance for the planting of up to 1,800 ha of new vineyards for a total budget of MKD 153 million (around EUR 2.5 million). However, as the planting and care of 1 ha of vineyard costs between EUR 6,000 and EUR 10,000 (over the first three years), the financial assistance of the Macedonian Ministry of Agriculture will cover only 14% of total costs. In the Republic of Moldova, the government recently decided to increase public funding for planting new vineyards by 20% annually between 2010 and 2012. The subsidy paid to plant 1 ha of vineyard will increase from MDL 25,000 in 2008 to MDL30,000 in 2011. Financial support in addition to that provided by government authorities is needed from local banks and depends on the capacity of borrowers to provide collateral, which in most cases is difficult.

  As is normally the case, land cannot be used as collateral so fixed assets such as buildings or equipment must be used to secure loans. However, as described below, the separation of grape production of vineyards and wine processing of wineries during privatization has further complicated the financing of the wine sector.

- Privatization of the wine sector and land fragmentation

  When land was privatized in both the WBCs and the ETCs, large plots of vineyard were divided among numerous farmers, resulting in small privately-owned vineyards of, for example, 0.3 ha per farmer in Georgia and 0.5 ha per farmer in the former Yugoslav Republic of Macedonia. Small vineyards are an impediment to mechanization and tend to encourage wine production for home consumption. For instance, it is estimated that in Georgia half of the wine produced is used for home consumption.

  Growing grapes and producing wine were vertically integrated during Soviet times but during privatization, grape production became a distinct activity from wine production due to the difficulties associated with the privatization of land. In the former Yugoslav Republic of Macedonia, for instance, companies and other forms of legal entities involved in the production of

wine have direct ownership of only 30% of the total area in vineyards, the remainder being owned by individual farmers.

In recent years, due to improved market conditions, wineries have been heavily engaged in buying vineyards to produce their own grapes. The strategy behind these acquisitions is to gain greater control over the quality of the grapes produced but also to reduce the dependency of wineries on outside purchasing of grapes. The downside is increased fixed costs and difficulties in adjusting production to fluctuations in the final market.

3.1.2 Grape production in the WBCs and the ETCs

Grape production statistics in the WBCs and the ETCs, should be analysed with caution: most statistics given by the agencies in charge of overseeing the sector add production of table grapes together with production of wine grapes. For instance, Uzbekistan registered more than 590,000 tons of grapes produced in 2006 but that includes 39,000 tons of table grapes.

Table 8: Production of grapes and raisins (tons)

Country	2003	2005	2007
WBCs:			
Serbia	n/a	n/a	353,343
Serbia & Montenegro	485,297	277,603	n/a
Montenegro	n/a	n/a	41,000
Bosnia & Herzegovina	21,804	23,273	21,300
ETCs:			
Republic of Moldova	677,200	518,525	598,000
Uzbekistan	401,530	641,610	590,400
Armenia	81,600	164,353	200,000
Tajikistan	28,403	90,600	116,600
Albania	105,500	115,100	105,000
Azerbaijan	65,009	79,655	97,794
Georgia	200,000	250,294	93,000
Kyrgyzstan	11,705	11,392	14,900

Source: FAOSTAT. © FAO Statistics Division 2008

Most of the WBCs and the ETCs have their own legacies of grape varieties. In the former Yugoslav Republic of Macedonia, vineyards of the Vranec grape variety cover 50% of the total area planted with red grape varieties, and vineyards of the Smederecka grape variety cover 60% of the total area planted with white grape varieties. In Georgia, 35 wine grape varieties are included in the standard vine assortment of the country, most of them being

local Georgian varieties such as Rkatsiteli, Kakhuri Mtsvane, Goruli Mtsvane, Khikhvi, Kisi, Saperavi, Chinuri, and Alexandrouli. In Albania, local varieties such as Shesh – Shesh i Zi (red variety) or Shesh i Barhe (white variety), Kalmet, Vlosh, Serine, and Debine can be found. In Armenia, the dominant wine grape variety is Mashali, a white grape variety mostly used for the production of brandy. Other dominant varieties are Voskeat and Garan Dmak for white wine production and Areni and Kahet for red wine production.

The compatibility of indigenous varieties with specific microzone soils and climatic conditions constitutes a unique inheritance for the WBCs and the ETCs that could distinguish their wines in the international wine arena. Some of these varieties have the potential, with modern vine cultivation and winemaking techniques, to compete on the international wine market.

Both in the ETCs and the WBCs, the quality of grapes (and therefore the quality of wine) is limited by a lack of knowledge of modern viticultural practices. Despite the efforts conducted by national research and extension institutes, *e.g.* the Kishinev Grape and Wine Institute in the Republic of Moldova, the level of knowledge about modern vine growing and winemaking is still not up to international levels. Local know-how is mostly based on old traditions, influenced by the Russian school, which tend to encourage quantity over quality. Due to limited resources, professors and researchers seldom travel to Western Europe or North America and mostly rely on publications to update their knowledge.

When investing, transfers of know-how to modern vine growing and winemaking practices should be considered, with special attention paid to hygiene practices.

In some of the WBCs and the ETCs, winery owners have taken the initiative to organize themselves in associations in order to develop common action plans and better protect their interests. For example, Georgian winery owners have created the Union of Wine Producers and the winery owners in the former Yugoslav Republic of Macedonia have formed the National Alliance of Wineries.

A lack of associations that unite grape growers results in difficulties for both the state and international organizations in terms of having reliable counterparts for discussions and for elaborating national strategies for grape production.

It should also be noted that fluctuations in the global wine market, together with conditions in regional markets, have a direct impact on the quantity of grapes that wine producers buy each year. As it is characteristic of the wine sector in both the WBCs and the ETCs to have grape growers of small-scale vineyards

selling to large wineries, a decrease in demand for grapes often generates social issues. Then states are quite often obliged to develop mechanisms to compensate for the losses incurred by grape growers. Georgia was forced to do so during the last three years to compensate for market fluctuations due to the loss of the Russian wine market.

It is advisable to encourage grape growers not only to depend on grape production for their living but also to engage in other fruit or vegetable production.

3.1.3 Wine production in the WBCs and the ETCs

Among the ETCs, the largest wine-producing country is by far the Republic of Moldova, followed by Uzbekistan and Georgia. Serbia and the former Yugoslav Republic of Macedonia are the largest producers among the WBCs (Table 9).

Table 9: Wine production (tons)

Country	2003	2005	2007
WBCs:			
Serbia	n/a	n/a	130,000
Serbia & Montenegro	173,441	106,839	n/a
FYR Macedonia	93,038	105,000	90,840
Albania	9,164	17,144	17,000
Montenegro	n/a	n/a	16,000
Bosnia & Herzegovina	9,125	4,985	3,000
ETCs:			
Republic of Moldova	170,520	324,000	200,000
Uzbekistan	45,750	23,090	42,900
Georgia	65,300	87,000	37,000
Azerbaijan	3,790	4,005	7,200
Tajikistan	2,484	460	6,100
Armenia	2,716	7,259	4,500
Kyrgyzstan	2,125	1,413	1,127

Source: FAOSTAT. © FAO Statistics Division 2008

Strong fluctuations in wine production are frequently observed from one year to the next for at least two main reasons:

- The WBCs and the ETCs are under the influence of continental weather dominated by strong variations from one year to another: for instance, severe drought in 2003 and heavy rain in 2007.
- Wine producers often do not own the vineyards that supply their grapes and so must buy most of their grapes from grape growers. This situation

allows wine producers to regulate their purchase of grapes depending on their capacity to find markets for the finished wines. The Russian embargo placed on Georgian and Moldovan wines in 2006 explains the sharp drop in 2007 wine production observed in these two countries.

The quality of wine produced can be inconsistent, as equipment for wine production and storage is often inadequate. Unfortunately, the WBCs and the ETCs have not developed a significant domestic industry for the manufacture of machinery specifically for viticulture and winemaking. Most of the equipment has to be imported, primarily from Italy, Germany and Bulgaria.

This situation makes it difficult for winemakers in the WBCs and the ETCs to receive adequate training in the use of modern equipment. Procuring spare parts and financing in foreign currencies for buying new equipment is also a common difficulty encountered.

Even if grape and wine production contributes a significant share to the Gross Domestic Product (GDP) generated by agriculture among the WBCs, the number of industrial companies involved in wine production is relatively small. Only 45 companies are involved in wine production and sales in the former Yugoslav Republic of Macedonia[3] and fewer than 20 companies produce and sell wine in Albania or Serbia.

As a consequence of this limited number of players, one or two companies tend to dominate the market, having a very significant market share for both domestic wine sales and exports. For example, in the former Yugoslav Republic of Macedonia, the Tikves winery has more than 30% of the market share.

By contrast, it should be pointed out that the number of grape growers involved in grape production in the WBCs is rather high. In the former Yugoslav Republic of Macedonia, 25,000 growers cultivate 25,044 ha of vineyards (2005) and in Albania 20,000 growers cultivate 6,000 ha.

This unbalanced structure of the wine sector in the WBCs could lead to major social issues resulting from disagreements between grape growers and winery owners over quantities purchased, prices paid, quality required, etc. In such an environment, wine companies tend to accelerate purchases of vineyards to produce their grapes to gain their independence.

In the ETCs, the number of wine processing companies is higher than in the

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[3] In the former Yugoslav Republic of Macedonia, the number of wineries increased from 28 in 2003 to 45 in the beginning of 2007. Detailed analysis shows that it is mostly investors with businesses outside of the wine and grape sector who are responsible for the increase. Grape growers have created no wineries despite their interest to do so. Several reasons explain this situation: grape growers are unable to provide the collateral required by the banks to guarantee long-term loans; financing the first years of cash flow requires a large amount of money; and the equipment (tank, cooling system, press, etc.) needed to start a winery is expensive.

WBCs. More than 120 companies produce wine in Georgia and 60 companies produce wine in the Republic of Moldova.

Compared with the situation in the WBCs, the number of grape growers in the ETCs is lower. In Georgia, 10,000 grape growers cultivate 60,000 ha of vineyards and in Bulgaria 30,000 grape growers cultivate 70,000 ha of vineyards.

This environment tends to create a more competitive and dynamic sector: wine companies have to compete with one another to gain new clients, competition for good quality grapes is greater and tends to push up prices, and investment in modern winemaking and grape-growing equipment is greater.

3.1.4 Wine consumption and trade in the WBCs and the ETCs

Local consumption of wine. Figures available for the WBCs and the ETCs indicate a very limited level of domestic consumption (Table 10). This is due to the fact that official statistics do not take into account the consumption of homemade wine. Most of the wines consumed in domestic markets in the WBCs and the ETCs are of low quality and sold in local bazaars, where control mechanisms to ensure that consumers are not misled by labels are usually weak.

Table 10: Wine consumption in the WBCs and the ETCs (kg/capita/yr)

Country	1999	2001	2003
WBCs:			
Serbia & Montenegro	8	10	8
Albania	4	4	3
Bosnia & Herzegovina	1	2	1
ETCs:			
Republic of Moldova	15	8	4
Georgia	10	7	6
Uzbekistan	2	1	1
Armenia	1	1	n/a
Tajikistan	n/a	n/a	1
Azerbaijan	n/a	n/a	n/a
Kyrgyzstan	n/a	n/a	n/a
Mongolia	n/a	n/a	n/a

Source: FAOSTAT. © FAO Statistics Division 2008

Main exporters of wine. The Republic of Moldova, the former Yugoslav Republic of Macedonia and Georgia and are the three main exporters of wine among the WBCs and the ETCs (Table 11).

Table 11: Wine exports from the WBCs and the ETCs

Country	Development of exports 1999–2001 %	Development of exports 2003–2005 %	Exports as share of local production in 2005 %	Exports 2007 thousand hl
WBCs:				
FYR Macedonia	–13	29	62	925
Serbia & Montenegro	25	44	38	98
Bosnia & Herzegovina	41	6	48	21
Albania	–60	–100	n/a	0
ETCs:				
Georgia	n/a	93	100	149
Azerbaijan	–90	138	17	17
Armenia	261	51	7	9
Republic of Moldova	113	36	111	1
Mongolia	n/a	n/a	n/a	n/a
Tajikistan	–100	n/a	n/a	n/a
Kyrgyzstan	446	32	2	n/a
Uzbekistan	33	66	2	n/a

Source: FAOSTAT. © FAO Statistics Division 2008

Republic of Moldova. In the first half of 2008, 84% of Moldovan wine exports (in value) were to the Commonwealth of Independent States (CIS), including the Russian Federation (30%), Ukraine (25%) and Belarus (21%). About 12.4% of exports were to the EU, in particular Poland, Romania and the Czech Republic. The share of wine exports to the Russian Federation used to be much higher but, in 2006, the Russian Federation decided to impose an embargo on Moldovan wine imports. The embargo severely hit most of Moldovan wineries. It was eventually lifted in the fall of 2007.

The former Yugoslav Republic of Macedonia. The vast majority of wine exports originating from the former Yugoslav Republic of Macedonia go to neighbouring countries, in particular to Serbia and Montenegro (31% in 2006) and Croatia (19% in 2006). As for exports to the EU, a significant share (51% in 2006) is in bulk.

Georgia. For the Georgian wine sector, the driving force of the export market used to be the Russian market. In 2005, out of total exports of 41.6 million litres, 39.2 million litres (i.e. 94%) were sold to the Russian Federation. By comparison, exports to European (EU and non-EU) countries were very

limited (1.8% of total exports). However, in late March 2006, the Russian Federation decided to ban imports of Georgian wines, with the immediate effects of generating stocks of unsold wine (estimated to be in the magnitude of 40 million bottles in 2006) and forcing exporters to search for alternative markets.

The Russian embargo resulted in a decrease in the demand for grapes from Georgian grape growers and created financial difficulties for both wineries – which lost their dominant market – and for grape growers who could no longer find markets for their grapes. As a consequence, the prices of grapes fell. The market price for the Saperavi variety went from GEL 0.65–0.80/kg in 2006 down to GEL 0.40–0.65/kg in 2007. The price for the Alexandruly variety decreased from GEL 2–3/kg in 2006 to GEL 1.50/kg in 2007. This drop was reinforced by the fact that numerous wineries were also trying to buy vineyards in order to decrease their dependency on independent grape growers. More information on Georgia's wine exports can be found in Section 3.2.2.

3.2 Focus on the wine sectors in the Republic of Moldova, Georgia and the former Yugoslav Republic of Macedonia

3.2.1 The Moldovan wine sector

The Moldovan wine sector has been and continues to be one of the most significant agricultural subsectors in a predominantly agricultural economy. As an industry, it accounts for 5% of GDP, about 25% of exports, and 8% of total agricultural land in production. The total surface area of vineyards registered in the Republic of Moldova was 156,400 ha in 2007, including 141,200 ha in production (Table 12). In 2007, 5,700 ha of new vine plantings were registered, a record high, compared with only 460 ha registered in 2001.

In the same year, the average yield of grapes was about 4.2 tons/ha and total production reached 600,000 tons, of which 299,400 tons were processed into wine. As shown in Table 13, a significant portion of Moldova's vineyards is planted in table grapes (16,000 ha in 2007, of which 15,400 ha in production), generating 80,000 tons of table grapes with an average yield of 5.2 tons/ha.

In tandem with the trend of increased planting, the number of Moldovan nurseries has increased more than three-fold over the last six years. Sixty-two nurseries were registered in 2007 compared with 18 nurseries in 2001. The ten largest nurseries have a 95% market share.

Table 12: Vineyards and wine production in the Republic of Moldova

	2005	2006	2007	2008(e)
Total vineyard area (thousand ha)	147.0	150.8	156.4	158.6
Vineyard area in production (thousand ha)	139.0	140.2	141.2	141.8
Average yield (tons/ha)	3.7	3.2	4.2	4.2
Total quantity of grapes (thousand tons)	517.1	446.0	600.0	600.0
Grapes processed for wine (thousand tons)	320.0	210.0	299.4	237.8

(e): estimated.
Source: Government of the Republic of Moldova, Agency Moldova-Vin

Table 13: Table grape production in the Republic of Moldova

	2005	2006	2007	2008(e)
Total table grape vineyard area (thousand ha)	15.9	15.9	16.0	17.1
Total table grape vineyard area in production (thousand ha)	15.2	15.3	15.4	15.5
Total quantity of table grapes (thousand tons)	56.6	33.0	80.0	77.5
Average yield (tons/ha)	3.7	2.1	5.2	5.0
Export of table grapes (thousand tons)	9.6	8.0	12.0	15.0

(e): estimated.
Source: Government of the Republic of Moldova – Agency Moldova-Vin

There are about 150 wine-processing companies officially licensed by Moldova-Vin. However, it is estimated that the ten most active companies have a 90% market share. Vinăria Bostavan is the leading wine producer in the Republic of Moldova, with total wine sales estimated at 12 million bottles (2008). Table 14 lists Moldova's top wineries.

Table 14: Leading wineries in the Republic of Moldova

Vinăria Bostavan	I.M. Acorex Wine Holding	Migdal - P
Vinaria Purcari	Lion - Gri	Salcuta
Cricova	Suvorov Vin	Romanesti
Carahasani -Vin	DK - Intertrade	Imperial Vin

Sales of grapes to wineries are normally done on the spot market. Table 15 gives some indications of grape prices and grape growers' revenues in 2008.

Table 15: Estimated revenues of grape growers for 2008

Average price of grapes on spot market	From MDL 2.2 to MDL 3 per kg
Average yield per ha	From 4 tons for 20-year-old vineyards to 10 tons/ha for newly planted vineyards
Average cost of production	From MDL 2.7 to MDL 3 per kg
Revenue	MDL 3,000/ha in best case scenario

Source: IFC SME Linkage Project

In 2003, the World Bank conducted a study on production costs in the wine industry, based on the interviews with top wine producers. The average cost of a bottle of wine was estimated at USD 1.36, of which the cost of grapes accounted for 70%, as shown in Table 16.

Table 16: Estimated direct costs to produce low- to medium-quality bottled red wines in the Republic of Moldova (USD)

	Imported inputs	Domestic inputs	Percentage
Purchase of grapes and transport to factory	n/a	0.95	70 %
Processing (fermenting and filtering)	n/a	0.14	10 %
Bottle	n/a	0.08	6 %
Cork	0.04	n/a	3 %
Labels and packaging	0.08	n/a	6 %
Cost of certification	n/a	0.02	1 %
Transport to boarder	n/a	0.05	4 %
Subtotal (f.o.b.)	0.12	1.24	n/a
As a percentage of the total f.o.b. price	*8.8%*	*91.2%*	n/a

Source: World Bank, Trade Diagnostic Study, Wine Sub-Sector Case Study, 2003

The indicative direct costs incurred by Moldovan wine producers are similar to those reported in the CIS/CEE competitor countries such as Romania and Georgia, with the cost of grapes constituting the major cost of wine production. However, the costs of corks and packaging are higher in the Republic of Moldova than they are in the majority of the CIS and the CEE countries.

Table 17 attempts to summarize indirect costs incurred by wineries that constitute the main constraints to trade.

Table 17: Estimated indirect costs incurred by Moldovan wineries that constitute constraints to trade

Constraint	Cost to wineries as % of total f.o.b. price
Delay in the payment of VAT and excise refunds	2 – 3 %
Laboratory testing charges for EU VI certificate	2 – 3 %
Imposition of transit bonds for transit through Ukraine	1.5 – 2 %
Transportation requirements for transit through Ukraine	1 %
EU tariffs on wine products	10 %
Restrictions on the use of USD denominated loans	3 – 4 %
Delay in repatriation of funds fines	1 %

Source: Shanken Communication, 2007

3.2.2 The Georgian wine sector

According to the Georgian Ministry of Agriculture, 218 wineries are registered in the country but fewer than 70% are actually operating. A total of 35 companies export their production. The leading wineries in Georgia are shown in Table 18.

Table 18: Leading wineries in Georgia

Georgian Wines & Beverage Company	Georgian Legend
Telavi Wine Cellar	Gremi/Mildiani Family
Teliani Valley	Kakhetian Traditional Winemaking
Tbilvino	Khareba Winery
Badagoni	Kindzmaraulis Marani
Bagrationi 1882	Shumi Wine Company
Askaneli brothers	Taro BZI Investment Incorporation
Binekhi (Vazi+)	Tiflis Wine Cellar
Corporation Kindzmarauli	Vaziani

The annual wine production of Georgia is estimated at around 1 million hl, which represents less than 0.3% of global wine production. Approximately 90% of the wine produced in Georgia is exported, while only 10% is sold on the local market. In 2008, Georgian wines were exported to 33 countries (compared with 22 countries in 2007). This diversification is the result of the embargo placed on Georgian wine imports by the Russian Federation.

As explained in Section 3.1, before the embargo, the vast majority of Georgian wines were exported to the Russian Federation. The ban caused Georgian wine exports to fall dramatically, from USD 41 million in 2006 to USD 29 million

in 2007. Since then, the Government of Georgia has been actively looking for alternative export markets, encouraging Georgian wineries to look to other CIS and European markets.

In 2007, Ukraine became the main destination for Georgian wines, followed by Kazakhstan, Azerbaijan and Belarus. In total, post-embargo, the CIS still represent destinations for more than 70% of Georgia's wine exports. Other markets where inroads have been made include the EU (16%) and the United States (5%).

Due to the dual pressure resulting from the global economic crisis and the August 2008 war with the Russian Federation, Georgia's wine exports fell by 28% in the first quarter of 2009 (compared with the same quarter in 2008) from 2.18 million bottles to 1.57 million bottles.

The Russian embargo has stopped the modernization process underway before 2006 due to the financial difficulties faced by most Georgian wineries. In addition to the positive effect of diversifying export markets, the ban has encouraged the emergence of Georgia's bio-wine segment. For climatic reasons, Georgia has a comparative advantage in producing bio-grapes. In 2007, the production of bio-wine was still limited to 20,000 bottles but in the near future bio-wine production is anticipated to soar.

3.2.3 The Macedonian wine sector

In the former Yugoslav Republic of Macedonia, there are currently 45 registered wineries located in the main grape-producing areas, compared with only 28 wineries in 2003. The number of new private wineries has, therefore, grown considerably, while – at the same time – the overall surface area of vineyards has decreased. The leading Macedonian wineries are shown in Table 19.

New wineries tend to be established and managed by investors originating from outside the wine sector. Of the 45 registered wineries, 14 were created by investors having businesses outside of the wine sector. These investors tend to focus on the production of higher-quality bottled wines, resulting from a stricter control of varietal selection, improved vineyard management, and better harvesting, transportation and delivery practices. They have also invested in sophisticated processing, bottling and marketing technologies, in order to compete on both domestic and international markets.

Table 19: Leading wineries in the former Yugoslav Republic of Macedonia, 2007

No.	Name of winery	Region	Maximum wine production capacity hl	Purchased grapes tons	Area in direct ownership and long-term rental ha
Large scale processors					
1	Tikves	Kavadarci	520,000	23,000 in 2006, on average 30,000	0
2	Povardarie	Negotino	300,000	5,000 in 2006, average 20,000	0
3	Ad Skovin - Skopje	Skopje	171,700	900	450
Medium scale processors					
4	Anevski Vinarija	Stip	150,000	5000	0
5	Strumicko Pole	Strumica	110,000	1,000 in 2006, or average 2 to 3,000	400
Small size processors					
6	Lozar - Pelisterka	Bitola	55,000	0 in 2006, average 250	250
7	Eko-Invest	Ohrid	50,000	2,000-3,000	0
8	Agropin	Demir Kapija	42,000	5,000	0
9	Rigo Impeks	Gevgelija	35,000	15.000 in 2005, average 16,000	70
10	To - Ko	Radovish	35,000	n/a	n/a

Source: Department for Vine, Wine and Fruit Growing, Ministry of Agriculture, 2007

In 2006, the total value of wine exports from the former Yugoslav Republic of Macedonia amounted to EUR 35.6 million, compared with EUR 28.7 million in 2005. Overall, wine export values and quantities have slightly declined over the period 1998–2004 but in recent years, the export share of bottled wine has gradually increased, which is a positive indicator for the development of the Macedonian wine industry, as the export price of bottled wine is much more favorable than the export price of bulk wine. In less than a decade, the share of bottled wine exports (as opposed to bulk) has increased from 7% (1998) to 26% (2003).

European Bank
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Food and Agriculture
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