THE CHALLENGES OF WINE BUSINESS IN RESEARCH

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Introduction

The wine is one of the most popular global beverages. Every year more than 24.5 billion liters of this drink are consumed in the world. However, in recent years, its consumption has been practically not growing. Old wine countries and new emerging markets have begun to lose interest in consuming wine. So according to the Wine Institute (2017), in 2013-2015 wine consumption declined in such countries as France (by 3.48%), Italy (by 5.94%), China (by 8.42%), Greece (by 10.34%), Russia (by 14.42%), Romania (by 15.22%), South Korea (by 17.04%). These countries still consume a third of all wine in the world, but the trend of reduced consumption can lead to the problem with wine sales. And this is only one of the current global challenges for wine business.

Under the influence of negative global and local factors the world wine production for 2013-2015 decreased by 3.5%, i.e. by above 1 billion litres (Wine Institute, 2017). The most dramatic decline in the production took place in Romania (by 31.4%), Greece (18.2%) and Spain (18.0%). 13 countries from the top-20 wine producers lost part of their wine production.

Described negative trends in wine consumption and production make us think about the challenges of wine business, and possible ways to overcome them.

So, what are the main challenges that wine business faces on today?

We have tried to find the answer to this and some other questions concerning wine business by studying the relevant publications.

Grouping the Challenges

Wine business can be considered as a main part of the wine value chains (WVCs). Previous study (Goncharuk, 2017b) identified the main challenges facing theory and practice of the WVCs: global and environmental challenges; methodological challenges; financial challenges; economic and market challenges. All listed challenges reduce competitiveness of the WVC actors.

But here we consider only wine business (winemakers) as an actor of WVC. And from the standpoint of the winemaker, the challenges have a narrower character and a specific nature. Therefore in this paper we somewhat abstracted ourselves from the WVCs and plunged into the challenges of winemakers proper.

Proceeding from this, all publications related to the wine business challenges can be roughly divided into following groups:

(1) Global challenges concerning changes in climate, consumer preferences etc.;
(2) Regional (local) challenges, concerning specific problems in each wine region (country).

The study below presents the results of research publications in accordance with the above classification.
The Results of Research

Global Challenges

Climate change is one of the hard challenges that influences on the grape growers and winemakers globally.

Bad weather increasingly leads to yield loss in wine business. For example, according to the Spanish Ministry of Agriculture, Food, and Environment (Bettini, 2015), Spain’s wine production declined due to adverse weather conditions during the harvesting period. Spain’s main wine producing areas include Castilla La Mancha, Extremadura, Catalonia, Castilla Leon, the Region of Valencia, and Andalusia. The most significant decline occurred in Castilla La Mancha (from 3.3 billion liters in CY 2013 to 2.3 billion liters in CY 2014), one of the leading wine producing areas. Spain still has the largest vineyard area in the world. But the global warming over time can disrupt the leadership of this country in the world viticulture business.

The global nature of this challenge is also confirmed by poor harvests in other countries in the same year due to the adverse weather conditions (unusual cold and/or heavy rainy and/or hailstorms): Portugal (in Minho loss of harvest was 14 percent, in Douro - 8 percent); Greece (Attica - 20 percent, Thrace and Drama - 10 percent); Bulgaria (-36 percent); Croatia (-29 percent); Romania (-29 percent); Austria (-10 percent); Hungary (-10 percent); Slovenia (-6 percent);

Mozell and Thach (2014) found that global warming will affect wine grape and wine production, not only in grapevine physiology and biochemistry, but in the production methods used to make wine (Schultz, 2010). This implies that viticulture managers and producers need to consider a wide variety adaptation and mitigation methods to preserve their wines’ quality, identity, and profitability (Bernetti, et al., 2012). So Mozell and Thach (2014) collected the practical solutions for both vineyards and wineries to mitigate and adapt to the coming change. In particular for wine production it can be 11 solutions:

1. using cooling equipment to assure completed primary and malolactic fermentations to offset warmer temperatures in the winery;
2. re-inspection of cellar hygiene practices and use of antimicrobials and antioxidants to offset warmer temperatures in the winery;
3. using more alcohol-tolerant yeast strains to offset the effect of higher sugar and alcohol levels during fermentation;
4. the employment of sugar reducing techniques such as ultrafiltration and reverse osmosis to offset higher sugar levels in the must;
5. applying acidification to offset a reduction of acidity so as to promote microbiological/microbial stability and reduce the likelihood of stuck fermentations;
6. applying new blending techniques, including the blending of wines from different terroirs and regions to offset vintage variability, particularly in regard to wine complexity and style;
7. leaving white wine on its lees longer so as to conserve fruit-aroma compounds, protect them from oxidation, and increase the release of mannoproteins to offset early harvest and lower acid level in white wines;
8. scheduling the harvest activities earlier to avoid the rush to secure labor and equipment in a more compacted timeframe to offset the early onset of ripening fruit;
9. applying the solar renewables in the form of solar thermal and photovoltaics to mitigate the effect of fossil fuels burning in the production of electricity;
(10) developing and implementing a system of “planned change so as to anticipate future climatically-induced impact and, thus, decrease vulnerability to maintain operational viability and competitiveness;

(11) employment of an energy consumption-monitoring plan to optimize the use of energy in addition to the clean, renewable sources of energy to mitigate the effect of the burning of fossil fuels in the production of electricity.

Moreover many progressive viticulture regions around the world have already taken steps to mitigate some of these challenges. Certifications for sustainable and environmentally friendly practices are being adopted more frequently by producers around the world. Some of these certifications and organizations include: ISO 14001 Environmental Management, FIVS Global Wine Sector Environmental Sustainability Principles, New Zealand Winegrowers' Sustainable Winegrowing, Demeter's Biodynamic Certification, California Sustainable WineGrowing Certification, Fish Friendly Farming, Napa Green and many other environmental and organic certifications for wine around the world. These types of positive efforts should continue, multiply, share best practices and coordinate data tracking.

Another global challenge may be a decrease in consumers' interest in wine, the mass demand for which was often explained by the fashion for wine in the world or some countries. Looking at a half-century history, we can see that 50 years ago wine accounted for almost half of all consumed alcohol in the world (Figure 1).

![Figure 1](image.png)

**Figure 1.** Wine's share of the world's recorded alcohol consumption volume, %
*Source: Anderson and Nelgen (2011)*

Reduction of wine share in consumed alcohol occurred before the end of the 20th century. For 40 years it has decreased fourfold. Smith et al. (1999) explained this downward trend by an increasing internationalization and cultural cross-fertilization. Smith and Solgaard (2000) showed that as traditional cultural boundaries become blurred, consumer shifts in alcoholic drinks preferences appear to be driven less by long-standing local and regional traditions, and more by growing acceptance of a wider choice. Furthermore, the disparity in total alcohol consumption has also decreased.
Simpura and Karlsson (2001) concluded that changes in drinking patterns are slow, even amidst rapidly changing living conditions. The natural time scale for such changes is not a few years or even a decade, but a generation.

But a new wave of fashion for wine in the world did not give this drink to fade away. Thanks to the fashion for wine in the world, its decline in world consumption was stopped. In the first decade of the 21st century, countries such as China, Korea, USA, Canada, Germany, United Kingdom, Belgium, Russia, Ukraine, Australia, New Zealand and many other rapidly increased wine consumption. This allowed the wine business to talk about development again.

Considering global challenges, we cannot fail to note the negative impact of the global financial crisis (Goncharuk, 2012), which led to a reduction in investments in all production industries including the wine business.

**Regional challenges**

Along with global challenges almost every country producing wine has local problems that hamper a development of the wine business. Here we will consider only a few cases due to the large volume of regional challenges.

Oleynik (2012) raises the problem of relatively low competitiveness of Ukrainian winemaking. According to this author, the problem can be solved by improving quality and safety of products, increasing labor productivity, expanding raw material base, improving pricing, developing innovations, concentrating the efforts of the marketing department on improving distribution channels and forming clear brands.

Other challenges of winemaking in Ukraine are the following:
(a) low investment attractiveness (Samofatova and Gerus, 2012);
(b) high taxes leads to ineffectiveness of small wine business (Lazareva, 2015; Goncharuk and Figurek, 2016);
(c) military conflict in the Donbass, the annexation of the Crimea, the decline in consumer purchasing power and losing a significant part of the internal market (Goncharuk, 2017a). All this has led to a reduction in wine sales and an increase in cost of inputs at Ukrainian wineries.

These and other challenges (Goncharuk and Figurek, 2017b) do not allow developing Ukrainian winemaking, which due to favorable climatic conditions in the South of the country has the potential for a growth.

The **Caucasus region** also has favorable conditions and prospects for the development of winemaking. But a number of challenges restrains the realization of its winemaking potential. For example, originating from Asia, the brown marmorated stink bug (Halyomorpha halys) is a significant pest of grapes. So the Georgian wine growers have felt already the loss of part of the crop because of this pest (Hadden et al., 2016).

According to Hanf (2016) winemakers in Azerbaijan see the following regional challenges for winemaking development:
(a) the process of growing grapes is too complex for them since it requires a lot of additional investment, labor and very specialized knowledge;
(b) the lack of good educated students in the field of viti- and vinification;
(c) the problems related to contract enforcement.

In addition, a lot of winemakers in Azerbaijan do not have the necessary
information and no clear strategy when they decide to grow grapes.

Hanf and Marquardt (2012) found a strong contradiction between the generally poor quality of local produce and high quality wines in Armenia. A problem lies in the fact that generally it is best for a country to firstly develop itself as a brand and from there on to enter the markets. The fact that this is not the case in Armenia, troubles overall marketing approach, as quality improves but customers are not aware of it.

In addition to the above problems, it should be noted that the Caucasus region, despite some current stability, has the "hot spots" (Abkhazia, Ossetia, Nagorno-Karabakh), the conflicts which have a negative impact on the winemaking prospects of this region, since they lead to the escape of specialists and investments.

Another troubled region - the Balkans is also famous for its winemaking traditions. For example, Bosnia and Herzegovina, after the war in the 1990s and the 1.3 million people displacement (Kondylis, 2010) revives its viticulture and winemaking today. However, Goncharuk and Figurek (2017a) found the following local challenges that restrain the development of winemaking in this Balkan country:

(a) weak education and training of wine producers and processors;
(b) insufficient incentives (subsidies) for winemakers;
(c) an excessive openness of the domestic market for imports of wine.

The latter two challenges are interrelated because the liberal foreign trade regime of imported products is not burdened by tariffs or other import duties, and their production in the country of origin is more than the subsidized production of the same products in Bosnia and Herzegovina.

However, unlike the Ukrainian winemaking mentioned above, in Bosnia and Herzegovina small wineries are more efficient than large wine business (Goncharuk and Figurek, 2017b).

Having considered the regional challenges of developing countries, we should also look into the challenges for winemaking in developed economies.

For example, German winemaking is characterized by special challenges.

So, Jenster (2008) described the German traditional white-wine consumption decreased by 50% down to 33% of market share due to a consumer preference shift. Hanf (2014) noted the problems with adequate pricing in German wine estates, e.g. how to set the “right” wine price. Hanf et al. (2013) described the conflicts between firm-level and network-level goals in German wine cooperatives.

These challenges concern a consumer preference shift, adequate pricing and goal conflicts seem very specific. However, it does not mean that developed and developing countries do not have common problems in winemaking. And such common problems are often global in nature. For example, the above-mentioned Ukrainian and German winemakers face identical problems: increasing international competition, reducing wine consumption, climate change (Goncharuk, 2017a). And actions of individual companies or one government are not enough to overcome them. The solution of global challenges is in the hands of all mankind and the future of winemaking and other industries totally depends on it.

Conclusions

Basing on review of the recent research studies we divided all challenges of wine business into two key groups, namely: global challenges concerning changes in climate, consumer preferences etc.; regional (local) challenges, concerning specific
problems in each wine region (country). For these key groups a brief overview of studies published in recent years was held. The key global and local challenges were demonstrated on several examples.

The main conclusion is that each of developing or developed countries has specific local challenges for wine business, but global challenges make them equally exposed to risks. And actions of individual companies or one government are not enough to overcome the global challenges. The solution of global challenges is in the hands of all mankind.

The results of this study may be useful for scholars, officials, students, investors, and all who are interested in exploring, developing and improving of wine business.

References


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**Abstract**

This paper allocated the basic groups of the current challenges of wine business: global challenges including changes in climate, consumer preferences; regional (local) challenges concerning specific problems in each wine region (country). For each group author held a brief overview with cases from the recent publications.

**Keywords**: wine business, wine, winemaking, climate change, local challenges