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The competitive landscape in transitioning countries: the example of the Armenian wine industry

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Abstract. Scholars showed that in transition and developing countries originating from the Soviet period, the degree of market competition is rather low, as large corporates that had been operating were still prevailing. One can assume that the markets had been highly attractive and many newcomers must have been interested in entering the market, due to fewer market participants, i.e. processors and retailers, but numerous farmers are engaged in the commodity production. This had provoked relatively high profitability for downstream firms acting on the local market and likely increased the market competition. However, evidence exists that market structures and hence competition is still hampered. Therefore, this study aims to show how competition in markets of transition countries has developed and provide a detailed description of the market structure to derive the degree of competition. As the subject of research, the Armenian wine industry has been exemplarily chosen as its wine industry is emerging and represents a key sector in the Armenian agri-food industry. Similar cases exist in other transitioning and developing countries. Empirical results from the qualitative research that allows a comprehensive overview of the whole sector reveal that the competition intensity is relatively low, and wine producers act in an oligopolistic market surrounding. Based on this, implications for producers and policy makers are derived, which include competitive and rural policy implications.

Keywords: competition intensity, industry structure, policy implications, rural development, Armenia, wine.

1 INTRODUCTION

At the beginning of the new millennium, researchers showed a heightened interest in competition in transition and developing countries [1]. Especially in transitional economies, the dramatic changes initiated after the collapse of communism have contributed to the growing interest in competition [1]. After leaving the previous centralized planned economies, a process of restructuring and development towards market economies took place [1,2]. In most cases, transition economies “developed weakly operating competi-

tive markets and regulatory frameworks” [1]. Scholars had shown that in different sectors of several transition and developing countries the degree of market competition¹ is rather low [1,4,5]. Especially in the agri-food industries of transition countries, large corporates that had been operating in the former Soviet Union were still prevailing. This was also true for the Armenian wine industry as part of the agri-food industry which serves as an example market for other transitioning countries [6]. Compared to the situation of perfect competition there had been fewer market participants, i.e. processors and retailers, but numerous farmers are engaged in the commodity production. This had provoked relatively high profitability for downstream firms acting on the local market. They had often received extraordinarily high margins but were not competitive in international competition. In conclusion, the markets had been highly attractive and many newcomers must have been interested in entering the market. However, the opposite was the case.

Friesenbichler et al. [2] showed that there had been a switch in research. While earlier research mainly focused on competition and productivity, later articles rather examined the effects of market competition on technology and innovation². Similarly, the wine research focused on wine clusters and their impact on innovation in developed and transitioning countries (e.g. 7–9). Dressler [10] analysed how innovation management can help to deal with market competition, conducting research with German wineries. Recently, only little research has been published regarding the analysis of structure and competition in markets of transition countries. However, evidence exists that market structures and hence competition is still hampered [2]. We argue that market structures and hampered competition are directly related to rural development. Knowledge of market structures and competition is necessary for a targeted development of rural policy implications.

In this context, the questions arise why market structures are not further analysed and how competition can be initiated. Therefore, this study aims to show how competition in markets of transition countries has devel-

oped and provides a detailed description of the market structure to derive the degree of competition. Based on the results, implications for competitive policies as well as for rural development will be given.

As a subject of research, the Armenian wine industry has been chosen as it is emerging and represents still a key sector of the agri-food industry in the transition economy of Armenia. The wine industry is becoming increasingly important for the Armenian economy and with its strong bonds with rural areas it is important for rural development. Similar cases exist in other transitioning and developing countries.

The Armenian government released a 2014-2025 development policy to develop several sectors that will contribute to economic growth and poverty reduction, prioritizing high-value-added processing industries, such as wine production (RA 2014-2025 Sustainable Development Strategic Program [11]). By coming increasingly important for the Armenian economy, the wine industry can be supported by rural policies that help to further develop the industry and to increase the competitiveness of the industry participants (or: of the sector as a whole). This would also create the opportunity for Armenian wine producers to export their wines, for instance, to European markets. For targeted rural policy implications, a profound knowledge of the sector and market structures is necessary. However, so far there is hardly any literature available regarding the domestic market.

With 35 companies, the Armenian wine industry is small in size; thus, a qualitative approach was chosen as a quantitative survey could not be carried out. In total, we conducted 41 individual in-depth interviews so that a comprehensive overview of the whole sector could be presented.

We interviewed almost 50% of all wine producers, including all large and leading companies. In addition, we have covered the majority of all experts from the Armenian wine industry. Accordingly, interviews were also conducted with suppliers, buyers, and other experts of institutions related to the wine industry. This comprehensive study - covering the sector almost completely - allows drawing implications for wine producers and policy makers. The Armenian wine industry can be seen as an example for countries such as Georgia and Azerbaijan, which have a similar historical development of their wine industries shaped by the Soviet history. Today, these countries and their wine industries face similar challenges [12–15].

The paper is structured as follows: Section ‘Framework of competition intensity in the Armenian wine industry’ outlines the development of the Armenian wine industry and sets out predictions for the analysis of

¹ The degree of competition is defined as follows: a high degree of competition refers to the situation of perfect competition (many firms, identical products). In imperfect markets, the degree of competition decreases from monopolistic competition (many firms, slightly different products) to oligopolistic market structures (few firms acting as suppliers) and monopolies (only one supplier). In fully competitive markets the firm is the *price taker*, whereas in a monopoly it is considered to be the *price maker*. In terms of welfare considerations, the effect of the different degrees of competition differ in their impact on total welfare: the higher the degree of competition, the higher is the total welfare. See [3].

² For a literature review on market competition in transition economies see [2].

competition intensity. Section ‘Empirical study’ details the approach of data collection and evaluation used in this study, and presents the results and key findings of the study. Section ‘Discussion and implications’ provides recommendations for wine producers as well as competitive and rural development policy implications. In the last section, ‘Summary’, summarizing comments are given.

2 FRAMEWORK OF COMPETITION INTENSITY IN THE ARMENIAN WINE INDUSTRY

2.1 *Development of the Armenian wine industry*

As many Caucasian countries, Armenia has a long-lasting history in winemaking which was heavily influenced by the country’s membership within the Soviet Union until 1991 [14,16,17]. Before becoming part of the Soviet Union, Armenia produced mainly wine and table grapes. Within the Soviet Union, Armenia had to focus on brandy production (80–90 % of grape production was used for brandy), whereas other Soviet countries, such as Georgia and Moldova for instance, were obliged to focus on wine production [18]. This led to a big change in the Armenian wine culture [14].

In 1991, after the collapse of the Soviet Union, Armenia declared its independence [19]. After the end of the Soviet era, Armenia was moving from a centralized planned economy to a free-market economy and democracy [20]. The country had many problems facing that change. The first years after the independence were very tough for the Armenian population, as the transition process caused an economic breakdown and the processing industry radically deteriorated in Armenia as well as in other Soviet countries (*ibid.*). Remarkable changes took place regarding land rights, privatization, new evolving markets due to the free market regulations and others. After the independence in 1991, many of the Armenian farmers got small plot sizes and due to the small production scale, they could not manage to finance their winemaking facilities and get access to the market in order to sell the high-valued final product [17]. This is why some farmers stopped producing grapes entirely or shifted towards new industries, whereas others continued to grow grapes and were heavily dependent on their grape sales to production plants such as wine producers or brandy factories [17].

The grape production area has gone through a tremendous decline after its 1980 peak of 36,200 ha. During the Soviet-times, Armenia processed more than 200,000 tons of grapes annually mostly for brandy, as well as some wine and sparkling wine. The major part of

the production was consumed in Russia and the Soviet Union [21]. Nowadays, the vineyard area stretches over 17,000 ha [22], from which around 2,500 ha are used for winemaking, while the majority (14,500 ha) is still used for brandy and table grape production [23]. The share used for table wine production is stable, but a steady increase in productivity is noticeable [22]. Overall, there are 35 wineries producing and selling table wine. This number has more than doubled within the last 10 years, as in particular more small-scale wineries were established [17]. Most of the wineries rely on own vineyards (vertical integration), but almost all of them also engage in vertical coordination and buy in grapes, must or wine. Some of the wine producers engage in producing and selling fruit wines and/or brandy. Fruit wines include mostly pomegranate, apricot and cherry fruits. For the production of brandy and fruit wines some technical equipment is needed, e.g. a press, barrels/tanks, for brandy a distillery etc. Only a small share of grape growers has access to the needed equipment.

As stated above the farmers’ plot sizes after the privatization were small and they relied mostly on grape sales. In 2017 the situations is mostly unchanged. In total 66,544 farmers cultivate grapes on an average plot size of 0.23 ha [23]. The farmers are still heavily dependent on selling their grapes to the few operating wineries [24]. Most of the sales are organized through oral agreements or contracts based on quantity and trust [17,25]. However, there is a current trend among wineries towards in-house grape production to control grape quality and yields, as well as variety [17,26].

Nowadays, the wine industry is again an emerging key industry for Armenia and is developing positively [27]. Until now, though, most Armenian wine-producing companies strongly focus on wine exports, as export developments were overall positive. Russia is by far the most important export market, accounting for 90% of all exports followed by the USA, Ukraine, France, Lithuania and others. Since Armenian wine exports are so undiversified, economic shocks occurring in the Russian market directly affect Armenia’s wine export dynamics. The strong devaluation of the Russian Rouble in 2014 resulted in a large decrease of Armenian wine exports (up to -40% in one year). However, the wine exports recovered, market share was regained and wine exports are increasing again. [28]

As the gross domestic product per capita is growing, the overall interest of the Armenian population in wine seems to be rising [29]. The local demand for wine is steadily increasing [30,31]. The increasing number of wine bars and restaurants in Armenia’s capital Yerevan underlines this evolution of growing interest and

demand for wine. Nowadays, especially the young population, which was part of the Velvet Revolution in Armenia in spring 2018, seems to be interested in wine and is willing to spend money on wine [29,31]. The peak of imported wines in 2011 with 717 thousand litres of wine declined heavily nearly two times in the following years, but at the same time the number of wine specialised bars and retailers is raising. Local demand on wine is steadily increasing [17,27,31]. This development in combination with a slowly increasing number of wine consumption per capita indicates an ongoing development in the interest and importance of the domestic wine production [17,32]. The consumption of wine is with 1.63 litres per capita [33] still very low, but the interest and growing importance of wine are steadily increasing and growing. A further indicator of the increasing importance of the wine sector is the establishment of the Vine and Wine Foundation of Armenia (VWFA) in 2016. The foundation is a governmental organization that represents the sector. Additionally, the organization is the responsible body for the development of the wine industry in Armenia as it takes a leading role³.

Most of the research is focused on developing towards the production of stable quantities and higher quality, accompanied by increased exports and domestic consumption in Armenia as well as wine tourism [6,16,17,24–26,31,34,35]. However, scholars have not paid much attention to the market structures as a whole.

2.2 Framework of competition intensity

The structure of the Armenian wine industry and the degree of competition were analysed using a framework based on the industry structure analysis. It provides the possibility to analyse the competition intensity within an industry as it investigates the industry conditions based on external factors. The intensity of competition implies for companies whether the industry is attractive or not. According to Porter [36], the following forces affect the intensity of competition: (1) intensity of

³ The organization represents the interests of all participants in the wine industry towards the legislator, other industry participants, and the government. The VWFA is in exchange with the government as well as the wine producers and is involved in different stages of the wine chain: Firstly, it considers the problems in viticulture that grape producers have to face e.g., grapevine breeding, determination of grape varieties, grapevine diseases etc., and supports the industry in finding solutions. Secondly, the organization is connected to wine producers and processing companies and it supports domestic and export activities (e.g., participation of wine producers at international wine trade fairs). Furthermore, the organization is engaged in developing an umbrella brand for the wine sector. Finally, yet importantly, the wine culture is promoted among consumers within the country.

rivalry among existing competitors, (2) bargaining power of buyers, (3) bargaining power of suppliers, (4) pressure from substitute products, and (5) threat of new entrants. To be able to derive strategic implications for the group of wine-producing companies and policy makers, the framework is applied from the perspective of the group of wine producers. This focus was set deliberately. Even though the wine producers differ in size (some are larger than others, but also very small 'boutique' wine producers exist), compared to other wine producers in the Old and New World countries, all wine producers are relatively small. They are located in rural areas and play an important role in the employment of the rural population in Armenia. In 2012, almost 1.500 people were permanently employed in 27 wine-producing companies. Taking into account the strong collaboration between wine producers and grape growers, the wine producers are a major sector for employment [32]. This enables grape producers to achieve higher grape prices in the medium and long term. In conclusion, the present structures contribute to rural development. Therefore, each force is applied to the Armenian wine industry from the point of view of all wine producers. The concluding predictions will be analysed in the empirical part of this study.

Intensity of rivalry among existing competitors

The Armenian wine industry has around 35 wine-producing companies, of which only six large-scale wine producers dominate the industry [32]. As the number of wine producers is quite small and the market is very transparent, the action one firm takes, except in the case of small-scale producers (households), can be seen by others. Due to the small quantities, which households produce and mainly consume privately, they have a minor influence on the market.⁴ Industry rivalry is low because the industry is small and a few large wine producers are leading the market. The positive market development [27] contributes to the low industry rivalry and gives firms the possibility to expand and grow in size. Highly specialized assets (vineyards, oenological equipment, technology) cannot be liquidized easily and bear high sunk costs for wine producers. Thus, in the Armenian wine industry, exit barriers occur. Even in the case of excess capacities, which makes it unprofitable to work in the industry, wine producers tend to stay in the market.

Prediction 1: In the Armenian wine industry, an oligopolistic market structure is present as only a few wine pro-

⁴ Thus, these small-scale producers are excluded from the analysis in this study.

ducers dominate the market. As the market is growing, existing wine producers can expand easily. Therefore, industry rivalry is low.

Bargaining power of buyers

In Armenia, there are only five big players in the category of supermarkets: *Carrefour*, *Yerevan City*, *SAS*, *Parma* and *Nor Zovq* [17]. Other retailers are mostly small but numerous and increasing. Since 2011, several wine bars and specialized retailers have started the business [17]. The first wine bar *In Vino* was opened in 2010 [31]. As the retailers are more concentrated than the wine producers (with 35 companies according to 6 [6]), the bargaining power of retailers is expected to be high. Due to the historical evolution and focus on brandy production during the Soviet era, the Armenian population also experienced a change in the wine culture. Since the country's independence, wine became emerging again. Data from 2012 to 2017 show an increasing trend in the total wine consumption in Armenia [31]. While 15 years ago, a large quantity of Eastern European and Georgian wines was still being imported and these represented the middle price segment in the food retail trade, today these imports are marginalised and Armenian wines dominate the middle price and premium price segment [31]. Wine consumption is driven by female consumers, local wines are more and more favoured, especially by younger consumers (18-34 years) [37]. The majority of wines are consumed at home, followed by events and restaurants [37]. In conclusion, retailers and final consumers can switch easily between wine producers and different products. The study by Corsi and Remaud [38] show that wine falls under the FMCG category. Thus, producers should establish branded products to stand out in the market, bind customers, and sustain in these markets. The study results of Hugger [37] show, that so far branded wines are rarely found in the Armenian wine industry.

Prediction 2: The bargaining power of retailers and final consumers is high.

Bargaining power of suppliers

The wine industry has different suppliers, such as producers of glass bottles, barrels, tanks, corks, screw-caps, labels, cardboards, fining and additives, technology and machinery. In a worldwide comparison, the Armenian wine industry is relatively small with only 2,500 ha of vines used for winemaking. A greater vineyard area is used for brandy production. Compared to European

wine countries, the quantity of wine produced in Armenia is small. As the total demand is too small, suppliers for wine industries do not set up a sales force in Armenia. For that reason, almost all the equipment has to be imported to Armenia [17].

As shown before the number of grape suppliers is rather high (in total 66,544 farmers). Compared to this, the concentration among wine producers is much higher. Therefore, buyers face low switching costs, especially because grape suppliers are often not protected by contracts [26]. The grape growers are dependent on the grape sale as it is for many the main rural income source.

Overall, grape growers can choose to sell the grape to wine or brandy producers. In general, wine producers pay more, as they demand differentiated quality criteria e.g. such as lower yields to have the right ripeness, healthiness or acidity. As an alternative, grape growers can sell to brandy producers, but brandy producers do not pay a price premium even if the grapes have a higher quality. The quality standards for brandy are lower. In contrast to table wine production, the prices for grapes for brandy are determined by a minimum sugar level and quantity only. A grape grower focusing to sell table grape quality fears the risk of not selling his grapes to a wine producer. Then he has to sell it for brandy production, but due to the lower quantity to reach the table grape quality, he will end up with less money, as brandy grape prices are mainly set due to quantity.

For a few grape growers (the minority) cultivating and selling international or rare varieties is an advantage. On the one hand, they can offer small capacities of highly demanded inputs. On the other hand, the special varieties can be seen as a kind of asset specificity. These varieties are only useful in wine-making. If these grape growers have no fixed relationships with buyers, they fear a huge risk of not selling their grapes.

Prediction 3: Suppliers of inputs other than grapes have high bargaining power, whereas grape growers have a low bargaining power towards the wine producers.

Pressure from substitute products

In Armenia, beer can be a substitute for wine⁵. Other substitutes of alcoholic beverages are spirits (including brandy), which is decreasing in consumption [17]. The market share of imported wine, which is a substitute for domestically produced wine, declined [22]. The switch-

⁵ In 2016, the per capita consumption of spirits exceeded the consumption of wine and beer in Armenia [39].

ing costs for consumers are very low, as the substitutes are available in all distribution channels at similar prices [17]. New product developments of substitute products in alcoholic beverages are very likely. According to 40 [40], globalization leads to a fast spread of innovations and product developments in the alcoholic sector.

Prediction 4: The threat of substitutes is medium. New developments and low switching costs create attractive alternatives for consumers.

business venture but the feeling of connectedness and belonging to their nation. This might be one of the reasons why only a few wine producers have entered the industry, even though entry barriers are low.

Prediction 5: The entry barriers for new entrants in the Armenian wine industry are low. The Armenian wine market is increasing in size; this makes the market attractive, creating a high threat of new entrants.

Threat of new entrants

After the collapse of the Soviet Union and the previous centrally planned economy, several wine producers entered the industry [6,32]. This indicates that entry barriers are low. Compared to European and other wine countries, the quantity of wine produced in Armenia is small and hence economies of scale and the earned profits are relatively small. Armenia has a very large diaspora with about 7 million people [31]. Some of them invest in the Armenian wine business [26]. For many, the main motivation for investment is not the profitability of the

3 EMPIRICAL STUDY

3.1 Sample and interview description

A qualitative approach was chosen for two reasons: Firstly, due to the size of the wine industry and the number of wine-producing companies as well as the number of experts in Armenia, a quantitative survey could not be carried out. Secondly, the data available on the structure and competition intensity of the domestic wine market is very limited, which also supports a qualitative approach. Thus, 41 face-to-face in-depth interviews were conducted throughout field research in Armenia in September and

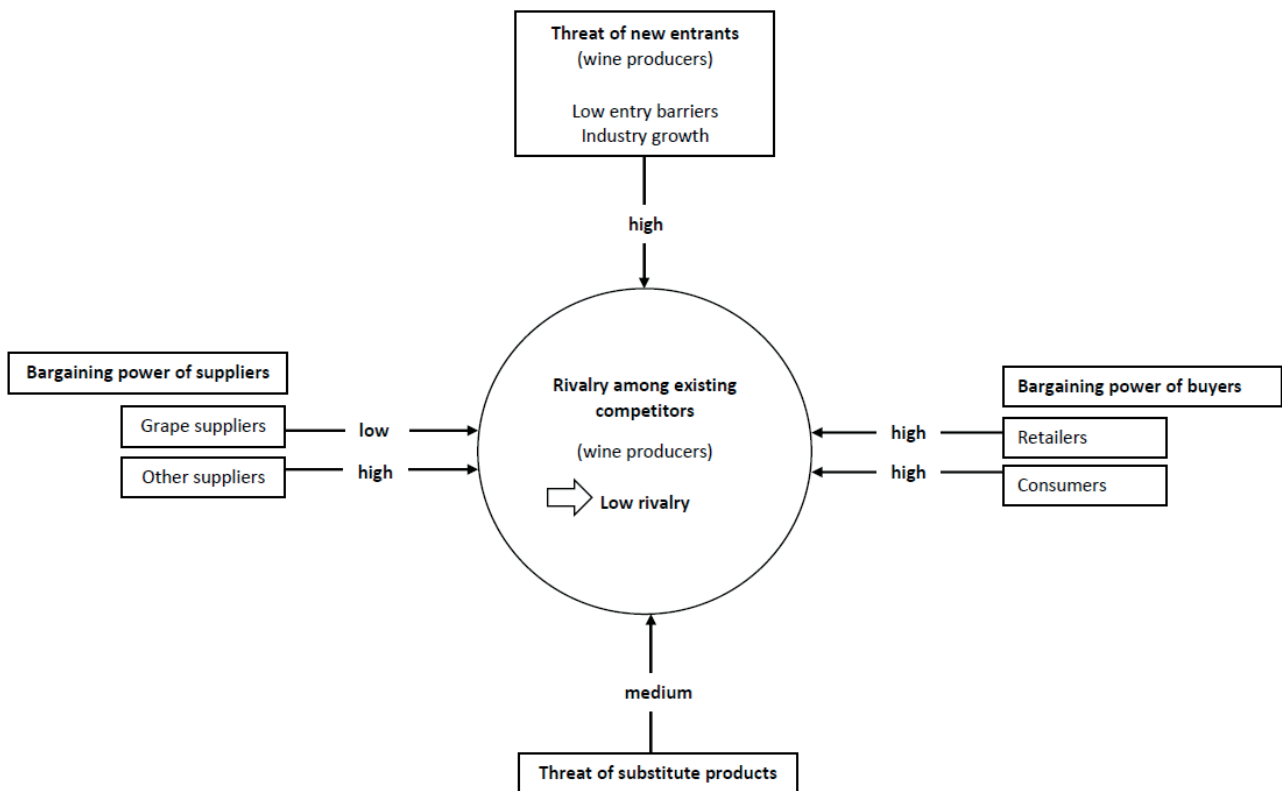


Figure 1. Summary of the expected influence of each force. (Own illustration).

Table 1. Overview of the different subgroups and number of participants.

Groups of the supply chain	Subgroups	Number of active companies	Numbers of attended companies	Percentage (%)
Wine producers		35	15	46
Suppliers	Grape growers	many	0	0
	Barrel producers	3	0	0
	Bottle producers	2	0	0
	Machinery/Agents	4	2	50
Buyers	Restaurants / Hotels	not obtainable	8	not obtainable
	Supermarket chains	5	2	40
	Wine Bars / shops	13	7	69
Other experts	Education	/	4	/
	Politics	/	1	/
	Foreign/related companies	/	2	/

Based on own research.

October 2016. For the interviews a semi-structured interview guide was developed, based on the framework in chapter 2.3. On average, one interview lasted about 32 minutes. Almost every interview was recorded with the oral approval of the interviewees. The recording gadget was a Sony ICD-BX140. Recording was not allowed in two interviews, but notes were taken afterwards. Depending on the interview partners, the interviews were carried out in Armenian, and then translated into English and German, as well as in English and German directly. In this study, the software for qualitative and quantitative research methods *MaxQDA* was used. The recording files were uploaded and with the transcription tool transcribed and then analysed.

In order to ensure a wide range of opinions and perspectives interviewees were chosen from different branches of the wine industry. In order to cover the sector, we have systematically and purposefully selected the interview partners, who are all actively working within the wine industry, considering different business models and including all parts of the supply chain. We interviewed almost 50% of all wine producers, including all large and leading companies. In addition, we have covered the majority of all relevant players from the Armenian wine industry. Accordingly, interviews were also conducted with suppliers, buyers, and other experts of institutions related to the wine industry. Four sections of interviewees can be divided:

- Wine producers: 15 wine producers of different size (including all large and leading companies), located in the countryside, were interviewed. Not every single wine-growing area has been covered.
- Suppliers: two suppliers of machinery and agents were interviewed.

- Distributors: 17 distributors were interviewed; out of these eight restaurants/hotels, two supermarkets and seven wine bars/shops.
- Experts: seven experts were interviewed. They work in key positions of closely related fields or are actively involved in the industry, e.g., politics, education, or foreign help organizations⁶.

Table 1 gives an overview of the different subgroups and the number of participants. Having conducted 41 individual in-depth interviews with all relevant players of the Armenian wine industry, we nearly achieved a representative sample, although we used a qualitative approach.

The applied research methodology is used to analyse the developed framework and to gain a deeper insight into the Armenian wine industry. Due to the explorative research character, the analysis of the interviews followed the approach of [41]. This method of analysing qualitative data is based on Mayring (2002). The advantage of the analysis following Gläser and Laudel [41] over the approach of Mayring [42] is that the category system is open, which means that new categories can be added throughout the research process when necessary. The applied research methodology is used to analyse the first level of the developed framework as basis for further implications. Secondary data that was collected to build assumptions about the peculiarity of each force is considered for the deductions within the developed framework to work out the competitiveness of the industry.

⁶ E.g., Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Centre for Agribusiness and Rural Development (CARD), Centre for the Promotion of Imports from developing countries (CBI) etc. At that time, all of the organizations were involved in projects in the Armenian wine industry.

3.2 Empirical results

The qualitative study revealed important results with regard to the prevailing market structure in the Armenian wine industry.

Regarding the intensity of rivalry among existing competitors, the interviewees verified the situation of having about 35 wine producers of different sizes, with few large-scale wine producers dominating the industry. The intensity of rivalry also depends on storage costs that can occur. Armenian wine producers had to face high storage costs during the crisis in the Russian market (Armenia's biggest export market) initiated by the Russian Rouble depreciation, which resulted in a decrease in sales for the Armenian wine producers. This example shows that external factors (e.g., crisis) can induce high storage costs and lead to price-cuttings. The Russian Rouble depreciation showed that rivalry is high in such situations, in which wine producers want to sell their stocks, and there is excess capacity in the market. Differentiation of wine producers is possible by branding and the quality level, as wine quality still differentiates strongly between producers. The market is developing positively and total consumption is growing. However, the interviews displayed that there is still potential for further growth in consumption. Caused by high sunk costs for vineyards and cellar equipment, the interviews revealed that exit barriers for established wine producers are high. The high percentage of wine producers who invested in their own vineyards (67 %) and their own cellars (80 %) emphasizes this result. Altogether, the intensity of rivalry among existing competitors can be described as low to medium. The prediction was confirmed.

Concerning the bargaining power of buyers, the interviews revealed that retailers have a large availability of different products. They can decide between imported and domestically produced wines. As there are 35 domestic wine producers, they already have a large choice. Adding imported wines, their options even increase. Most of the interviewed retailers work with contracts, only one works with loose agreements. For retailers, the contracting and delivery costs stay the same, no matter with which wine producer they decide to cooperate. Thus, retailers can switch easily between wine producers and different products. The bargaining power for all types of retailers is high. For consumers, the bargaining power is also high, because they can switch at low costs to other products or wine producers. The results confirm the prediction about the high bargaining power of buyers.

The bargaining power of suppliers of inputs other than grapes was evaluated separately, as the situation is

very different for grape suppliers and suppliers of other inputs. The interviews showed that most equipment has to be imported to Armenia. Some bigger wine producers import on their own. Apart from that, only three registered companies organize import. The interviews revealed that one reason for the low number of suppliers is that the wine industry in Armenia is not attractive enough as it is too small. Therefore, only few companies decide to set up a sales force in Armenia. Substitutes are not available. Within the country, a single bottle producer, some smaller barrel producers and printing companies exist with limited product portfolio compared to other established wine countries. These firms are too small to threaten with a forward integration. Due to the oligopolistic structures among suppliers of inputs other than grapes, these suppliers have the option for high margins; thus, they can charge prices, which are higher than the price in a competitive market. In addition, the suppliers offer different brands in their portfolio, e.g. Bucher, Europress and Della Toffola. As the press systems are (mostly) not compatible with each, wine producers cannot switch between the suppliers and compare prices. Thus, for some products the suppliers operate with monopolistic margins. The threat of wine producers to integrate backward is credible, as they can manage the import themselves. The findings suggest that a threat of backward integration is trustworthy and already 80 % of wine producers do self-import of supplies. This means that the bargaining power of suppliers is lower than expected.

For grape growers, the situation looks different. As the number of grape growers is high but only a few buyers exist, it is difficult for them to switch, whereas wine producers can easily switch to other grape suppliers. Therefore, wine producers face low switching costs, especially because grape suppliers are often not protected by contracts. Agreements are usually made orally for one year only [25]. Additionally, high transaction costs arise, as a continuous business relationship is missing. This indicates a low bargaining power for grape suppliers. In Armenia, wine producers set the prices, so these are not subject to negotiation. Grape growers are dependent on sale as this is the main source of income. Most small-scale farmers sell small quantities to wine producers. As wine producers supply grapes from many growers, they are not dependent on a specific farmer and have greater bargaining power. The lack of collaboration among grape growers contributes to the low negotiation power of the farmers. Grape farmers often lack the financial resources to threaten with a forward integration. Some grape growers who are cultivating special and highly demanded varieties have higher bargaining power, but

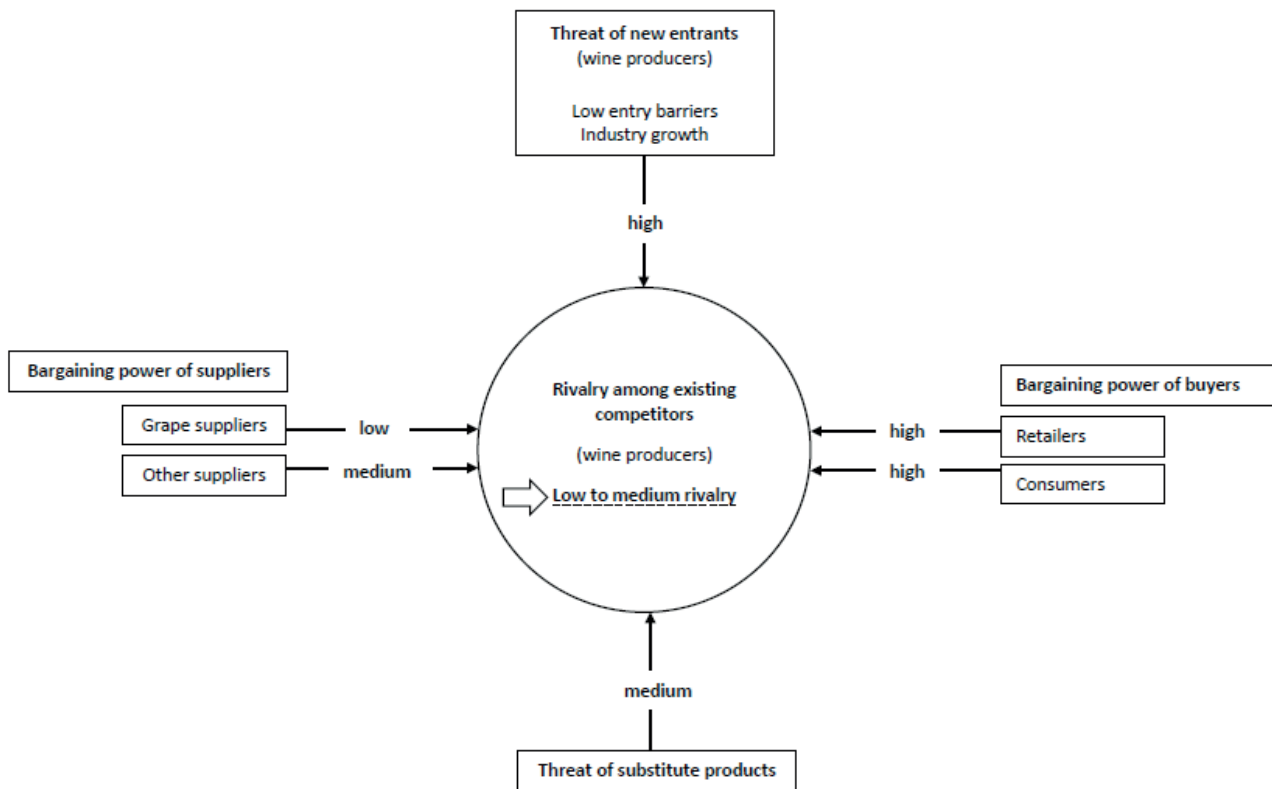


Figure 2. Summary of the peculiarity of each force.(Based on own research).

these growers represent a very small percentage. Other grape growers slightly increase bargain power if they can threaten wine producers with not accepting the instructions. This causes higher agency costs for wine producers, as they need to control or pay higher prices. Following the results of the interviews, grape suppliers generally have low bargaining power. In summary, suppliers of inputs other than grapes have medium bargaining power, while grape growers have low bargaining power. The prediction was not confirmed.

Regarding the substitutes, the results of the interviews show that vodka and spirits do not serve the same function, as wine and brandy are drunk on different occasions. Therefore, it can be stated that the pressure of these substitutes is low. Beer and fruit wines can compete to a certain extent, but for fruit wine, the market share is rather small and beer is a seasonal competitor. Imported wine is the strongest competitor, although it only possesses a market share of around 7 % of all consumed wines in 2017 [43]. For every alcoholic beverage, the switching costs for consumers are low, since it is available everywhere and within comparable price ranges and thus creating a high threat of substitutes. It is similar to new product developments. The same likeli-

hood applies to all alcoholic beverages, again increasing the threat of substitutes. In summary, the threat of substitutes is medium. The prediction was confirmed.

In terms of the threat of new entrants, it was shown that in Armenia, there are no legal administrative entry barriers for the industry as there is no official wine law until now. Some basic health and safety regulations do exist but are simple to be followed. The import of grafted international varieties, for instance, is restricted due to the threat of phylloxera⁷ that could affect all non-grafted vines in Armenia [22,26]. For entering the Armenian wine industry, capital is necessary to buy or set up new vineyards, machinery, equipment, etc. However, the capital requirements are not too high. Wine producers also have the opportunity to rent facilities and equipment of existing producers or to use services such as contract bottling, which lowers the sunk costs. Switching to other grape suppliers is easy, as the number of grape growers is high. Switching to suppliers of inputs other than grapes such as producers of glass bottles, fining and

⁷ Phylloxera is a louse or aphid that severely affects vineyards covered with vines that are not grafted. Affected vineyards have almost no chance to be recovered.

additive agents, barrels, machinery, cork suppliers, etc. is more difficult since only a small number of suppliers operate on the market and each of them with their own brands (products with different characteristics, prices and maintenance services). A change to production of wine-related products (such as fruit wine and brandy) is not as difficult as expected in advance and the costs of a switch vary between different products. As many wine producers also produce fruit wine and brandy, it is feasible with low investment costs. The switching costs to other productions such as table grapes are high as selling machinery previously used for wine production can be difficult. Furthermore, different varieties need to be planted, which can cause high costs. Overall, this leads to medium exit barriers for possible new entrants. However, since the entry barriers are low and the exit barriers are medium, this implies a high threat of new entrants. The prediction was confirmed.

4 DISCUSSION AND IMPLICATIONS

4.1 *Implications for wine producers*

The results showed that wine producers have a low bargaining power towards suppliers of inputs other than grapes as well as in negotiations with retailers. There is a need to act to support wine producers in enhancing their bargaining power towards upstream and downstream stages. Possible recommendations include (1) the collaboration among producers, (2) the establishment of a communication network among producers, (3) the strengthening of the competitive position of producers, and (4) investing in the establishment of brands.

The establishment of collaboration among wine producers creates an opportunity to increase bargaining power towards suppliers of inputs other than grapes and towards retailers. Such collaboration can be organized, for instance, by establishing a wine producers' association. The producers' association could include a producers' communication network to interconnect with other wine producers. Another example, could be collaboration among producers vertically or horizontally. 44 [44] analysed a small group of producers from Portugal, called the Douro boys and showed that the "informal network"/collaboration fostered innovation and improved their market situation by fighting competition together. The group worked together in the international wine market through collective presentation of its wines in tastings, fairs and other events, but remained independent in all other areas.

An additional possibility is to build a producers' communication network to interconnect with other wine

producers with the help of the VWFA. By being part of such a network, producers can exchange knowledge and discuss the development of the sector with the aim to strive for a common goal. Together with the VWFA, wine producers can take joint measures to increase the visibility of the umbrella brand in export markets.

Wine producers have several options to strengthen their individual competitive position. They can try to produce at lower costs by improving the production cost structures and applying economies of scale (e.g., by expanding vineyard area and the total production volume or by mergers and acquisition). In general, through merger and acquisitions the overall competition intensity decreases for the industry. However, out of the perspective of a single, individual firm, it can improve its competitive situation and help to improve the bargaining situation with grape suppliers or buyers such as retailers due to bigger quantities. Another possibility is to invest in product differentiation, which can be achieved with product development and branding. As earlier shown wine is a FMCG product, for which branding is especially important [38]. This is also related to the fourth recommendation for wine producers, which entails investments in the establishment of brands. This addresses the consumers and builds consumer loyalty establishing a long-term relationship. Wine touristic activities can serve as a measure to establish brands. In wine tourism strong emotional bonds between consumers and the brand can be created through experience. Thus, wine tourism can help wine producers to improve their competitive situation.

4.2 *Competitive policy implications*

The results show that there is still a low level of competition among wine producers in the Armenian wine industry. There are about 35 wine producers. The industry is still growing, which is proving the profitability of the industry. Oligopolistic structures are detected not only in the case of wine producers but also in other stages of the value chain. For instance, there are only a few suppliers of inputs other than grapes, especially those suppliers offering the import of supply necessary for viticulture and winemaking. Also, in downstream stages, oligopolistic structures occur. Five big players dominate the supermarkets in Armenia. Those three groups are able to charge higher prices due to the oligopolistic market structures. The implementation of measures, which help to increase the competition intensity among suppliers, wine producers and retailers, would cause a lower average market price. That, in turn, increases total welfare, especially by increasing consumer welfare. In the

case of greater competition among suppliers, wine producers would benefit, as average prices for the supplies fall. To increase the competitiveness in the wine industry in Armenia, possible implications for policy makers are (1) encouraging investments to increase competition, (2) increasing institutional infrastructure, (3) increasing the availability of data to make sophisticated decisions, and (4) fostering a regional and/or country brand.

Encouraging investments to increase competition

Although the findings presented earlier indicate a high degree of concentration of different participants along the value chain, including input suppliers, wine producers and retailers, there is no instant suggestion that the concentration has led to significant exercising of market power of any of the set firms. Still, increased competition is beneficial to consumer welfare. The promotion and support of start-ups and investments into capital, skills (e.g. for further education and training) and labour (e.g. for vocational education) could help to improve the competitive landscape. In addition, the promotion of addition markets (e.g. neighbouring countries), would also help to improve the competition situation.

The policy makers can promote the wine industry as a possible pillar for investors, no matter if they are local entrepreneurs or foreign investors. Encouraging foreign investors to do business in Armenia can contribute to the development and modernization of the local industry. This especially concerns technology and machinery needed in the wine production process, such as laboratories or anti-hail technologies, but also knowledge for marketing tools and strategies. 25 [25] showed for the Armenian wine industry that most of the inflow of foreign direct investments (FDI) originates from the Armenian Diaspora or from other investors, which have a personal connection with the country. "The overall effect of FDI is considered positive, within society and for overall developments. Constraints still exist, but examples show that the interest of investors exists and difficulties can be overcome." [25].

Increasing institutional infrastructure

The results have shown that up to now the legal setting for the wine industry in Armenia is not defined in detail. The interview results also show that wine producers require wine laws and regulations, and the enforcement of these.

There is a law on alcoholic beverages on the basis of grape raw materials, but no detailed law exclusively cov-

ering the product grape wine. A first step was taken in 2014 when Armenia joined the OIV as a member state, but the legal requirements must be implemented in the national law. The analysis showed that until now, clear legal definitions of product categories (wine, fruit wine, brandy, etc.) are missing. When purchasing wine, consumers demand a certain level of wine quality. To reach a higher quality of wines produced in Armenia, it is necessary to implement wine laws and regulations based on international standards. Standard specifications have to be set up that are valid for all grape and wine producers, which produce grapes or sell their wines commercially. This makes wines more competitive in the domestic and international market and facilitates wine exports in various countries. The wine that is sold abroad helps building trust between local consumers (also including tourists) and wine producers. Like this, local consumers see that wines are produced according to international standards, which can contribute to a higher willingness to pay for local wines. Hence, wine laws and regulations that increase the overall quality level will increase the competitiveness of the wine sector. It gives security to producers and consumers. On the one side, it enhances the chance for wine producers to sell their products, and, on the other side, it gives orientation to consumers, as they know what wine quality to expect.

Wine laws and regulations have to include specifications and minimum requirements in terms of grape cultivation, oenological practices, and regarding sales and marketing (e.g., labelling requirements, quality assessment in certified laboratories etc.). Part of this step is also to create a standardized quality assessment system and opportunities for monitoring and control. To ensure a certain quality level, a legal analysis of the products has to take place before the products can be sold. Therefore, independent and certified laboratories are necessary⁸. If the products do not match the regulations, sales have to be prevented. As many small-scale home producers exist, the regulations can only be applied to wine producers who sell through indirect sales channels.

Increasing the availability of data to make sophisticated decisions

The results indicate that there is a lack of governmental decisions regarding threats for grape growers and wine producers such as the phylloxera. Grape grow-

⁸ Certified laboratories should carry out tests on malolactic fermentation, tests on stability and protein sediments, sensory tests, and microbiological assessments. This has been recommended by März and Bitarishvili [45] in the Report on The Qvevri Wine Identity - Practice of the Qvevri Wine Cluster members.

ers are the first in the value chain to be affected by the pest, and wine producers the next when they cannot secure their supply. In order to know where the rootstocks are, which, and how many are affected, which grape and wine producers are affected, and to predict the actual scope of the crisis, a cadastre is necessary. Furthermore, the government needs such a database to plan subsidies for grape and wine producers. Thus, to be able to make governmental decisions safeguarded and purposeful, a statistical database for the wine sector has to be set up. Such a database is beneficial for public regulators, policy makers, corporate managers and researchers, who can use this information to make sophisticated decisions about innovation, profits, competition, and social welfare.

Until now, the National Statistical Service (NSS) provides a minor database. A database for the industry needs to integrate information about production areas, production quantities and qualities, planted varieties and rootstocks, land ownership, the corresponding grape growers, as well as wine and brandy producers, commercialization permits, distribution channels, trade, and consumption. It is essential to steadily collect, store and evaluate data. With these numbers, the importance of the wine industry in the context of the agricultural sector is clarified.

Fostering a regional and/or country brand

A continued investment in the VFWA can help foster the generic brand of Armenian wines. In turn a stronger regional or country brand can help to strengthen the individual brands of the wine producers [46]. 47 [47] show in their research that GI, collective brands and sector brands subsumed under shared brands facilitate the establishment of a relationship of trust between the producer and consumer, being a source of competitive advantage.

4.3 Rural development policy implications

The interview results show that there is great potential to increase wine consumption in Armenia. Besides establishing brands to increase consumer loyalty, as mentioned in the recommendations for wine producers, the government can engage to create greater awareness for the product wine. The VWFA, as governmental organization, already promotes wine culture within Armenia. Additional measures, such as the promotion and development of wine tourism in the country, lead to industry growth.

Wine tourism in Armenia can contribute to rural development [34]. So far, wine tourism in Armenia only exists on a small scale. In 2018, the project of the so-called Wine Cube started, which has built the base for further development of wine touristic activities within the country [48]. To increase wine touristic offers, policy makers should introduce potential benefits for wine producers to managers, the wine sector as a whole and the public. Additionally, the government can encourage wine producers to engage in these activities, collaborate with established tourism providers to increase the offers. This includes (I) enhancing the quality of existing wine tours, (II) developing new wine tour offers and wine tourism routes, (III) providing information on the tours and attractions offered, and (IV) training guides with needed skills and knowledge.

Wine tourism offers locals and foreigners to incite interest in such activities and in the wine sector itself. This will foster economic development in the country as it creates employment for locals in rural areas. Furthermore, it promotes cultural awareness and helps to preserve local culture and traditions. The earned money can be reinvested in infrastructure as well as the protection of the countryside. Additionally, the promotion of wine tourism does not only foster the wine industry it also has cross border effects due to collaboration. This means, that wine tourism is only successful when a regional network including several actors, such as various overnight offers (hotels, B&Bs etc.), gastronomy and others (museums, art galleries, regional tourism organizations etc.) work together offering a holistic touristic experience. In this case, besides the wine producers all other collaboration partners bloom as well, thus (wine) culture is promoted on a broad base [49].

The results of the industry analysis showed that the bargaining power of grape suppliers is quite low. Farmers often possess small plot sizes. There is a high number of smallholders and they depend on the grape sales, as this is often the only source of income. Hence, the government and VWFA should not only try to engage collaboration among producers but also among grape growers. An overall more professional type of relationship between grape suppliers and wine producers can be established by fostering the usage of mid- to long-term contracts, including the compliance of contract terms and contract monitoring. This would help to protect smallholders as well as wine producers and allow them to reduce uncertainty in the business relationship. Besides, the government can promote collaboration among smallholders by either establishing a grape grower association or cooperatives. These kinds of partnerships between smallholders increase their bargaining power towards

buyers and give them the opportunity to exchange knowledge, which can lead to the production of higher quality grapes and a higher income. 50 [50] showed that collective action by local and international governmental and non-governmental institutions and organizations may enhance farmer's market performance. In their study, 50 [50] found that training and learning support is the main trigger to enhance farmer performances. In the case of governmental support, however, the government should only serve as a facilitator, providing capacity development in terms of management, contract negotiation, market research, supply chain analysis and book-keeping for the farmer organizations to develop independent and sustainable structures [51].

Governmental support already exists to a limited extent (e.g., regional development centres where agronomists share their knowledge with the farmers) but measures should be more target-oriented, reaching more farmers with the same effort. The government can establish a centre in the capital Yerevan for all grape growers, where experts in viticulture offer consulting services without charging the individual farmers. Another possibility of governmental support is to offer subsidies for loans to emancipate farmers to take business decisions e.g., to change to other crops, to change to other varieties, to increase the size of the cultivated vineyard area etc. In this way, the government can provide security to farmers in dangerous income situations.

In terms of production, farmers need adjusted plant material of high quality and nurseries for the reproduction of plants for a stable production of high-quality grapes. For special agricultural problems that can occur in the industry, as for example phylloxera in viticulture, the government should provide state support concerning plant material and nurseries. In addition, the VWFA must give recommendations and advice to grape growers and wine producers on how to deal with specific agricultural problems. As no centralized organizations can assure an equal information distribution among farmers, some farmers have a lack of information and are not aware of the risk the phylloxera poses to their vineyards and income situation. A possibility for a recommendation given by the VWFA would be grafting of local varieties on resistant rootstocks. Furthermore, it should negotiate with the Armenian government in order to achieve the subsidization of grafting.

5. CONCLUSION

With this study, the industry structure of the Armenian wine industry and its competition intensity is

shown. Armenia was chosen as an example for other transition countries in the Caucasus. The results of the interviews, which have been conducted, permit to derive implications for wine producers and policy makers.

Recommendations, which address the increase of the bargaining power of wine producers towards suppliers and retailers, include (1) the collaboration among producers, (2) the establishment of a communication network among producers, (3) the strengthening of the competitive position of producers, and (4) investing in the establishment of brands.

The competitive policy implications aim at three main areas: (1) encouraging investments to increase competition, (2) increase institutional infrastructure, and (3) increase the availability of data to make sophisticated decisions. The attractiveness of the industry should be promoted among local entrepreneurs and foreign investors. To build a sufficient institutional infrastructure and to reduce the uncertainty of market participants, policy makers should aim to establish laws and regulations for the Armenian wine industry, as well as to develop a quality assessment system. The establishment of a widely accessible statistical database about production, distribution and consumption gives policy makers and managers the opportunity to make informed decisions. Rural policy implications enclose the promotion and growth of wine touristic activities, the protection of smallholders by building more professional relationships along the value chain, the collaboration among smallholders, the establishment of cooperatives and state support for special agricultural problems (e.g. phylloxera).

These implications may contribute to an increase in the overall competition and the development of the wine industry in Armenia. With such a development, the country could overcome the struggles of building a strong sector with vital competition and foster the industries' development.

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