Introduction

When people talk about the wine, someone marks its aroma and taste, the other notices its beneficial or harmful properties for a health, others can also highlight its ability to influence human creativity etc. In a world very few people are indifferent to this beverage, which has been considered as divine since ancient times. Today, wine is still one of the most popular beverages in the world. Its production and consumption grow.

According to Forbes (2016) the global wine production in 2015 was marginally up to 274 million hectolitres (up 2.2%). It is above 3.7 litres per world capita. The consumption of wine world-wide is stable at 240 million hectolitres that is about 3.3 litres per world capita.

Globalization of the world economy made it possible to expand the range of wines on supermarket shelves, which is produced in various parts of the world. The world of wine is becoming increasingly international with 43% of all wine is consumed in a country other than it was produced.

However, the world’s vineyard area is almost unchanged, at 7.5 million hectares (18.5 million acres). On the background of wine production growth it indicates the growth of wine-making efficiency. But is it really? What are the challenges and prospects of winemaking?

To answer these questions, we need to decompose wine production process into its component parts. Certainly, efficiency of winemaking is in the hands of many actors. Each of them creates a part of the value of wine. All of them can be combined into the wine value chain (Figure 1).

![Figure 1. The Framework of Wine Value Chain](image-url)
be defined as a network of stakeholders involved in growing, processing, and selling the wine that consumers drink, i.e. from farm to table (from vine to dine). However, WVC has its own features, which certainly need to be considered.

This is an exploratory paper on the challenges the WVCs are facing and on the prospects they have in the globalized economy.

**The WVC Features**

The origins of the theory of value chain can be found in Porter (1985) where value chain includes all relationships within the process, and they begin with the supplier and end with the customer, thus highlighting the relationship between the company and its suppliers.

Each actor and process (step) on Figure 1 has features, which certainly need to be considered to understand the challenges of WVCs.

**Grape growing**

Unlike cereals, legumes and other crops, the grape growing needs special soil, a favourable climate and a long period of courtship and preparation, including pruning, pest control, etc. Hence a grape grower needs to have a diligence and patience, because the first harvest can be got only once a year, and also between the moment he plants a grape and the moment he can transform it into a good wine, it can take 3…10 years or even more.

So the main challenges (factors) to growing high-quality grapes for wine production are:

(a) quality of soil,
(b) climate and crop requirements,
(c) diligence and patience of grape growers.

If these challenges are not solved, the good wine production is not possible.

WVC can be short if a grape grower has own private winery and sell own wine right on the spot. It is extended practice for some grape farms in popular touristic regions, e.g. German Rheingau (Hanf, 2014) or French Bordeaux (Mora, 2006).

But most of small grape growers don't produce or sell own wine. For market entry and survival in a highly competitive environment they are united in cooperatives (Hanf et al., 2013) or sell their harvest as a raw material to winemaking companies.

The largest grape estates make their own wine and sell it at the market under own brand.

So we can distinguish three types of wine-grape growers:

1. small grape growers united in cooperatives;
2. grape growers sold their harvest as a raw material to winemaking companies;
3. grape growers made their own wine and sell it on the spot (in touristic region) or at the market (large estates).

All of them have own vineyards where they grow raw materials (grape) for wine production.

**Wine Production**

This (second) step includes wine production operations such as stemming, crushing, the fermentation and storage. Here, the grape is transformed into wine, by
first becoming the must and then – through the fermentation process – the wine. Operations included in the clarification of wine comprising racking, fining, filtration, and refrigeration are also an important part of this step in order to purify the output, i.e. the wine. Finally, storage takes place in this phase where wine is stored in order to be aged.

All wine production operations can be made by the following actors:
1. winemaking companies that don’t have own vineyards;
2. wine cooperatives uniting grape growers and winemakers;
3. private wineries that have own vineyards.

All of them have the necessary equipment, facilities, production and management personnel. Usually they also implement packaging operations including: bottle filling, corking, capsuling, labelling, box filling, placement on pallets etc.

All these operations need a participation of other actors, e.g. cork suppliers, bottle suppliers, printing houses etc. They also form a part of the wine value.

Wine production step can last from a few months to many years and moves to the distribution step.

**Distribution**

The distribution step is a mainly transport-related one and can be referred to at a local, regional, national or international level, depending on the strategy and production capacity of the firm.

The largest wine estates may distribute wine by themselves. Actually, large wine companies control the full wine value chain, extracting margins at every level and retaining bargaining power. The other winemakers pass distribution operations to specialized companies, which focus on the wine (food, beverages, alcohol) distribution and can promote numerous wineries at various markets. They mainly benefit from the economies of scale.

Therefore, all wine distribution operations can be made by the following actors:
1. large wine companies that control the full wine value chain;
2. specialized distribution companies: wholesalers, merchant traders, auctioneers, etc.

Some of them (like auctioneers) can sell wine right to the final customer.

Wine distribution step can last from a few days to few months and mainly moves to the retailing step.

**Retailing**

Retailers connect distribution companies with the wine consumers. So they are all there, where people can buy and drink wine: supermarkets, restaurants, wine bars, specialty shops, etc. All of them make the wine available for the final consumer.

**Consumption**

The consumer step should be considered as a significant stage in the WVC. This is due to the fact that storage takes place here and may have a rather noteworthy impact (depending on the needs to keep the wine refrigerated or not) when assessing the overall environmental impact of wine.

This step also includes the operations for treatment of the bottles and waste of
packaging (cardboard boxes, corks etc.). This step can also have great impacts on the environment depending on the chosen method of waste management (for example, reuse, recycling, landfilling, etc.). Some part of paid wine value can be given back to consumer, e.g. for an empty bottle.

**The WVC Concept and Governance**

So what is the WVC?

The term WVC is not new for the science. Some of its aspects are presented in scientific publications. So its theoretical background and case studies are disclosed below.

Often WVC is considered as a particular case, a variety of the food value chain (FVC) or food supply chain.

Sánchez-Hernández (2011) defined FVC as a complex array of actors (primary producers, industrial processors, trading companies, retail outlets and final consumers); all of them must meet the rules of regulatory bodies operating at different geographical scales. FVCs have conventions of their own, formal and informal rules of behaviour that are the basis of the shared cognitive frameworks that allow for coordination among those actors (Storper and Salais, 1997).

The concept of value chain governance illustrates how ‘lead firms’ achieve certain functional divisions of labour along a value chain – resulting in specific allocations of resources and distributions of gains. (Ponte, 2009) argued that agri-food lead firms do not govern chains solely on the basis of buyer power, market share, and/or economies of scale or scope but also through normative work.

So, Mathijs et al. (2015) summarised the case studies of food supply chains in various countries attaching Swiss (Cravero et al., 2015) and French (Touzard and Maffezzoli, 2015) WVCs to overview of such cases together with pork, bread, cheese, tomatoes, apples and berries supply chains. They found that in some cases, such as Swiss wine, local chains seem to create more added value than their global counterpart.

Hall and Mitchell (2008) noted that the role of the wine value chain is not to add cost, but value by engaging the supply chain to develop relationships and broadcast the message of brand value of the product and the story behind the product.

There are several approaches to segmentation of the wine value chain. So, Meissenheimer et al. (2001) divide WVC into the following segments:

(i) soils and plant material;
(ii) vineyard practices;
(iii) cellar practice and wine making;
(iv) packaging and distribution; and market development and marketing.

These are supported by logistics; technology, labour and an institutional framework. The strengths, weaknesses and key success factors were identified for each stage in the supply chain.

Each stage in the supply chain was subsequently subjected to a transaction cost analysis whereby the sources of transaction costs were identified within the realm of asset specificity, bounded rationality, opportunism, and information asymmetry. The most important sources of transactions costs are as follows: (i) the impact of viral infections, (ii) risks in terroir choice, (iii) moral hazards and free-rider problems in cooperative systems, (iv) research capacity limitations, (v) product image, (vi) inadequate information flows, (vii) inconsistent delivery times, (viii) intellectual
property, (ix) human development, and (x) economic instability. Recommendations are formulated around each of these aspects.

Gereffi et al. (2005) suggested the following typology of governance patterns for FVCs:

(a) Hierarchical chains represent the fully internalized operations of vertically integrated firms;

(b) Quasi-hierarchical chains involve suppliers or intermediate customers with low levels of capabilities, who require high levels of support and are the subject of well-developed supply chain management from lead firms;

(c) Relational and modular chain governance exhibit durable relations between lead firms and their suppliers and customers in the chain, but with low levels of chain governance often because the main suppliers in the chain possess their own unique competences and can operate independently of the lead firm;

(d) Market chains represent the classic arm length relationships found in many commodity markets.

Considering WVCs, the governance pattern (a) occurs in various economies, e.g. in Azerbaijan (Hanf, 2016) or Spain (Fernández-Olmos et al., 2009). So Fernández-Olmos et al. (2009) found that transaction costs and product quality provide a useful explanation of vertical integration in the Spanish wine industry. Wineries that produce high-quality wines are more likely to integrate vertically than those producing low-quality wines. They also found that the size of the winery significantly affects make or buy choices.

Navas–Aleman (2011) argued that chain governance has tended to move away from quasi-hierarchical models (b) towards the modular type (c), as this form of governance reduces the costs of supply chain management and allows chain governors to maintain a healthy level of competition in their supply chains. However, Kaplinski (2010) noticed that whilst modular type (c) maintains short term competition in the supply chain it has allowed some leading intermediaries to develop considerable functional competences and in the long term these have the potential to emerge as competitors to their original chain governor.

Ewert and Hanf (2015) highlighted two important aspects for a governance of global WVCs:

1. the relationships are established among heterogeneous actors (e.g. retailers, wine producers and farmers),

2. these relationships are built up to pursue a clear aim.

Hence, vertical procurement relationships can be characterized as a strategic network disposing of a pyramidal-hierarchical structure. This means that there is a focal company that acts as a lead firm and, equally important, considers collaboration throughout the whole chain. The focal company that strives to coordinate a WVC must develop a collective strategy that addresses both cooperation aspects as well as coordination aspects. As a global WCV consists of a multitude of independent firms scattered around the globe, successful chain management relies on the approach the focal company employs to influence the decisions and actions of their partner companies (Gagalyuk et al., 2013). Thus, influence strategies play a crucial role in the management of value chains (Belaya and Hanf, 2012).

There are a few case studies for WVCs. So Soosay (2012) examined the Oxford Landing WVC from South Australian grape growers, via Yalumba Winery to Tesco

Below we discuss the main challenges the WVCs are facing.

The WVC Challenges

Global and Environmental Challenges

Considering the global challenges, it is necessary to highlight a climate change that is one of the serious factors that influence FVCs (Goncharuk, 2016). As climate change progresses, an increasing number of wine industry enterprises and other resource-based enterprises will need to transform. So Fleming et al. (2015) highlighted how transformation decisions require a broader set of considerations than incremental changes, taking into account stakeholder values, attitudes and value chain position.

Desta (2008) and Berry et al. (2016) recognized that conventional wine-producing practices can seriously damage the environment. Environmental damage occurs throughout the WVC due to inputs (such as chemicals, energy, packaging materials and water) and outputs (such as organic waste, solid and liquid waste, CO2 emissions and a water footprint). Within this context, there has been growing pressure around the world to improve the environmental sustainability of the wine sector over the past two decades (Santini et al., 2013). The challenge of environmental sustainability has arisen in part from the wine sector itself, due to the negative impacts of climate change (less rainfall and more frequent and extreme weather conditions) it has suffered. Moreover, wine consumers are increasingly concerned with reducing their carbon footprint, which is another pressure on winemakers to improve their environmental impact.

Andrade (2015) attributed also to global challenges for wine sector the following: water shortages directly impact soil salinization and the quality of wine, lack of local suppliers results in high prices of supplies, poor government funding and high taxes (at a similar level to those charged to other beverages with higher concentrations of alcohol, such as distilled beverages) reduce competitiveness. But some of them aren’t global and are related to selected countries and regions.

Methodological Challenges

Traditional models of Value chain analysis (VCA) (Bockel and Tallec, 2005) have focused predominantly on economic drivers including efficiency of resource inputs and production, product innovation and marketing advantage. But last decade there is selective inclusion of aspects of health and sustainability as business drivers in some value chains, particularly where businesses perceive a competitive threat or advantage. The changing landscape of the food and wine value chain is revealing a need for industry adjustment to heightened consumer power and the increasing role of values other than economic values within consumer behaviour.

Fearne et al. (2012) focused on imperfection of analytical tools for WVCs – Value chain analysis (VCA). They noted that to date VCA has largely focused on economic sustainability and paid inadequate attention to social and environment consequences of firm behaviour and the (re) allocation of resources within and between firms in the chain. These risks are producing recommendations which either ignore the
competitive advantage offered from improving environmental management and social welfare, or have such detrimental external consequences as to render any proposals unsustainable when exposed to government or broader (public) scrutiny.

Financial Challenges

In order to encourage the development of value chains the reasonable financial levers should be created.

Navas-Aleman et al. (2012) noted that loan guarantee associations (LGAs) and other guarantee systems are widely used in Argentinian wine industry. The agreement between the largest public LGA (Garantizar SGR) and a private-public entity that represents wine producers (CoViAr) is directed toward strengthening the wine value chain by supporting SME financing. In this value chain, a large leading firm (or cooperative) needs a critical input that is generally provided by SMEs and is therefore interested in strengthening its SME suppliers.

Considering Californian WVC, Andrade (2015) noted poor government funding and high taxes, high initial investment (equity is insufficient, funding is required) among the main challenges for wine sector. Ukrainian wine industry faces same challenges, but in addition, and the high cost of entry to the market. Hence a small business almost does not develop in Ukrainian WVC (Lazareva, 2015).

Economic and Market Challenges

In a highly competitive environment perhaps the most serious challenges to wine value chain actors come from the global market. They are related with the ability to produce and sell a competitive product. However, local producers are facing the similar problems competing with each other and simultaneously with competitive global players. This challenge is common to all world of wine.

So, Soosay et al. (2012) think that the greatest challenges for wine industry – to compete on a global stage with quality wines that are accessible to the mass market, without jeopardizing the livelihoods of wine producers, the communities they serve or the environment upon which they rely. Hence the industry leaders are looking for ways to improve the industry’s competitiveness into the future.

Conduit and Plewa (2015) noted that wine sector strategy aims to boost the competitiveness and sustainability of the sector across the value chain by 1) facilitating greater coordination among all stakeholders to work together effectively, 2) supporting a strong culture of collaboration and 3) focusing RD&E resources so they are used more effectively, efficiently and collaboratively.

Ronan (2009) wrote that “it is a challenge for business people to shift from being product focused and driven to being consumer/customer focused and driven”. This supported by Bruwer et al. (2005) that believed that the premise for the wine industry is that in order to be marketing-orientated, the industry will have to adopt a wine value chain approach to its wine business. Essentially this involves determining by means of professionally executed consumer research exactly what it is that the consumers actually want to buy and feeding this information back down the wine value chain to the provider.

The needs of the consumer changes with age and wine producers have to be prepared to adapt their offerings to suit the market. More importantly they have to create value for their clients who are price and quality conscious (Vink and Alant,
Perin and Lockshin (2001) identified grape production, primary wine production, secondary wine production, marketing, sales, distribution and administrative costs, as the key cost drivers in WVC. Ewert and Hanf (2015) named the design of the chains as a success factor of WVCs.

Ponte and Ewert (2009) found that in the highly competitive wine value chain, some South African wine makers prefer to occupy a lower position on the price and quality pyramid for their exported wines to the European market, and indeed are pursuing forms of product and functional “downgrading” (such as selling higher volumes of basic quality or bulk wines rather than premium wines, vertical disintegration by moving away from the high fixed costs of grape growing, and a reduced emphasis on premium brands), in order to maintain stable market share and margins for mid-range or basic wines, especially during the economic crisis when cost cutting has been necessary for survival in some segments of the industry.

Mathijs et al. (2015) found that local and global wine chains are differentiated primarily by distance, production volumes and governance. In France, the local chain is represented by family domains that commercialise a relatively large share of their output through local markets. In the global bulk wine chain, growers sell their grapes to large cooperatives that produce the wine and sell it through a variety of channels. An intermediate case is a global bottled wine chain, in which wine is produced by domains or small cooperatives, but commercialised globally. In Switzerland, the local chain is represented by Valais-based domains that grow grapes, produce wine and sell it using local outlets.

Unlike producers involved in global chains, the local wine producers in France are more involved in local cultural or gastronomic events, fairs, tourism projects (Brunori et al., 2016).

Borisov (2013) noted that a possession of own vineyards gives opportunity for maximum control of WVC. In such way, wineries are enterprises, which integrate vine growing with wine processing, branches with huge influence on ecology and landscape of rural regions. This author found that investments in green innovations negatively impact on performance of wine sector: vine growing holdings are out of wine value chain because wineries have own vineyards, so this have negative social and economic impact on local holdings.

Gwynne (2012) argued that the ‘systemworld’ of the WVC not only links producing spaces with consuming spaces but also links these with the spaces that generate technology and the applied knowledge of wine. The systemworld also involves the ‘cultural circuit’ of the wine sector – wine associations, trade journals, websites, wine critics and journalists, scholars and experts. Hence some Chilean wine firms have been able to forge export growth by harnessing the potential of the cultural circuits as well as the value chains of the global wine sector.

Hayward and Lewis (2012) gave a monetary value to the geographic wine brand rent. They argued its existence owes much to preferences of wine consumers – who necessarily fuel the wine value chain by paying premiums for geographically differentiated wines. In this study a premium appears to trickle down the value chain, and emerges as a discrete rent on the geographic factor.

Chan-Halbrendt and Fantle-Lepczyk (2013) described the difficulties of farmers in Albanian wine value chains: lack of modern equipment, dearth of technical
expertise, especially difficult time ensuring quality, and most products are substandard in terms of variety and food safety. The findings of their study indicate that difficulties in farmer and wine producer interactions have led to some vertical integration in the wine value chain – wine producers prefer to manage their own vineyards. However, lack of intellectual property protection and lack of marketing expertise in industry has resulted in a lack of trademarks and branding for wine producers. Trademark enforcement has led to frequent infringement cases and a loss of market share for popular wine producers. As with other industries, credit availability is low but vineyards production is subsidized. Poor irrigation infrastructure is cited as another major challenge for producers.

Similar problems are typical for WVC in Baja California in Mexico (Andrade, 2015): a lack of financial resources, need for modern equipment and machinery and reduction of bargaining power and product distribution capacity; water shortages directly impact soil salinization and the quality of wine, lack of local suppliers result in high prices of supplies, poor government funding and high taxes. All they reduce competitiveness of the WVC actors. These limitations require broad participation and an organized response by entrepreneurs, the academic and research sector and three levels of government.

**The WVC Prospects**

As Humphrey and Schmitz (2002) pointed out, the network relationships offer firms clearer opportunities for upgrading than in more hierarchical arrangements. This does mean that the WVCs have good prospects for significant upgrading and bargaining power.

Gwynne (2008) noted that export-oriented wine firms have become highly dependent on the relationships they forge with large supermarket chains in core country markets. These supermarkets have been successful in the scramble for value, at least within the value chain linking Chilean producers with UK supermarkets. However, this value chain has provided a vehicle for rapid growth in export volume for many Chilean wine producers.

Therefore, the Chilean experience can be useful for other developing countries, which should develop an export-oriented agro-industry that would be based on adding value to resources, be sustainable economically in the long term and has a trajectory of technological upgrading. Over the past three decades, the wine sector in Chile has successfully developed this combination of value-added, sustainability and technological upgrading and this has brought dramatic success in export growth.

Grant et al. (2014) suggested treating the wine value chain (Australian) as a ‘club’ by applying a two-part tariff for shared R&D services that the Grape and Wine Research and Development Corporation provides to chain members. According to these authors the advantage of such a tariff is that it enables members of the ‘club’ to convert latent demand for services into effective demand by sharing services that otherwise would not have been satisfied. The first part of this tariff is an entry fee, which is charged to all 'club' members. It is a levy paid by grape growers and winemakers based on the annual wine grape crush. The second part of the tariff comprises fees for a specific service. It is referred to as a usage fee. Chain members pay for any such service according to their individual needs.

Ewert and Hanf (2015) argued that the governance structure of value chains is of
crucial importance, hence the design of the chains can be considered as a success factor.

Bruwer et al. (2005) see an opportunity for the wine industry to increase wine consumption by targeting the female market in a more direct manner than is the case at present. They based on the results of study showed that a wine consumption of consumers peaked with increasing age and with the male gender group. However, females across the age groups bought more expensive wine than their male counterparts.

Bruwer et al. (2011) found that females buy more wine from foodservice on-trade retail outlets such as restaurants, while Millennials frequent the tasting room channel much less than older consumers. There are strong indications that the higher the wine tourism activity level, the higher the wine consumption (usage) level of the consumers. So it is possible and prospective to direct marketing strategies at wine consumers in accordance with their gender and lifecycle stage as far as certain behavioural and sensory aspects of the product are concerned. Bruwer et al. (2012) also found the winery tasting room as the most obvious retail channel vehicle to reach people with high tourism activity factor levels who also happen to be the high usage consumers in the wine market.

Internet technologies and e-sales can improve WVCs and render them more transparent for consumers and producers (Kleine, 2008). So e-prospects open new opportunities for WVCs’ development.

Johnson and Bastian (2007) found that wine consumers' behaviour may be influenced by their wine expertise, i.e. the high expertise level consumers spent more on wine, purchased more bottles and fewer casks per month and consumed more wine in a week than the low and medium expertise groups. This means that the wine training (education) among the population will increase sales and give new boost to developing the WVCs.

Innovative forms of in-chain collaboration could improve prospects for WVCs’ development. For example the prosuming that actively involves consumers in process steps of the suppliers, prosuming extends the notion of involvement to include active engagement of consumers, empowerment. It results in co-creation of producers and clients. Creative business models of customer integration in the wine world are for example realized by Naked Wines or Crushpad (Dressler, 2016). In the case of Naked Wines, a community of wine buyers invests in wineries, sources the wines with reduced prices, and shares the individual evaluation of the wines within the network. Crushpad invites wine amateurs to participate in the creation of individualized wines through online decision processes. Indeed, client integration into formerly solely winery activities spans from clients investing in a winery buying vine partnerships, internet-based customer integration in planting and production decisions, customization of wines or labels by clients, to customers actively selling wine or communicating as wine ambassadors of a winery complementing them in their sales and marketing efforts – hence covering the whole WVC (Figure 2).

So prosuming as a phenomenon of extended integration of customers into the processes of the producers is gaining ground in the wine industry with vivid examples of client activation for all steps of wine estates' value chain (Dressler, 2016). Thereby WVCs' actors offering creative prosuming can profit from profiling in the competitive wine market.
Figure 2. Examples for Prosuming in Wine Value Chain Perspective  
*Source: Dressler (2016)*

Wood and Kaplan (2005) focused on the prospects of a support of marketing and brand development by respected institutions and knowledge exchange between producers contribute to ongoing improvement in wine industry.

Whilst WVCs faces many challenges, but still have good opportunities that should be used for improving and development.

**Discussion and Conclusions**

Considering the framework and basic features, we defined WVC as a network of stakeholders involved in growing, processing, and selling the wine that consumers drink, i.e. from farm to table (from vine to dine).

In recent literature we found several case studies of WVCs from around the world (South Africa, China, New Zealand, Australian, UK, Chile, France, etc.), but no one clear definition or detailed conception for WVC. However some aspects of WVC theory are considered as a particular case, a variety of the food value chain (FVC) or food supply chain. But how appropriate was noticed by Hall and Mitchell (2008), the role of the WVC is not to add cost, but value by engaging the supply chain to develop relationships and broadcast the message of brand value of the product and the story behind the product.

In our view discussing WVC it is important to consider segmentation, the sources of transactions costs, and a typology of governance patterns for value chains.

Discussing the governance patterns we found that vertical integration of WVC occurs in various economies, and they have lower transaction costs and higher product quality. However chain governance has tended to move away from quasi-hierarchical models towards the modular type, as this form of governance reduces the costs of supply chain management and allows chain governors to maintain a healthy level of competition in their supply chains. Besides whilst modular type maintains short term competition in the supply chain it has allowed some leading intermediaries to develop
considerable functional competences and in the long term these have the potential to emerge as competitors to their original chain governor.

As a global WCV consists of a multitude of independent firms scattered around the globe, successful chain management relies on the approach the focal company employs to influence the decisions and actions of their partner companies.

In this paper we identified the main challenges facing theory and practice of the WVCs that can be divided on the following groups:

(a) **Global and environmental challenges** including a climate change, environmental damage occurs throughout the WVC due to inputs (such as chemicals, energy, packaging materials and water) and outputs (such as organic waste, solid and liquid waste, CO2 emissions and a water footprint), a water shortages, etc.;

(b) **Methodological challenges** including limitations of VCA that focuses predominantly on economic drivers including efficiency of resource inputs and production, product innovation and marketing advantage; other imperfection of analytical tools for WVCs;

(c) **Financial challenges** including poor government funding and high taxes, high initial investment, low credit availability, a lack of financial resources for technical upgrading, low supporting SME financing, etc.;

(d) **Economic and market challenges** including highly competitive environment, facilitating greater coordination among all stakeholders to work together effectively, supporting a strong culture of collaboration, focusing RD&E resources so they are used more effectively, efficiently and collaboratively; shifting from being product focused and driven to being consumer/customer focused business; negative impact of investments in green innovations on performance of WVC; a lack of modern equipment and technologies, dearth of technical expertise, poor irrigation infrastructure, water shortages directly impact soil salinization and the quality of wine, lack of local suppliers result in high prices of supplies, etc.

All listed challenges reduce competitiveness of the WVC actors. These challenges require broad participation and an organized response by entrepreneurs, the academic and research sector and all levels of government.

Defining the prospects of WVCs we found that:

(a) The network relationships offer firms clearer opportunities for upgrading than in more hierarchical arrangements that open good prospects for significant upgrading and bargaining power in WVCs;

(b) Developing countries have a good example (Chilean) for developing an export-oriented WVCs that should be based on adding value to resources, be sustainable economically in the long term and has a trajectory of technological upgrading;

(c) The governance structure of WVC is of crucial importance, hence the design of the chains should be considered as a success factor;

(d) It could accelerate industry upgrading by treating the WVC as a ‘club’ by applying a two-part tariff for shared R&D services that provides to chain members, who pay for any such service according to their individual needs;

(e) It is prospective to direct marketing strategies at wine consumers in accordance with their gender and lifecycle stage as far as certain behavioural
and sensory aspects of the product is concerned, e.g. females across the age groups bought more expensive wine than their male counterparts etc.;

(f) Internet technologies and e-sales open new opportunities for WVCs’ development and render them more transparent for consumers and producers;

(g) The wine training (education) among the population will increase sales and give new boost to developing the WVCs;

(h) Support of marketing and brand development by respected institutions and knowledge exchange between producers contribute to ongoing improvement in wine industry;

(i) Applying presuming as a phenomenon of extended integration of customers into the processes of the producers is gaining ground in the WVCs with vivid examples of client activation for all steps of wine estates’ value chain.

Therefore, innovative forms of in-chain collaboration and special tariff for shared R&D services, developing network relationships and governance structures, progressive marketing strategies and internet technologies, wine training and brand development jointly with using the best practices open good prospects for improving and developing the WVCs.

The results of this study may be useful for the scholars, regulators and WVC actors, who wish to understand the nature, composition, challenges and prospects of the wine value chains.

References


WINE VALUE CHAINS: CHALLENGES AND PROSPECTS

Anatoliy G. Goncharuk
International Humanitarian University, Ukraine

Abstract

The paper defines the concept of wine value chain (WVC), discloses its features and governance patterns. Author identified the main challenges facing theory and practice of the WVCs, grouping them on global and environmental challenges, methodological challenges, financial challenges, economic and market challenges. All considered challenges reduce competitiveness of the WVC actors and require broad participation and an organized response by entrepreneurs, the academic and research sector and all levels of government. Discussing the opportunities for WVCs, the author found that innovative forms of in-chain collaboration and special tariff for shared R&D services, developing network relationships and governance structures, progressive marketing strategies and internet technologies, wine training and brand development jointly with using the best practices open good prospects for improving and developing the WVCs.

Keywords: wine value chain, winemaking, governance, challenges, prospects