

CLUSTERS AS AN APPROPRIATE WAY TO INCREASE THE COMPETITIVENESS OF THE WINE SECTOR

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Abstract

In recent decades in terms of globalization the competitiveness concept in the wine sector becomes more crucial. Economic and political trends, climate change, technology boom and financial liberalization determine the conditions of production and force businesses to articulate more - creative to the environment.

As an effective situational organization clusters provoke with the power to reduce transaction costs and increase efficiency in parallel providing competitive advantages for the participants. They are current form and in terms of synergies in cooperation between business, education and government sectors, which contributes to the formation of trust in society.

The aim of the study is to identify the main trends in the sector, to define problems and on that basis to reveal the potential for solving them through the cluster form of organization in terms of the common market organization.

Key words: competitiveness, clusters, wine sector

1. MAIN TRENDS IN THE WINE SECTOR IN BULGARIA

In recent decades, in terms of globalization the concept of competitiveness for the wine sector becomes more and more crucial. Economic and political trends, climate change, technology boom and financial liberalization determine the conditions of production and so forcing businesses to respond more creatively and purposefully to the surrounding environment. That is the main reason why there occur a lot of dynamic processes in the sector. The current situation of viticulture in Bulgaria is a result of restructuring processes in production of grapes and wine. The Common Agricultural Policy of EU also contributes in high degree to that, because its mechanisms aim to support and assist producers to increase their competitiveness.

Nowadays the potential for a positive development of the sector in Bulgaria is faced with resolving several major issues. Among them are drastic reduction in the areas under vines, fragmentation of vineyards, deteriorated age and varietal structure, shortages of raw material qualities for wine production, reduced export volumes at the expense of growing imports, insufficient formation of added value in the sector and not lastly socially overcoming of the individualism and desire for independence of the Bulgarian manufacturer.

The aim of the study is to identify the main trends in the sector, to define problems and on that basis to reveal the potential for solving them through the cluster form of organization in terms of the common market organization and international competition.

The study results are based on official data released by Ministry of Agriculture and Food (MAF), Executive Agency of Vine and Wine (EAVW), National Statistic Institute (NSI), Eurostat and Faostat. The period of study covers the years after the country's accession to the EU (2007 - 2014) and year 2006 as a base year.

For study's aims is used a dynamic analysis, which is applied mainly by following indicators: level of development, pace of development on constant basis, average and absolute growth.

The main determinants defining the development of the wine sector are harvested area, their age structure and varietal composition, the farm type, the economic aspect of production and not least

trading volumes of imports and exports. There are considered both directions of producing grapes for direct consumption and for wine, taking into account the importance of the last one for the sector.

1.1 Harvested areas under vines

According to dates of "Agrostatistics" collectively for the entire sector in year 2014 there is achieved a reduction of the area under vines of 46.6% compared to the base year 2006 (Ministry of Agriculture and Food, 2006 - 2014). Vineyards grow moderately until 2008, after that is downward trend with intense pace until 2012, when due to the economic situation was noted a slight recovery of the indicator. However, at the end of the period - 8 years after the accession of Bulgaria to the EU, wine grapes harvested areas have reached amounts of approximately one second in low compared to the base year 2006 and specifically: 46.9 percent for red wine varieties and 45.3 percent for whites.

For the direction of the table grapes must be noted that due to lower percentage of representation for the sector, the data don't show a strong dynamic change. In the first year after accession to the EU there is a decline in harvested areas at whole 20%. After that in year 2009 there is noted a single in nature increase of 5% compared to the 2006. The main reason (Vachevska, 2010) for the mentioned positive increase is an advantageous market situation driven of expressed preference for the consumption of native grapes at a time when the latter is lacking in sufficient volume on the market.

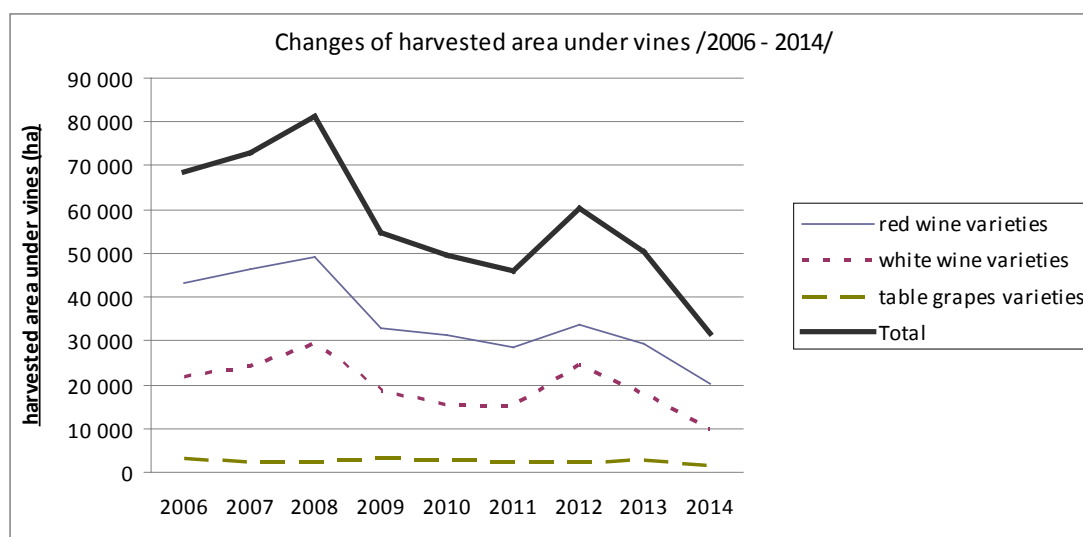


Diagram 1: Development pace of harvested area under vines 2006 – 2014

Source: Adapted to data of MAF "Agrostatistics", vol. 2006 - 2014

However, Bulgarian grapes production fails to significantly expand its supply because of natural compensation demand by the amount of imports and to some extent because of the high price levels, mainly due to higher marketing costs of local producers. So in general the development is gradually but steadily and at the end of the period the deviation from the base year also reached 52% compared to 46.6% - average decrease for the sector as a whole.

In terms of concentration of harvested areas in the country following two charts show the structure of viticulture for the period 2006 – 2014 by planning regions and according to the direction of the grapes.

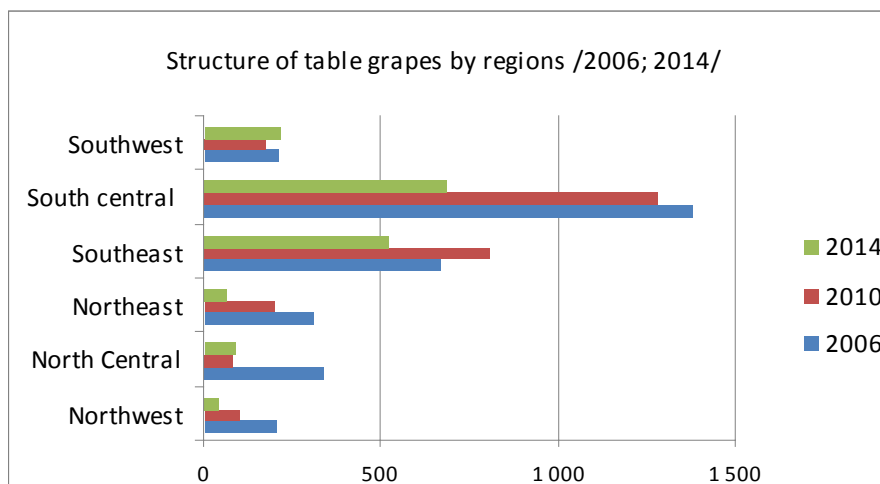


Diagram 2: Structure of wine grapes by regions

Source: Adapted to data of MAF "Agrostatistics", vol. 2006 – 2014

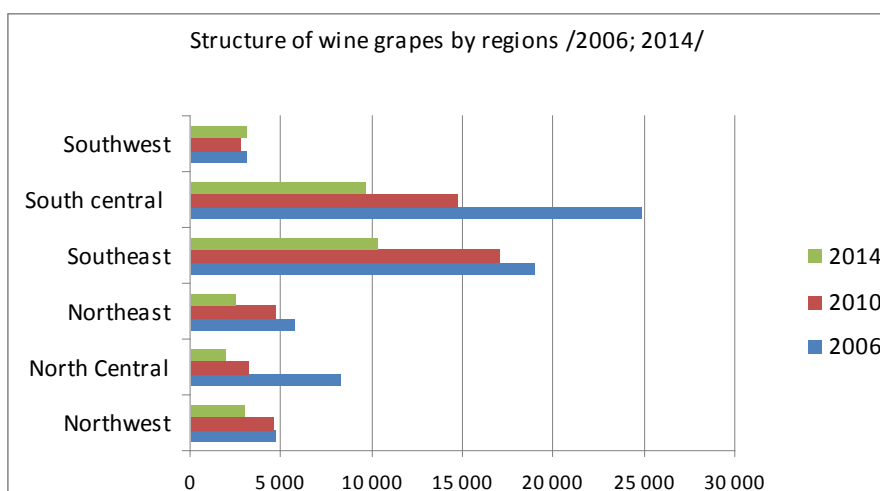


Diagram 3: Structure of table grapes by regions

Source: Adapted to data of MAF "Agrostatistics", vol. 2006 – 2014

In general a downward trend of harvested areas is valid for all six regions in the country and at the end of the period there is no significant change in the distribution between them. A Strong concentration of harvested areas continues to be in South Central and South East regions, such as the lead role remains to the first of them. However mentioned reduction of areas led to the lower values compared to the beginning of the period - respectively 38.8% and 54.2% for vineyards and 49.3% and 78% for table grape yards. The North Central region seems to be the most injured of the reduction of harvested area and reached 22.8% of its original area of vineyards and 26.6% of table grape yards.

1.2 Age structure of vineyards

The analysis of the age structure of vineyards in the sector reveals similar negative trends for both production lines.

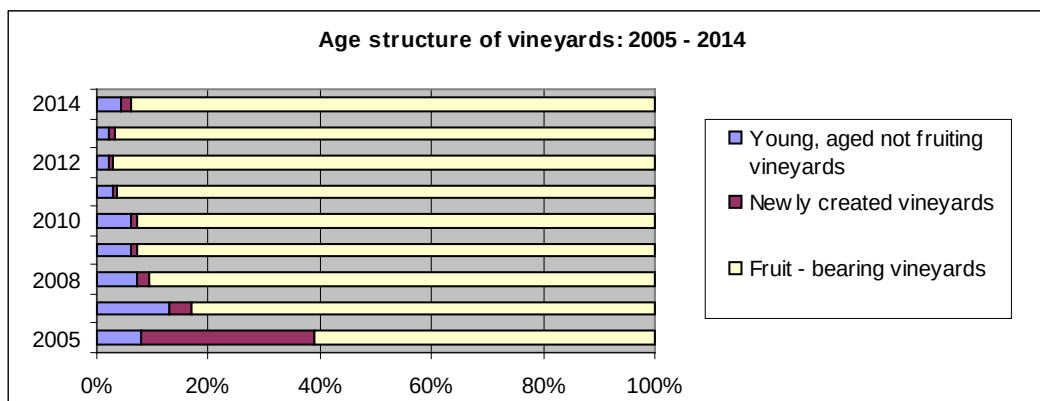


Diagram 4: Age structure of vineyards for the period: 2005 – 2014

Source: Adapted to data of MAF "Agrostatistics", vol. 2006 – 2014

The graph shows that in the structure of harvested areas for the entire period studied – the fruit bearing vineyards have the highest share, ranging from 63.7 percent to 97.3 percent and the highest levels lie in the period 2011 - 2013. According to EAVW to year 2010 about half of the vines are older than 29 years, suggesting downward trend in the area as a whole in the near future.

Young, aged not fruiting vineyards represent a rate within 2% - 13% and the highest value they registered in 2007. The graph shows that the downward trend in their area is strongly progressive for the whole period studied except for the last 2014. In quantitative terms in the second half of the period they were almost 5 times more - than the same in the beginning, mainly due to massive plantations before 2007, giving its implications also later. The rate of decrease in the proportion of aged, not fruiting vines of total harvested area is almost twice amended. Thus for the first half of the period its share is within 13% - 6%, and after 2011 it sinks to the meager 4.3% - 2%. The latter in combination with the registered increase of the indicator in year 2014 gives hope for a positive impact on the structure of the sector.

The segment of newly planted vineyards varies from 0.5% to 4.1% for the period 2007 – 2014 compared to 30% for year 2005. The dates show a sustainable and lasting reduction and in addition in recent years there are plant only about 600 ha new vines. By year 2014 they are about 2% of the harvested area, which is strongly insufficient as pace to ensure the reproduction of existing areas, of course partially that is dictated and conditioned by the political requirements of the Common Wine Market Organization. The intensity in the planting of vines is amended during the reference period, so for 2011 – 2014 there were planted approximately 20 450 hectares, which is twice than in the first half of the period. On the other hand after the country joined the EU in 2007 there are created approximately 7 750 hectares new vineyards, which reaches about 24% of harvested areas now and in combination with even slight increase in their overall structure, provide a basis for positive expectations as qualitative opportunities, although quantitative restrictions.

1.3 Varieties structure of vineyards

The creation of a vineyard requires significant investments that return after a long period of time, even in successful management function. Due to the limitations of the time difference between investment and return, the choice of a variety for planting is extremely crucial. It directly depends on the economic direction of the farm; it means the selected direction of grapes, but in any case from the actual market demand and valid natural climate conditions.

Regarding to EAVW by 2014 the distribution of harvested areas according to the economic grapes direction is an absolute predominance in favor of wine grape varieties that nationwide lies to 94.95%

against 5.05% for table grape varieties. A similar ratio is typical for all 6 wine regions and the most apparent is it in the Northwest region, where wine varieties maintained a share of 98.55%.

Except for the Northeast region for all others is typical an intensive growing of red wine varieties, the most widely practiced is in the Southwest, South Central and Northwest regions, where the share of red varieties is respectively 86.9%; 85.7% and 78%.

According to EAVW most - popular red wine varieties are Merlot, Cabernet Sauvignon, Pamid, Shiroka Melnishka Loza and Mavrud. Of these, Merlot occupies most wide area, while typical Bulgarian varieties Shiroka Melnishka Loza and Mavrud cover relatively small areas (about 8.1%), which restricts the production and supply of authentic national wine varieties (Radev, 2012).

The role of the white varieties dominates primarily in the Northeast region with share of 73.6% and also in the regions South and North Central, where white varieties are also well represented, respectively with 47.7% and 42.3%.

From all the white varieties the most common are red Muscat, Muscat Ottonel, Rkatsiteli, Chardonnay and Dimyat, which are mainly grown in the Black Sea region due to the favorable climate.

From the perspective of realization of the final product regarding wine varieties it is important to note another trend, namely the desire to offer recognizable and a qualitative product on the market.

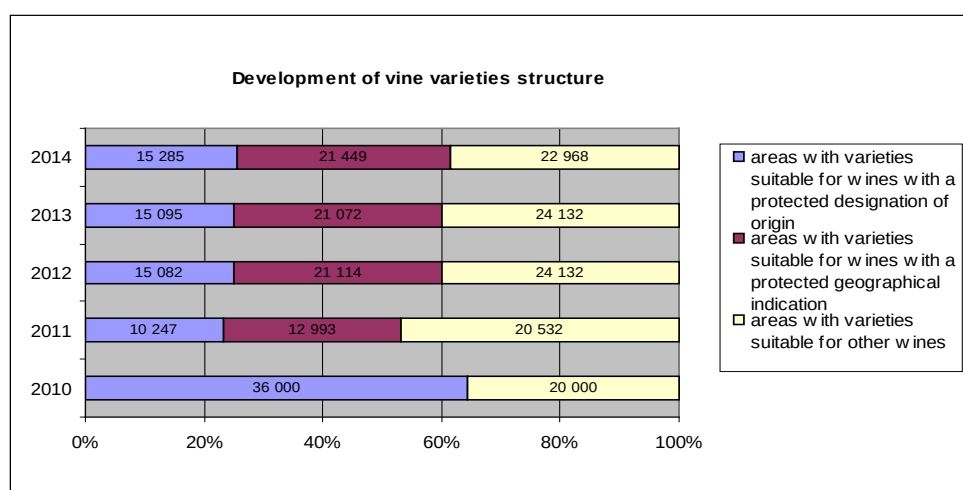


Diagram 5: Development of vine varieties structure: 2010 -2014

Source: Adapted to data of MAF "Agrostatistics", vol. 2010 – 2014

According to the data in the past five years, even slowly has expanded an attitude for growing suitable varieties so as to ensure production of qualitative wines, namely those with protected designation of origin and wines with a protected geographical indication. Such areas have increased sustainably by about 1% per year, which is further hampered by the low values of the harvested area as a whole. This direction of commercial behavior of specialized farms is supported to some extent by the legal base synchronized with the current EU requirements in order to stimulate the production of high qualitative and recognizable products, albeit in limited quantities. For the remaining approximately 40% of areas it could be sad they are occupied by less market oriented varieties, which implies they are managed by inactive market participants (Angelov, 2007). Their output is often used for their own needs.

1.4 Production structures in the wine sector

In terms of production structures in the sector regarding their legal status- approximately 99% of farms are owned by individuals and represent approximately 66% of the areas under vines. The rest of 34% is managed by legal persons and represents less than 1% of all farms in the country. Regarding to EAVW there are registered 45 576 grapes manufacturers and 244 wine producers (Executive Agency of Vine and Wine, Annual Report, 2014). Despite the high number most farms produce on small and non-integral compact spaces. By 2013 the average vineyard size is about 8,84dka and those for table grapes - 4,27dka.

In comparison with 2010 there is a trend of increasing average size of the vineyard in all regions for wine and also for table grapes varieties.

When examining the production structures of interest is the indicator for the number of farms: after year 2010 it has decreased overall by about 43%, which is over 39 000 farms. Leading the trend is the segment with wine grapes varieties this time in a negative aspect as there is reduction reached 41% or almost 34 000 farms have signed off their activities. In comparison table grapes - farms decreased by 1300 (16%) and in connection with a slight increase of almost 4% of the harvested area showed some resilience in the development of this direction. The main reason is that according to statistics this type of activity is mainly secondary or additional for the farms and that's why it is not significant for their economic existence.

Regarding the structure of the vine farms in aspect of the economic volume of production - there is an extremely diverse representation of regions toward the country averages. Nationally, about 60% of the farms are divided almost equally in the categories of output in volume to 4 000Euros between 100 000 - 250 000 Euros and over 250000 Euros and the remaining 40% are also fairly evenly distributed within the range of production between 4 000-100 000 Euros. (National Statistic Institute, 2010 - 2013)

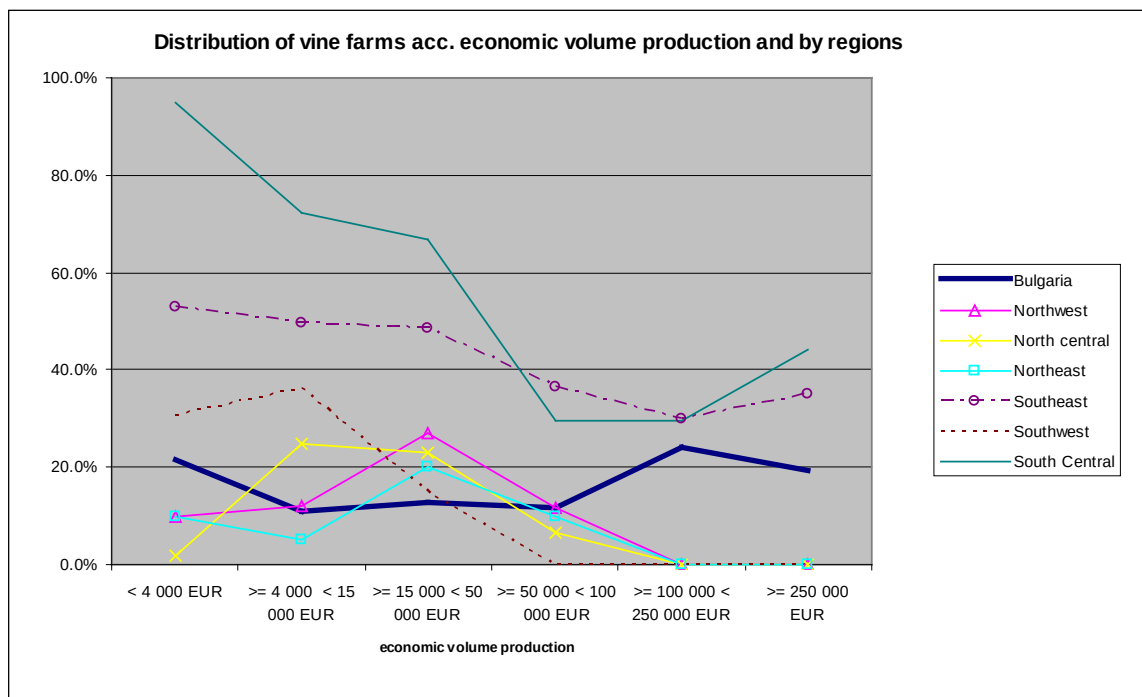


Diagram 6: Distribution of vine farms according their economic volume production

Source: Adapted to data of NSI "Farm type", 2013

The even fairly distribution is rather misleading, because the very nature of the average indicator. In fact at a detailed review of the values crystallize significant differences. Both regions South Central and Southeast show higher values in all categories, but mainly in the final segments: less than 4 000 Euros and more than 100 000Euros. The biggest market players are also concentrated in those regions. Additional differences are enforced by the fact that the Southwestern region determinates its presence in the category to 50 000 Euros output and in the segment more then 100 000Euros economic volume output their participation end also the three north located regions.

The above facts show that the polarization of the activity in Bulgaria climatic conditions have a critical impact and lead to a "disposal" of high levels of economic and market realization of the northern regions. The existing problems in that part of the country in terms of depopulation and difficulties in providing skilled workforces further catalyze regional differences.

1.5 Trade trends in the wine sector

In connection with the sector analysis the commercial aspects, namely export and import quantities also give an essential reflection.

Overall market for Bulgarian grapes outside the country is again characterized by a strong predominance of wine over table grapes and the difference in trading volumes lies to 98%. In general for the period imported quantities for both directions greatly exceed exported.

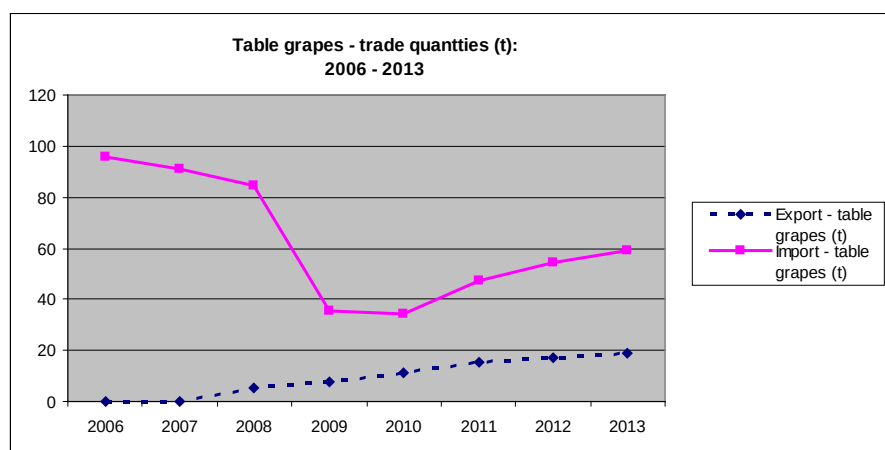


Diagram 7: Import and export of table grapes: 1998 – 2013r (t)

Source: <http://faostat3.fao.org> (2014), adapted

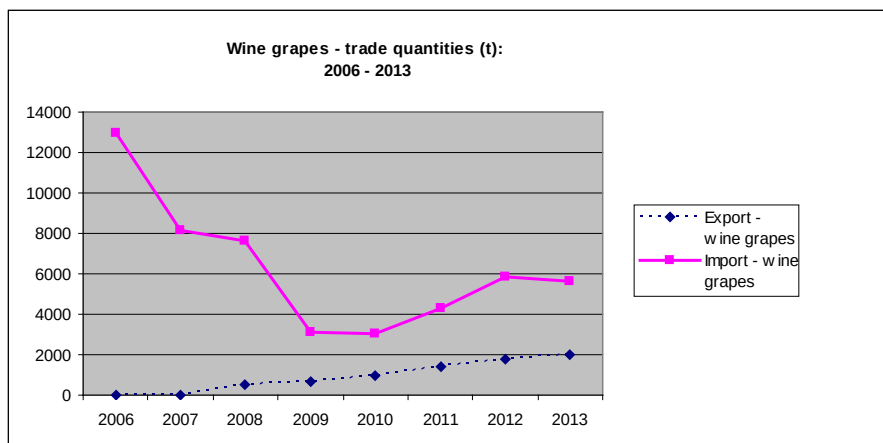


Diagram 8: Import and export of wine grapes: 1998 – 2013r (t)

Source: <http://faostat3.fao.org> (2014), adapted

Analyzing the import quantities there is a trend of reducing in both directions to be observed. After 2010 the trading volumes have begun to rise again, albeit at weak pace. A study of Faostat (Faostat, 2014) reveals a globally upward trend in import volumes in table grapes and it is mainly due to stronger expressed healthy eating and awareness of consumers, leading to higher use of fruit and vegetables. On the other side for our country it shows higher demand for goods, which may be due to lack of own production or non covering with its assortment, quality and price.

Exports of grapes also have experienced a slight rise in the direction of recent years, which is a sure signal for skillfully pave the way for Bulgarian grapes to foreign markets, relatively influenced by targeted measures for promoting goods and services by EU projects. Commercial quantities of Bulgarian wine are also unstable. In general after 2007 there is a significant decrease in the volumes of import and export. The export values are around 10 times higher, again proving the purpose of realization on more solvent markets. It is positive fact that, although almost twice - small volumes compared with pre-accession period, currently the country enjoys a relatively stable rate in exports - approximately 53 000 tons per year. It is important to note that highest share in export keep bottled wines, which is a signal for recognizing their quality abroad.

In combination data on trade volumes of grapes and wine in recent years have shown preference of national entities to export compared to realize their production on the domestic market, which despite logistic costs and risks corresponds to higher profit. The reason for high levels of grapes imports lies in insufficient raw material nationwide and specialization of business units in production of wine, instead of growing vines. Upon wine import causes is the search for high qualitative wines in the higher price segment, such that could satisfy the fine taste of a small percentage of users.

In summary, the adaptation of Bulgarian wine sector to the requirements of the new regulations of EU and in terms of Common Wine Market Organization and according to the analysis of data for the period after accession to EU can be defined several major problems:

- Drastic reduction of harvested area, which limits the possibilities for reproduction and further strengthened by increasing the unsupported vineyards and continuing practice of abandoning
- Deteriorated age structure: significantly limited areas aged, not fruiting and newly created vineyards, which despite weak pace in recent years hampered the recovery of the structure of vineyards nationwide.
- Slowing renewal varietal structure: Lack of production focus of prominent Bulgarian varieties and still high rate of production of grapes, which is not directed to the appropriate varieties for production of qualitative wines. Unrevealed marketing strategy for realization of Bulgarian wine in foreign markets.

- Fragmentation of vineyards and slow pace of land consolidation, which creates organizational difficulties in providing sufficient raw material for wine production, increases logistic costs, hampers the quality control of the participants in the chain
- The trend in reducing the area under vines reflects on the reduction of the total production of grapes, which further hampers negotiations with trading partners of high class.
- Highly polarized structure of farms in the sector, as most of them are not market oriented. Dominated by small farms, mainly owned by individuals, who are scattered and unorganized. Approximately 43% of the farms have determined their activity.
- Low participation of Northern regions in viticulture as a whole, leading to under utilized potential of the country, as well as creating unnecessary internal competition and concentration in the other more saturated regions.
- Lack of prominent economic interest to develop activities in the segment of table grapes growing, despite favorable weather conditions. Treating it as a secondary activity and not essential activity for the farm
- Trend of low levels of exports. Loss of traditional markets in the EU and third countries.

2. CLUSTERS AS AN APPROPRIATE WAY FOR IMPROVING THE COMPETITIVENESS OF THE WINE SECTOR

2.1 *Impact of Common Agriculture Politic on the wine sector in Bulgaria*

After Bulgarian adoption to EU, the main instruments affecting the development of viticulture are the “National support programs” and partial measures under the “Programme for Rural Development”. The applied historical approach to the allocation of financial packages from the EU for Bulgaria did not reflect fully the problems in the sector and the country was placed at a disadvantage to producers in other Member States (Valkanov, 2012).

Year	Budget	Absorption	
	EURO	EURO	%
2009/2010	21 234 000	14 318 486	67.4%
2010/2011	22 022 000	5 864 000	26.6%
2011/2012	27 077 000	17 379 192	64.2%
2012/2013	26 742 000	18 333 877	68.6%

Table 1: Absorption of budget by “National support programs” for wine sector: 2008/2009 – 2013/2014

Source: Annual Report of EAVW: 2013

According to dates 30% of the funds provided under the “National Programme” are not used, while still impressive is the fact that there is a trend of improvement at the end of the period (Executive Agency of Vine and Wine, Annual Report, 2013). Among the main reasons for failure are: low interest in some of the measures, cumbersome procedures and excessive short term in applying for projects, lack of support from the state and supporting institutions, reluctance of financial institutions to lend to the sector and others.

The Support under current “Programs for Rural Development” in the wine sector for the period 2007-2013 is expressed in implementation of mainly two measures of Axis 1: (112) “Establishment of

young farmers" and (121) "Modernization of agricultural farms". The number of the projects and disbursement for the period did not exceed 2% of the budget.

In general European policy regarding the wine sector undoubtedly contributes to the development of the sector in Bulgaria, but also puts some obstacles for increasing the competitiveness of grapes- and wine producers. All the final effects for Bulgaria are positive proved, but can not be assessed as driver. Financial resources are insufficient and do not alleviate significantly the economic situation of the producers in the sector.

Summarized it is necessary to combine the opportunities submitted by the Common Agriculture Politics with additional initiatives of Bulgarian authorities in order to achieve an optimal mix of appropriate conditions for fostering the development of wine sector in the country. Enhancing the competitive position of the sector can be achieved on the basis of the interaction between economic entities and institutions under established national conditions in their overall broad range using the cluster approach.

2.2 Expected benefits from the cluster organization

The cluster (Porter M. , 1998) is a geographic concentration of interconnected companies and institutions in a particular field. Among favorable conditions for cluster occurrences are: geographical neighborhood, entrepreneurial culture, a critical mass of business units and formation of trust. Clusters affect competitiveness within countries and across national borders. They lead to a new agenda for how companies should be configured. Today's economic map is dominated by them, they are atypical competitive success in certain areas.

The benefits of this type of organization commonly include: creating incentives to reduce transaction costs, implementation of innovation that increases efficiency and accelerates the pace of productivity growth, increasing sustainability and competitiveness of the local economy, generating more added value, creating an image of a product or industry, positioning within the boundaries of a region. Not least by revealing how business and government together create conditions to promote growth, clusters offer a constructive way to change the dialogue between the public and private sectors.

In the cluster organization closeness of companies, customers and suppliers catalyze aggregate pressure and thus lead to innovation and renovation of permanent nature. It depends not only on the mechanical sum of the competitiveness of separate business units (Porter M. , 1985). In many more it is already dependent on the ability of them to cooperate with potential partners from related industries, from the complexity of corporate services, the efficiency of public administration and political decisions that help to create a favorable business environment for economy development.

In general cooperation and association are laid down in the proposed financing measures in the new programming period (2014 – 2020) of EU. For this reason, active targeting of Bulgarian grapes - and wine producers toward options of clusters organization will additionally contribute to the increase of financial aid in future periods.

State intervention should also be towards creating clusters, branch organizations and support local farms for their successful adaptation to changes in the CAP after 2013.

In recent years in our country that cluster structure is mainly popularized because of the possibility to finance it by a scheme "Support for cluster development in Bulgaria" as a part of operational Programme "Competitiveness".

How the cluster structure would help to enhance the competitiveness of the sector? Bulgarian sector is included in the total European market after a prolonged declining in harvested area, yield and production, quality deterioration, fragmentation and downsizing areas and outflow of manufacturers. In that meanings below are listed some key issues and expected benefits:

- Most entrepreneurs has refused or failed not because the tax or social security burden is high and not due to the confusion in the environment, but because they haven't adapted to the conditions. The crisis has changed the conditions for doing business and that not once. The way out of the situation created is uniting and cooperating in order to achieve more protected, informed and secured position.
- The smaller size of the property suggests that majority of the farms are to be seen as suppliers of grape for producers. Because of weaker resources and capabilities these farms have high flexibility and integration processes in the sector are of great importance for them.
- Fragmentation of vineyards is an obstacle in the creation of new plantations, as investors sometimes fail to realize projects due to the lack of large separate arrays. Often the consolidation of areas with a view to participation in Community projects is achieved again through various forms of cooperation.
- In cases of concentrated production is easier to deploy successfully advanced high technologies and to achieve the effect of economies of scale.
- The low share of areas for production of qualitative wines ($\approx 37\%$) implies a need for expansion of investments in that field in order to meet the needed higher competitiveness. The direction of investments is primarily towards marketing tools that promote "Bulgarian wine", i.e. association with a view to offering a wider assortment.
- Given that most producers build a large part of their income from the market, it is important to strengthen their negotiating position. Namely that is the weak part for the majority grapes- and wine producers, who enter into commercial relationships with big suppliers and retailers with significant market power and force. Uniting is the right way to increase the added value for the small players compared to other participants of the marketing chain.
- Lack of association and coherence in defending their own interests in the formation of purchase prices of grapes between grape producers and wineries rise to sharp conflict. The offered low price discourages producers and reduces their desire to grow vineyards. This leads to losses for both sides and the state loses also because the sector is not developing steadily and the opportunities for resistance to and surviving the frequent changes in the market environment and unfavorable weather conditions are reducing, too.
- The implementation of standards of food safety, product quality and environmental protection and supply of bio products requires significant investments, including training of employees, and valuable consultancy. In this area association would facilitate the transfer of information and experience sharing.

In summary the inclusion of separate farms in clusters, helps to better control the processes in them and facilitate their access to new technologies and markets, strengthen integration processes in the sector, develop professional, financial, legal and other services. On the other hand our country's participation in a market with larger, absorption capacity and creditworthy population is a powerful driver of motivation to increase production and exports. Historically determined the starting position of Bulgarian wine sector in the EU as scale of production is very low and far below its potential opportunities. On the first hand by cluster form of organization could be achieved positive effects for the separate business unit, which leads to increased economic benefits and higher satisfaction for it. On the other hand the aggregate effect is hidden in the added value in regional or national scale, due to the benefits of collaboration between business, educational organizations and government sector that in sum contributes to the formation of trust in society.

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