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# The economics of industrial property rights: use of geographical indications as marketing strategy for competitiveness of wine sub-sector in Republic of Macedonia

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## ABSTRACT

We analyze the importance of the industrial property rights and the competitiveness of wine sub-sector in four wine-producing countries in order to present geographical indications as a powerful marketing strategy for competitiveness. In the Macedonian agricultural sector, there is a low level of awareness for the economic benefits of industrial property rights. Macedonia has a competitive wine sector, as result of the factor conditions, particularly in tradition, geographic and climate conditions (Balassa index 3.83), but unfortunately the bulk wine has the largest share in export of 87%. The consequences of neglecting the legal protection of industrial property rights could lead to losing the market position of the producers or unsuccessful promotion and export orientation of the products.

**Key words:** Geographical indications, marketing, competitiveness, wine sub-sector, trade indicators

## INTRODUCTION

The system of industrial property rights (IP rights) include: patents, trademarks, industrial design, appellation of origin and geographical indication (Law on industrial property of Republic of Macedonia, 2009). Many reasons such as: market liberalization, expansive development of international trade in goods and services, transfer of technologies, dependence on foreign direct investment, increased the need for protection of industrial property rights in transition economies. The importance is also emphasized through the fact that the interests of the less developed nations are neglected by tendencies of imposing products and system of values, protected by the highly industrial-

ized countries.

Generally, experts in the field of IP protection believe that use of these rights creates sustainable product differentiation of the enterprise. Idris (2004) points that the use of IP as a marketing strategy will increase the competitiveness through differentiation of the products. Differentiation, on one side, allows avoiding the need of a low-price position, and on the other side, helps to create loyalty among consumers (Porter, 2004). Accordingly, companies could achieve significant competitive advantages by creating high-quality value-added products and services whose quality guarantee will be subject of protection of IP rights.

IP rights have great importance in the agro-food sector, especially in part of traditional, added value and processed products. One way to maintain the competitiveness of these products as being unique on the global market is the legal enforcement of the protection and commercialization of Geographical Indications (Protected designation of origin - PDO) and protected geographical indication - PGI)) of agro-food products. Geographical indications (GIs) serve to achieve distinctiveness and recognition of the products with specific quality characteristics, origin from a particular geographical region or area (Dabovic-Anastasovska, et al., 2011). Many economies in transition and developing countries consider GI protection as most suitable options for international protection (Bramley, et al., 2009). Dabovic-Anastasovska et al., 2011, consider use of geographical indications, trademarks and industrial design as powerful tool for marketing and branding strategy. As collective producers right, GIs could directly influence the increased competitiveness and reputation of the products, originated from the region (Idris, 2004). With regard to the competitiveness of the wine sub-sector of Macedonia, Manevska-Tasevska (2006) pointed out that long tradition; favorable geographic and climatic conditions have major impact on product quality.

In Macedonia, most of the research in the field of intellectual property is focused to the legal perspective. Consequently, there is a lack of comparable research regarding the economic aspect of the IP whereas GIs are included less in the research than other IP rights.

## MATERIAL AND METHODS

The paper is based on the deductive research and interdisciplinary approach where industrial property is presented as a marketing strategy for increasing the competitiveness of wine sub-sector of Republic of Macedonia.

The material for the study is based on primary and secondary data collection and semi-structured interviews with relevant persons based on flexible research method. The period of research is 2004-2010, but in some of the calculations, due to the lack of data availability, the period is shortened to 2008. Information regarding wine export and import value was gathered from State Statistical Office of RM, FAO and Word Bank. Data regarding industrial property was gathered from the Ministry of ag-

riculture, forestry and water economy, State office of industrial property and European Commission database.

Most of the data regarding wine production was used from the National Strategy for wine production and viticulture 2010-2015.

### Method

As a part of the qualitative approach, the national and international system of protection of industrial property rights is presented. Compared results shall identify the strengths and weaknesses of Macedonia, as well as the level of protection. Based on the theory of competitiveness, qualitatively are represented factor conditions in Macedonia.

Quantitative methods include comparative analyzes with three countries of the European Union (Bulgaria, Slovenia and France) through calculation of the international trade indicators issued by the Organization for Economic Cooperation and Development. Trade indicators are used to analyze trade balance and coverage ratio, trade openness, trade performance and specialization of countries' wine sub-sector. The first indicator is trade balance value, a difference between exports and imports<sup>1</sup>. Normalized trade balance is export minus imports divided by exports and imports. The normalized trade balance represents a record of a country's international transaction with the rest of the world, normalized on its own total trade. Its range is normalized between - 1 and + 1. Coverage ratio shows exports as a percentage of imports. The coverage ratio indicates if a country is more an exporting or more an importing country (in terms of value). Trade balance in goods and services as a percentage of GDP is exports minus imports divided by the GDP. The trade balance as a percentage of GDP is an indicator that allows highlighting countries which have registered a surplus / deficit in the period of reference. Trade-to-GDP ratio is a sum of imports and exports of goods, divided by GDP. Indicator for market share presents the exports of a country as a share of total exports of the region/world, and measure the degree of importance of a country on the total trade of the respective region.

Revealed comparative advantage RCA (Balassa index) is defined as export share of a product of the total exports of a country, divided by the export

<sup>1</sup>Definition and explanations for the indicators, are used from OECD report

share of this product of the world. In this paper, Balassa index measures the intensity of wine trade specialization of a country within the world. If it takes a value less than 1, this implies that the country is not specialized in exporting the product.

## RESULTS AND DISCUSSION

### *Protection of IP rights*

The interest for protection of different IP rights in Republic of Macedonia is related to the structure of production capacities. According to the Strategy for Intellectual Property 2009-2012, patents are most present in the field of chemistry and metallurgy. The number of applications for registration of trademarks is increasing steadily, but most of them are from foreign applicants. Compared to the other rights, the number of applications for industrial design protection is relatively low. Protection of new plant varieties stagnate. Even though eight geographical indications for wines were protected, the protection of these rights is not renewed.

Generally, there are more than 10,000 legally protected GIs in the world, which generate an estimated value for sales of over 50 billion dollars (WIPO, 2009). The data for France, present that the market value of their products with GIs is almost 19 billion euro. Most of the protected products in EU refer to wines and spirits, and the number of registered agricultural and food products has an increasing trend. As a result of the EU enlargement, the number of applications for the protection of agricultural and food products is increased.

According to European Commission, 2012, the number of PDO protected products amounts 160 in France, 3 in Slovenia and 2 in Bulgaria and the number of PGI protected products amounts 450 in France, 4 in Slovenia and 52 in Bulgaria. France, despite highest level of protection of intellectual property, is as a country - leader in the protection of wines with GIs. The importance of the protection of this country is confirmed by the high market value that the county realizes from the sale of products with GIs.

Regarding GIs protection, in the past two years, an institutional change has been made in Republic of Macedonia. Agro-food products are

protected separately from the other IP rights, by the Law on Quality of agricultural products. The responsible institution for registration process of PDO and PGI, is the Ministry of agriculture, forestry and water economy (MAFWE). Wine and spirits are protected under the Law of wines. Additionally, MAFWE is in a process of preparation of new guidelines and Registry in which all wines protected with geographical indications will be stored again. Important to note, is the initiative from MAFWE to protect three types of table grapes and two wines produced from autochthonous vine varieties on national level. Unfortunately, the edge of extinction, limited production quantities and low market demand are reasons why only two products of the proposed fulfill the basic requirements, and could be protected with PDO and PGI (USAID, IQS, 2012). In this regard, in order farmers to achieve higher efficiency, investment in Macedonian grape assortment should primarily be directed towards regionally recognized and table grape varieties (Manevska-Tasevska, 2011).

FAO/EBRD also initiated a support of Macedonian wine producers in developing GIs for the Vardar River Valley, further used as a name for the PGI (Wines of Macedonia, 2012).

In 2010, State Office of Industrial Property of Republic of Macedonia protected four agro-food products with geographical indications (including one wine), in compliance with Lisbon Treaty. This system did not encompass PDO and PGI protection of the products.

### *Factor conditions-natural resources*

Republic of Macedonia has a variety of agricultural products grown in certain regions, valued for their tradition, quality and regional origin (USAID, IQS, 2012). Viticulture and wine production are important sub-sectors in Macedonia, with a share of 17-20% in agricultural GDP. The average wine production is around 100 million liters per year. Around 80 million liters of the production, is exported and only 11 million liters of this is bottled wine (13%) (State Statistical Office, 2012). The total capacity of production of wine in bottles is around 650.000 hl per year, but it remains unused since most of the wine is sold as bulk.

With the adoption of the new Law for wine,

Macedonia is classified as one geographical area for the production of regional wine, including sixteen vineyard districts. In order to present the specific natural condition and comparative advantages possessed by each vineyard district, we have divided the districts according to the climate-vegetation-soil regions selected by Filipovski (1996). Skopje, Veles, Tikves, Ovcepole, Kocani-Vinica and Kumanovo vineyard district belong to the Continental-Sub-

Mediterranean region. Gevgelija-Valandovo and Strumica-Radovis vineyard district belong to Sub-Mediterranean regions. Kratovo, Pijanecko, Prilep, Bitola, Prespa, Ohrid, Kicevo and Tetovo vineyard district belong to Continental region.

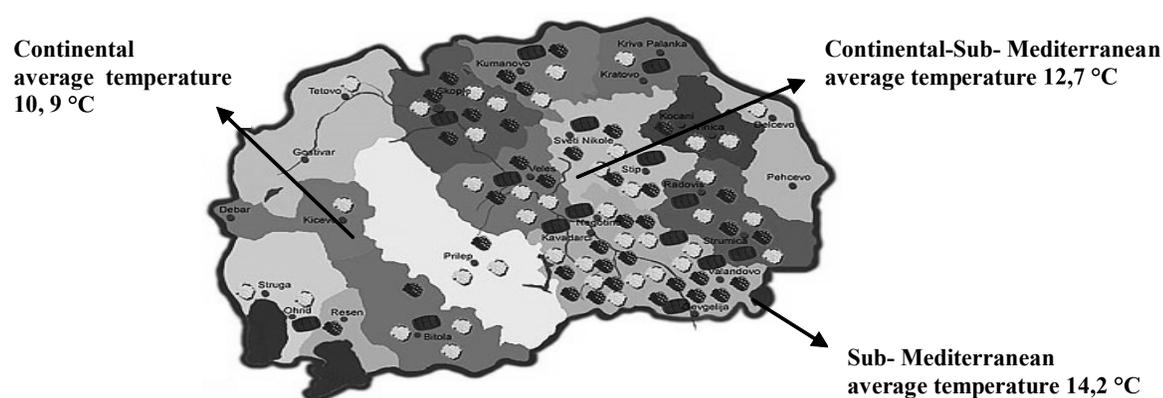


Figure 1. Macedonian Grape Growing and Processing Regions

Source: Manevska –Tasevska, 2006

According to the results, the comparative advantage of the wine sub-sector of the Republic of Macedonia comes from each factors condition for the developed regions.

### Trade balance, normalized trade balance and coverage ratio

Wine trade balance in Macedonia, Bulgaria and France show positive trend (Table 1). Exception is Slovenia, which in 2008 imported larger quantities of wine compared with the export, but in the years to follow, this trend stabilized and the country achieved a positive balance. In Macedonia, the balance is positive, because wine exports significantly exceed imports. This arises from the fact that wine is the second most important export agro-food product from Macedonia. The lowest trade balance was achieved in 2004, with a value of 32.202 thousand dollars, and the highest in 2008 with 59.127

thousand dollars. Decline in the value of the trade balance is reached in 2010, with 14% compared to 2008. The average trade balance is 47 490 thousand dollars.

Normalized trade balance allows unbiased comparison between the analyzed countries and sectors. In this regard, Bulgaria and Macedonia, along with France, accomplished positive normalized trade balance, which present the trade surplus of wine. However, in the analyzed 2009, 2010, and the average seven-year period, Macedonia has a value closest to 1. It shows that, Macedonia achieved the highest trade surplus of wine, comparing to other countries. According to the data, France, reaches linear values, which express its constancy in the wine trade.

In terms of trade orientation, the coverage ratio of exports with imports, showed which country is more export or import oriented. The calculated

**Table 1. Trade balance (000 \$)**

		2004	2005	2006	2007	2008	2009	2010	Average
Macedonia	Export	32.621	36.122	44.680	59.561	57.207	52.811	49.427	47.490
	Import	419	344	535	434	1.330	823	569	636
	Trade balance	32.202	35.778	44.145	59.127	55.877	51.988	48.858	46.854
Slovenia	Export	7.798	7.948	9.550	10.169	11.624	10.448	12.332	9.981
	Import	4.718	5.440	7.604	9.601	12.420	10.058	9.469	8.473
	Trade balance	3.080	2.508	1.946	568	-796	390	2.863	1.508
Bulgaria	Export	80.193	93.499	129.736	118.073	109.134	69.954	66.388	95.282
	Import	1.643	4.173	14.701	31.311	16.481	11.283	12.596	13.170
	Trade balance	78.550	89.326	115.035	86.762	92.653	58.671	53.792	82.113
France	Export	6.919.730	7.014.770	7.820.850	9.254.180	10.000.600	7.694.178	8.392.086	8.156.628
	Import	603.053	594.641	606.335	734.173	817.136	729.430	698.779	683.364
	Trade balance	6.316.677	6.420.129	7.214.515	8.520.007	9.183.464	6.964.748	7.693.307	7.473.264

Source: FAO

data highlights the export orientation of Macedonia in terms of wine, which is the largest in 2007. France achieved the greatest constancy in terms of trade orientation, while Bulgaria shows a trend of increasing export orientation.

### Trade openness (Trade-to-GDP ratio)

By calculating the coefficient for trade openness, we present the importance of international trade in correlation with the national trade of analyzed countries. In this paper, the indicator is calculated considering the national GDP (TtGDP) and agricultural GDP (TtAGDP) of the countries. Thus, we present the degree of dependence of domestic producers on the foreign markets and their trade orientation. International trade may have higher importance for smaller countries (in terms of number of population and surround by neighboring countries with open trade regimes). In this regard, Macedonia has the highest ratio, indicating most oriented domestic producers to international markets (Figure 2).

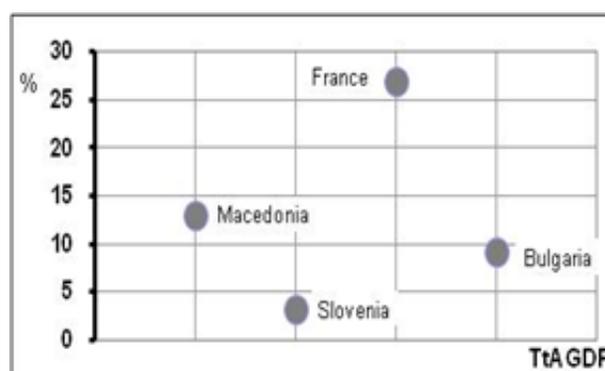
Then comes France, followed by Bulgaria, and Slovenia which shows less trade openness. Although the lower value of coefficient is sometimes associated with trade barriers, the result of Slovenia shows that this is not the case. The reason for this may be the size of the country or geographical distance from potential trading partners.

With regard to the agricultural GDP (AGDP), France shows the highest trade openness because of the largest share in agricultural GDP (Figure 3). Macedonia comes after France, almost at the same

level as Bulgaria. Slovenia has the lowest orientation in terms of AGDP.



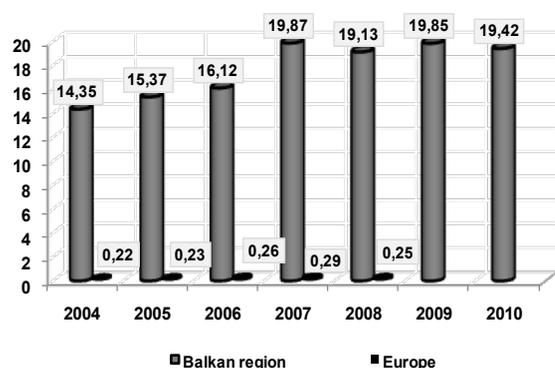
**Figure 2. Share of countries' wine trade in GDP (%)**



**Figure 3. Share of countries' wine trade in AGDP (%)**

### Trade performance (Market share)

The share of exports of wine of Macedonia, in total wine exports of certain region, is shown by the indicator for market share in correlation with the exporting countries in the Balkan region and Europe. This indicator presented the degree of importance of wine exports of Macedonia in the Balkan countries and Europe (Figure 4). As expected, significantly important is the share of the Macedonian wine export in the total exports of the Balkan countries. Less significance occurs within Europe, due to the fact that in this region the largest exporters in the world, such as, Italy, Spain and France are located. These countries achieve significantly higher production of wine, wine exports value and trade with many countries - trade partners.

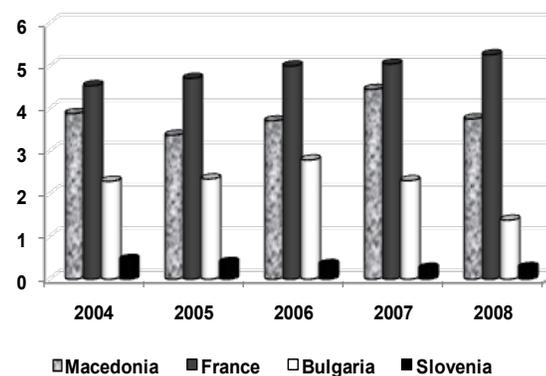


**Figure 4. Market share of the Macedonian wine export in the total export of Balkan region and Europe (percentage)**

### Trade Specialization

We used Balassa index to measure trade specialization of the Macedonian wine. This index shows the degree of trade specialization of Macedonia in relation to the countries and world. According to the results, in the period of 2004 to 2008, Macedonia has shown positive degree of specialization, with an average of 3.83.

The highest value was reached in 2007 with 4.45, when was the highest value of wine exports. The interval of the index value ranges from the lowest 3.37 up to the highest value of 4.45. The reason for this decrease might due to the impact of the global economic crisis, resulting in reduced consumption.



**Figure 5. Balassa index**

According to the results obtained by Manevska-Tasevska (2006), Balassa index calculated for the Macedonian wine in the period 1998 to 2003, of 4.53 in average, clearly confirms the specialization of the Macedonian wine. Maximum value is reached in 1998 with 5.96, and from then the index tends to decrease. If we compare with the period from 2004 to 2008, the average value decreases. Downward trend might due to large wine surplus facing the European Union and the measures undertaken in order and to organized and control wine production to maintain competitiveness in the market. The wine production in Macedonia is the most specialized in the Sub-Mediterranean region and is very close to the specialization of French wine industry (4.87) (Manevska-Tasevska, 2006). In the referenced period 2004 to 2008, Macedonia (3.83) tends to maintain the level of wine specialization close to France (4.91), but with a downward trend of the index value compared to the previous period (Figure 5).

The high value of the index of Macedonia, arise from the high export value of wine. However, if we consider that bottled wine (in terms of quantities) participates with a small percentage of total exports (around 13%), it can be said that high value index is a result of export of bulk wine. It is difficult to discuss strong marketing and competitive wine strategy, when the major export of Macedonian wine is still bulk wine. In this regard, it is important to use GIs, trademarks or industrial design. Therefore, collective marketing, specific packaging and visible logo would be an adequate promotional strategy of the Macedonian wine association, for exporting bottled wines. Even though there is an option for bottling wine in another country, producers should

consider the possibility of performing this activity domestically. Here, GIs protection should be perceived as a long term investment with sustainable results, where the traceability of the process and quality control would be easily monitored.

## CONCLUSIONS

The process of reaching higher competitiveness of agro-food products, supported by strong marketing strategy, should be considered as a risky process, if the legal protection of IP rights, is neglected. The consequences could lead to misappropriation, market failure, information asymmetry, imitations, abuse or unfair competition, which can influence on losing the market position of the producers or unsuccessful promotion and export orientation of the products.

The condition of the current use of IP in Macedonia, shows a low level of interest of the domestic rights holders. There is a low degree of awareness of the business sector for the economic benefits of IP use and its enforcement, especially in the small and medium sized enterprises in agricultural sector.

From the comparative analysis with Bulgaria, Slovenia and France, it can be concluded that these countries are more competitive than Macedonia, in terms of intellectual property rights, but not in terms of IP. In this regard, the degree of interest of domestic holders must be increased, through raising the public awareness of the economic benefits of IP rights, especially important in terms of market liberalization.

Macedonia has a tradition of wine production and wine producers who use the favorable natural resources and local "know-how", in order to produce quality wine. The wine sub-sector has competitive advantages in terms of: trade surplus of wine, highest trade to GDP, export orientation of the producers and positive degree of specialization (Balassa index 3.83). The major problem is the fact that producers' orientation is focused on exporting large quantities of bulk wine. As export-oriented, producers must follow recognized international system of quality assurance in order to create a competitive position and enter on niche markets. Based on GIs protection and territory, a collective marketing which will include well-defined promotional strategy (visual identity, wine tourism, and international recognition), is necessary for success-

ful export of Macedonian wines and re-positioning in higher price segments. Packaging and labeling of the products with adequate collective logo, will provide information about the quality, specificity of the production process, natural resources used and characteristics of the GI product. It might increase the consumer's willingness to purchase and pay for the Macedonian wine protected with GIs and thus, to activate the unused capacities for production of bottled wine.

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## **Ekonomika prava industrijskog vlasništva: primjena geografskog podrijetla kao marketinške strategije za konkurentnost u podsektoru vinarstva u Republici Makedoniji**

### **SAŽETAK**

U radu se analizira značenje prava industrijskog vlasništva i konkurentnosti podsektora vinarstva u četiri regije koje se bave proizvodnjom vina, kako bi se prikazalo geografsko podrijetlo kao snažna marketinška strategija za konkurentnost. U makedonskom poljoprivrednom sektoru vrlo je niska svijest o ekonomskim pogodnostima koje donosi pravo industrijskog vlasništva. Makedonija ima konkurentan vinarski sektor, što proizlazi iz čimbenika uvjeta, posebice tradicije, geografskih i klimatskih uvjeta (Balassa index 3.83). Nažalost, glavnina vina se izvozi (87%). Posljedice zanemarivanja pravne zaštite u smislu prava industrijskog vlasništva mogle bi dovesti proizvođače do gubljenja pozicija na tržištu ili neuspješne promocije i izvozne orijentacije proizvoda.

**Ključne riječi:** geografsko podrijetlo, marketing, konkurentnost, podsektor vinarstvo, trgovinski pokazatelj