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**THE ECONOMICS OF INDUSTRIAL PROPERTY RIGHTS: USE OF  
GEOGRAPHICAL INDICATIONS AS A MARKETING STRATEGY FOR  
COMPETITIVENESS OF WINE SECTOR IN REPUBLIC OF  
MACEDONIA**

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## Abstract

The aim of this paper is: (a) to emphasize the importance of the industrial property rights for countries in transition economy, (b) to analyze the international trade and competitiveness of Republic of Macedonia and EU countries and (c) to present geographical indications as a powerful marketing strategy for competitiveness of the wine sub-sector in Republic of Macedonia. The paper includes qualitative and quantitative approach. Regarding the qualitative approach, we have performed a descriptive analysis to make a relation between industrial property, marketing and competitiveness of wine sub-sector. Quantitative methods include comparative analyzes with three countries of the European Union (Bulgaria, Slovenia and France). In order to present the current competitiveness, several calculations were performed such as: the international trade indicators for trade balance and coverage ratio, trade openness, trade performance and specialization of countries' wine sector, issued by the Organization for Economic Cooperation and Development.

The results show that in the Macedonian agricultural sector, there is a low degree of awareness for the economic benefits of industrial property rights. Macedonia has a competitive wine sector, as result of the factor conditions, and in particularly tradition, geographic and climate conditions. Significant result is the positive degree of specialization of Macedonian wine in exporting the product, but unfortunately the bulk wine has the largest share in export of 87%. 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 industrial property rights, is neglected. The consequences could lead to misappropriation and information asymmetry, which can influence on 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.  
JEL classification: Q17.

## 1. Introduction

The system of intellectual property rights includes three parts: industrial property rights, copyrights and related rights protection and protection against unfair competition (Dabovic-Anastasovska, *et al.*, 2011). In the last years, many reasons increased the need for protection of intellectual property rights in transitional economies and developing countries, such as: market liberalization, expansive development of international trade in goods and services, transfer of technologies, dependence on foreign direct investment, importance and dispersion of inventions and innovations. 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 industrialized countries.

The use of intellectual property rights in transitional economies is described as a need to promote an economic environment which is capable to attract investment and promote the transfer of technology to the country (Helm, 2003). Lesser (2001) analyzed the relationship between increased intellectual property protection and two international factors: imports and foreign direct investment. He stated that relation between them is positive and significant where increased intellectual property rights could provide certain domestic income for developing nations. Polenak *et al.* (2009) described that strong intellectual property system has a directly proportional relationship with foreign direct investment, market and competitive economy and ultimately, prosperity and development of the country.

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). Marketing aspects of industrial property (IP) are analyzed by Idris (2004). He points that the use of IP as a marketing strategy will increase the competitiveness through differentiation of the products.

IP rights have great importance in the agro-food sector, especially in part of traditional, added value and processed products. In the recent years, there is a higher demand on domestic and international markets for high quality agro-food products, produced on traditional way or originating from a region with particular agro-ecological and cultural characteristics. 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). Belleti *et al.* (2007) investigated the use of geographical indications of international market, where GIs are mostly used in order to take advantage of the reputation of the protected geographical name, especially for export products. Many economies in transition and developing countries consider GI protection as most suitable options for international protection (Bramley, *et al.*, 2009). Dabovic-Anastasovska 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).

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. GIs are included less in the research than other IP rights. The reason for that is the difference in the legal protection of these rights, and the fact that in most of the countries, legal protection of GIs is a particular area of IP right and indirectly, of the intellectual property rights (Dabovic-Anastasovska, *et al.*, 2011).

### *1.1. Legal framework of IP in Republic of Macedonia*

The process of transition in Republic of Macedonia brings changes regarding the legal protection of IP rights. In 1991, Republic of Macedonia declared independence. The Stockholm Act (1967) of the Paris Convention which refers to protection of IP was enforced during the same period (WIPO, 2012). After the change of social-economic system, in 1993 Republic of Macedonia became a member country of WIPO. The Office of industrial property was founded as a part of the Ministry for development<sup>1</sup>, and the first national law of industrial property was adopted<sup>2</sup>. The harmonization of a legal framework of IP rights in compliance with European laws is in process and the laws are substantially harmonized with European standards and legislation.

Unfortunately, there is a low degree of awareness of the business sector for the economic benefits of IP rights use and its enforcement, especially in the small and medium sized enterprises in the agricultural sector (Dabovic-Anastasovska and Zdraveva, 2009).

## **2. The concept and theory**

Economics of IP is related with clientele theory. Dabovic and Pepelugoski (2009) explain that all rights of intellectual property are directed towards increased profit. However, according to clientele theory, the rights of IP are focused on customer acquisition, or economic position in the business environment, by expanding the supply of its products, which can be released on the market only by the holder of the rights.

With regard to the competitiveness, Hecksher-Ohlin theory explains that international and regional differences do not arise from the level of productivity, but from the difference in the supply of certain factors of production such as land, labor, natural resources and capital. States obtain a competitive advantage with specialization for that production which possesses abundant or sufficient quantities of the required factors of production. As a result, the export of those products could be

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<sup>1</sup> In 1993, the Office of industrial property was founded as a part of the Ministry for development. In 2002, the amendments of the new Law for industrial property have changed the status and name of the institution into the State Office of Industrial Property, which in 2004 becomes an administrative organization with the status of an independent state body.

<sup>2</sup> New Law of industrial property was adopted in 2002 and 2009.

realized, whose supply of certain factors of production, can directly affect the reduction of production costs. Dominant version of the theory of competitive advantage (Michael Porter, 1998) is based on this theory. In fact, Porter (1998) uses the factors of production as presented in Heksher - Ohlin theory. He presents the factors of production as part of the determinants of national advantage. In this regard, the theory of competitive advantages may be related to the competitiveness of the wine from the Republic of Macedonia, as a result of the protection of geographical indications and designation of origin based on specific factor conditions, with emphasize on natural conditions and favorable characteristics of certain regions.

Considering competition, Porter (2004), defines enterprises' competitiveness as ability to compete on world markets with a global strategy. In order to achieve a successful competition, enterprises must possess a competitive advantage through two basic types of competitive advantage: the ability to produce and distribute a product with lower costs than competitors or the ability to achieve product differentiation that imposes premium prices. Porter (2004) cited differentiation as one of the three successful generic strategies for greater enterprise success and larger share on the market.

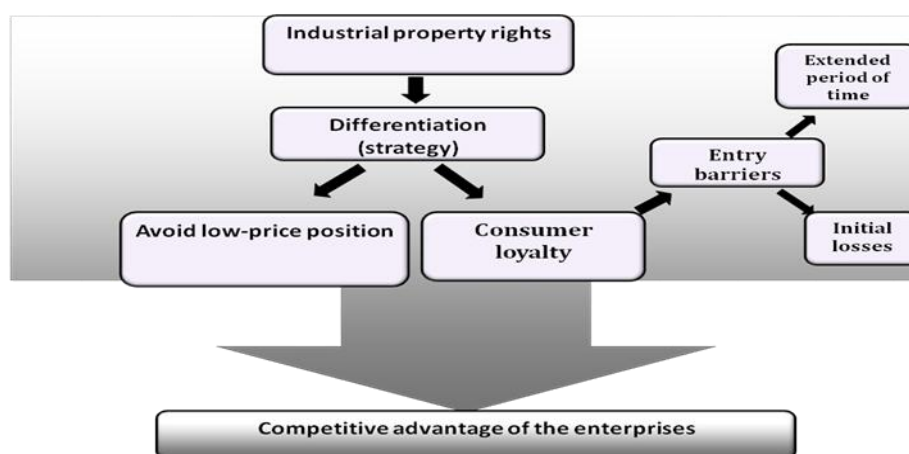


Figure 1. The theoretical framework

In Figure 1, we present the theoretical framework, as process of creating a competitive advantage of one enterprise, through summarizing the expert attitudes for use of industrial property rights as differentiation strategy. Generally, expert in the field of IP, believe that use of IPR creates sustainable product differentiation of the enterprise. 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). The loyalty creates difficulties for competitors who want to penetrate the market. Consequently, they are forced to additional investments in order to gain consumer loyalty and threaten the uniqueness of the product in the market. Thus, barriers to entry of competitors in the market are created. Faced with barriers, the effort of competitors to acquire the market usually involves initial losses and prolongs the planned time period. In this way, an enterprise could create a competitive advantage over competitors. Accordingly, in order to maintain competitiveness, companies must achieve significant competitive advantages by creating high-quality value-added products and services whose quality guarantee will be subject of protection of IP rights.

With regard to the competitiveness of the wine sector of RM, Manevska-Tasevska (2006) pointed out that long tradition; favorable geographic and climatic conditions have major impact on product quality. However, Bergant 2006, presents that climate change could be a serious factor, that will endanger the competitiveness of the regions, when it comes to the natural condition.

### 3. Data and method

The paper is based on the deductive research approach. This means that access is moving in direction of industrial property theory and the theory of competitive advantages to examining empirical data. In this regard, it is an interdisciplinary approach, where industrial property is presented

as a marketing strategy for increasing the competitiveness of wine sub-sector of Republic of Macedonia.

Viticulture and wine production are important sub-sectors in Macedonia, with a share of 17-20% in GDP. Besides the tobacco, wine is a product which holds the second place regarding the export value of agro-food products.

### 3.1. Data

The material for the study is based on primary and secondary data collection; discussions with experts in the field of intellectual property 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 up to 2008. Information regarding wine export and import value was gathered from State Statistical Office of RM, FAO and World Bank. Data regarding industrial property was gathered from the Ministry of agriculture, 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.

### 3.2. Method

The paper includes qualitative and quantitative approach. Regarding the qualitative approach, we have performed a descriptive analysis to make a relation between industrial property, marketing and competitiveness.

Descriptive method includes the importance and economics of industrial property protection products and GIs and their impact on wine marketing of Macedonia. In this framework, the national and international system of protection of industrial property rights is presented. Compared results of the use of IPR, 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 sector.

The first indicator is *trade balance value*, a difference between exports and imports<sup>3</sup>.

$$NT = X - M, \text{ where, } X\text{- export, } M\text{- import} \quad (1)$$

*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, which allows unbiased comparisons across time, countries and sectors.

$$\overline{NT} = \frac{X - M}{X + M}, -1 \leq \overline{NT} \leq 1 \quad (2)$$

*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).

$$CR = \frac{X}{M} \cdot 100 \quad (3)$$

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<sup>3</sup> Definition and explanations for the indicators, are used from OECD report

*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.

$$TBtGDP = \frac{(X - M)}{GDP} \cdot 100 \quad (4)$$

The most frequently used indicator of the importance of international transactions in relation to domestic transactions, is the *trade-to-GDP ratio*, which is a sum of imports and exports of goods, divided by GDP. The trade-to-GDP ratio is often called the trade openness ratio.

$$T_t = \frac{(M_t + X_t)}{GDP_t} \cdot 100 \quad (5)$$

*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.

$$S_{xi} = \frac{X_i}{\sum_{i=1}^n X_i}, 0 \leq S_{xi} \leq 1 \quad (6)$$

OECD defines competitiveness as measure of county's advantage or disadvantage in selling its products in international markets.

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 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.

$$RCA = \frac{\frac{x_{c,p}}{NX_c}}{\frac{wx_p}{WX}} \quad (7)$$

,  $x_{c,p}$  - wine export value of a county,  $NX_c$  - total export value of agricultural production

$wx_p$  - total world export of wine,  $WX$  - total world export value of agricultural production

## 4. Results and discussion

### 4.1 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.

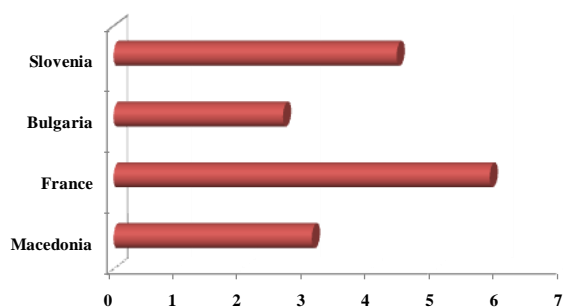
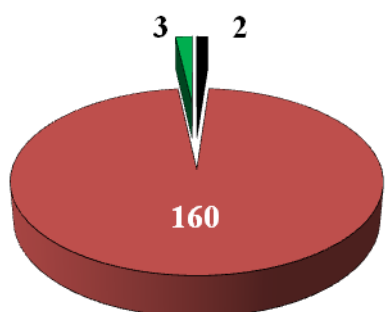


Figure 2 Comparative statistics of the intellectual property index

Source: The Global Competitiveness Report 2010-2011

Generally, there are more than 10,000 legally protected GIs in the world, which generate an estimated value for sales of over \$ 50 billion (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 the European Commission, the number of protected designations of origin which are entered in the register is 505. The number of protected geographical indications is 465, and the number of products with traditional specialty guaranteed is 30. There are only 11 non-EU products with protected status.

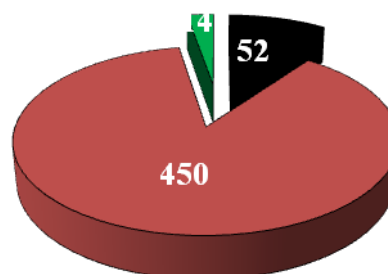
The main countries in terms of value of PDO/PGI production are Italy (33% of the total), Germany (25%), France (17%) and the United Kingdom (8%). Next come Spain with 833 million euro (6%), Greece with 606 million euro (4%) and Austria with 123 million euro (1%). (European Commission, 2010).



■ Bulgaria ■ France ■ Slovenia

Figure 3 Number of PDO protected products

Source: European Commission, 2012



■ Bulgaria ■ France ■ Slovenia

Figure 4 Number of PGI protected products

Source: European Commission, 2012

According to the data, presented on Figure 3 and Figure 4, 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.

According to the number of wines with GIs, Slovenia is situated after France and Bulgaria. The high value of the intellectual property index presented on Figure 2, confirms the higher commitment of Slovenia to other intellectual property rights than GIs.

Different types of GIs are regulated with different international agreements and regulations. This is usually confusing for the stakeholders involved in the system of protection. 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 for 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 (G. Damovski, personal communication 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.

#### 4.2 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). 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%) (R. Elenov, personal communication 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. The average area of vineyards is around 20.000 ha. The average area of the plots is around 1,2 ha, and it is quite fragmented (MAFWE, 2007).

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, with an average temperature of 12,7 °C. Gevgelija-Valandovo and Stumica-Radovis vineyard district belong to Sub-Mediterranean regions, with average temperature of 14,2 °C. Kratovo, Pijanecko, Prilep, Bitola, Prespa, Ohrid, Kicevo and Tetovo vineyard district belong to Continental region, with average temperature of 10,9 °C.

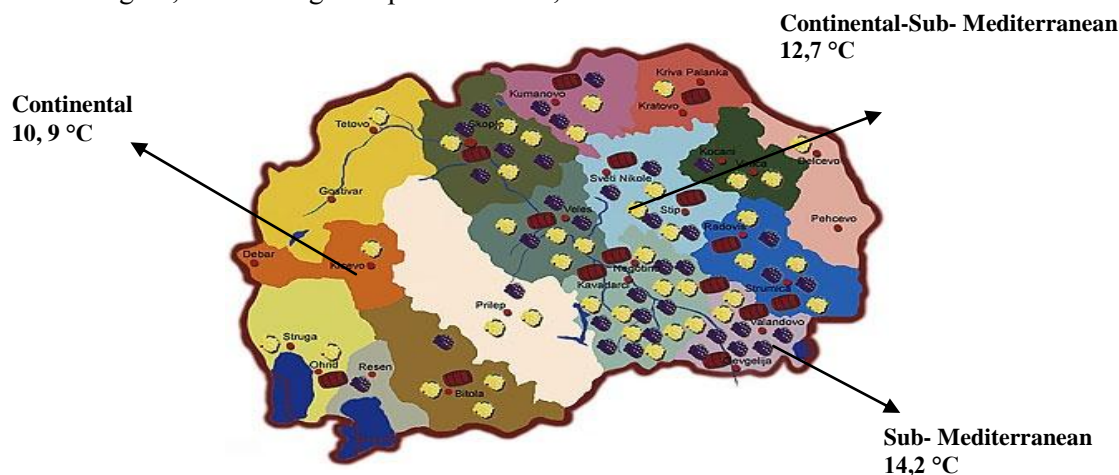


Figure 5 Macedonian Grape Growing and Processing Regions  
Source: Manevska –Tasevska, 2006

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. As states from Manevska-Tasevska (2006), favorable geographic and climatic conditions have a major impact on the quality of grapes and wine in the country.

The climate change scenarios for the regions in Macedonia, presents changes in the temperature over the years in the regions with sub-Mediterranean, continental and sub-continental climate. This can have an influence on the most competitive vineyards districts, with possibility of changes from sub-Mediterranean into sub-tropical climate (Bergant, 2006).

#### 4.3 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 next years, this trend has 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 has been 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.

Table 1 Trade balance (000 \$)

		2004	2005	2006	2007	2008	2009	2010	Average	$\Delta x$	Cv	$Iv$
Macedonia	Export	32.621	36.122	44.680	59.561	57.207	52.811	49.427	47.490	10.250	0,22	26.940
	Import	419	344	535	434	1.330	823	569	636	343	0,54	986
	Trade balance	32.202	35.778	44.145	59.127	55.877	51.988	48.858	46.854	10.059	0,21	26.925
Slovenia	Export	7.798	7.948	9.550	10.169	11.624	10.448	12.332	9.981	1.711	0,17	4.534
	Import	4.718	5.440	7.604	9.601	12.420	10.058	9.469	8.473	2.721	0,32	7.702
	Trade balance	3.080	2.508	1.946	568	-796	390	2.863	1.508	1.469	0,97	3.876
Bulgaria	Export	80.193	93.499	129.736	118.073	109.134	69.954	66.388	95.282	24.514	0,26	63.348
	Import	1.643	4.173	14.701	31.311	16.481	11.283	12.596	13.170	9.662	0,73	29.668
	Trade balance	78.550	89.326	115.035	86.762	92.653	58.671	53.792	82.113	20.948	0,26	61.243
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	1.141.684	0,14	3.080.870
	Import	603.053	594.641	606.335	734.173	817.136	729.430	698.779	683.364	84.746	0,12	222.495
	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	1.067.801	0,14	2.866.787

Source: FAO

Normalized trade balance allows unbiased comparison between the analyzed countries and sectors (Figure 6). 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 achieves 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.

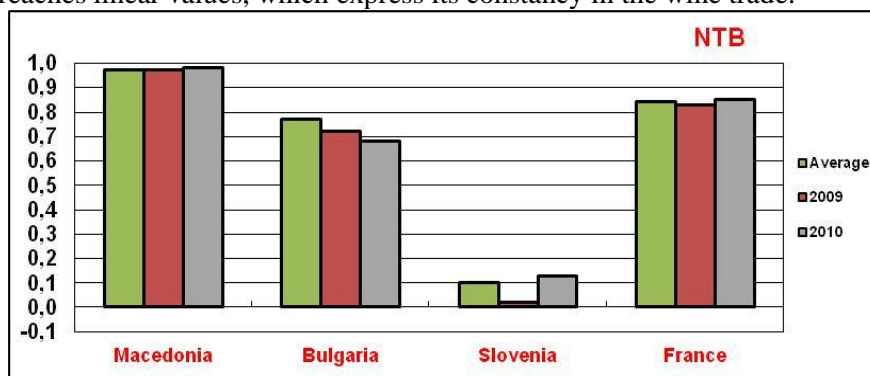


Figure 6 Normalized trade balance

In terms of trade orientation, the coverage ratio of exports with imports, showed which country is more export or import oriented (Figure 7). Presented 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.

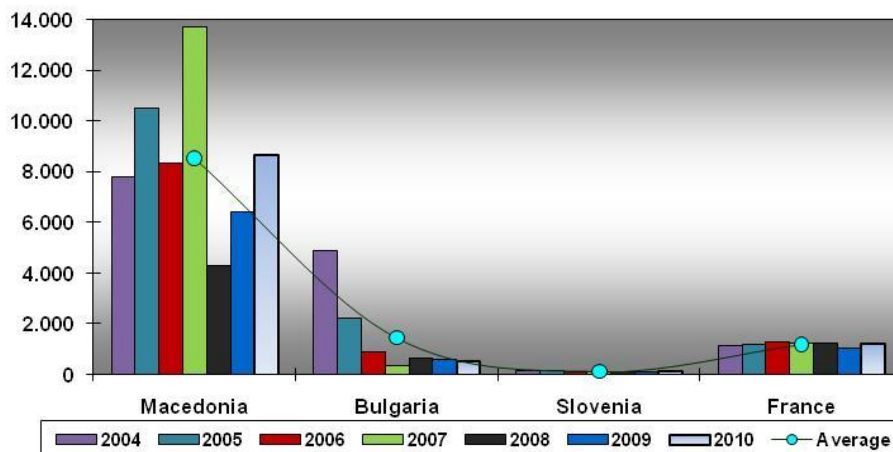


Figure 7 Coverage ratio

#### 4.4 Trade openness

By calculating the coefficient for trade openness, we present the importance of international trade in correlation with the national trade of analyzed countries. Indicator for countries' trade in relation with

GDP is the most commonly used indicator. In this paper, the indicator is calculated considering the national GDP and agricultural GDP 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 8). Next country is France followed by Bulgaria, and Slovenia which shows less trade openness. Although the lower value of coefficient sometimes is 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 9). Macedonia is after France, almost at the same level as Bulgaria. Slovenia has the lowest orientation in terms of AGDP.

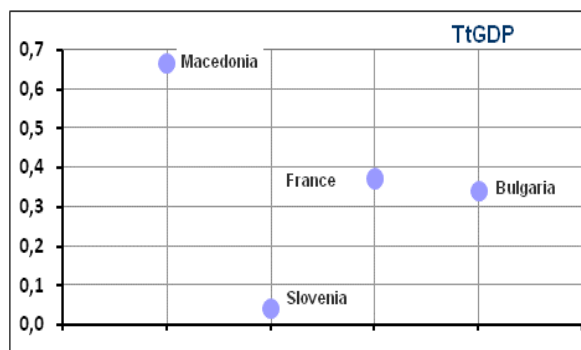


Figure 8 Share of wine trade in GDP (%)

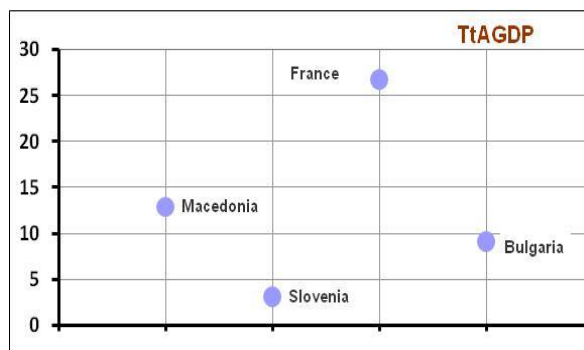


Figure 9 Share of wine trade in AGDP (%)

#### 4.5 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 10). 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.

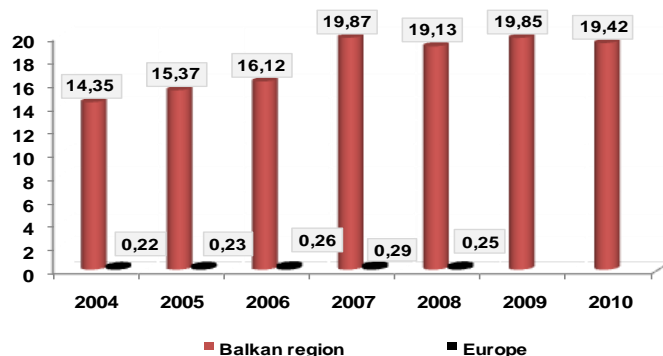


Figure 10 Market share of the Macedonian wine export in the total export of Balkan region and Europe

#### 4.6 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, presented on the Figure 11. The reason for this decrease might due to the impact of the global economic crisis, resulting in reduced consumption.

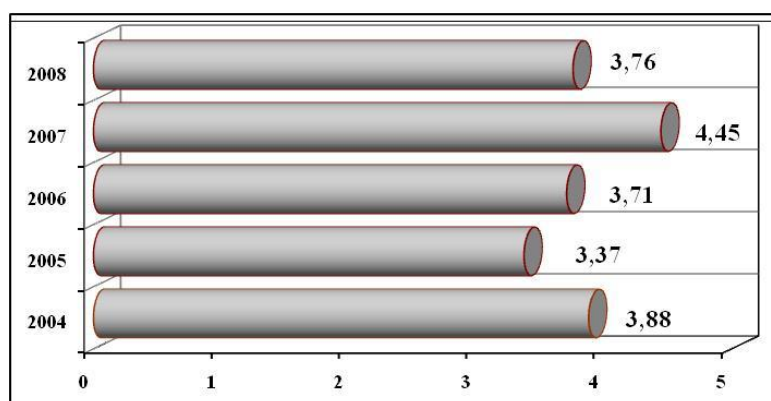


Figure 11 Ballasa index of Macedonian wine

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 be due to large wine surplus facing the European Union and the measures undertaken in order to organize 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 the 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 12).

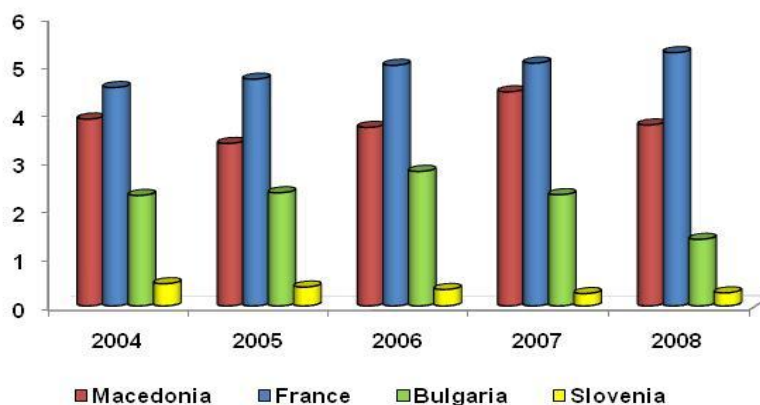


Figure 12 Balassa index

The high value of the index of Macedonia, arises from the high export value of wine. However, if we consider that bottled wine participates with a small percentage of total exports (around 13%), it can be said that the high value is a result of the export of bulk wine. It is difficult to discuss about strong marketing and competitive wine of Macedonia, with major export of bulk wine, without emphasizing the origin of the final product. In this regard, significantly important is the use of IP. GIs, particularly PDO and PGI could be a strong marketing strategy, if labeled on the bottle of the product. Furthermore, protection of GIs shall indicate that Macedonia has a tradition of wine production and serious wine producers who take advantage of the favorable natural conditions of the country and maintain the product origin. It could lead to rising consumers' curiosity for tasting Macedonian wine and consequently increased demand. The increased demand for the wine shall result in the activation of unused capacity for the production of bottled wine.

## 5. Conclusion and recommendation

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, bio-piracy, abuse or unfair competition, which can influence on losing the market position of the producers or unsuccessful promotion and export orientation of the products.

IP is important for the agro-food sector because of the traditional way of production and specificity of food products. Some of the products arrive from a specific area and can be protected by geographic origin, while others can be packed in new and original designs. Accordingly, as a reason why agro-food products should be subject to the use of different types of IP, the valorization of agricultural traditions and rural heritage can be pointed out.

The condition of the current use of IP, in Macedonia, showed 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 the 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 competitive wine sector, whose trade significantly affects GDP, and even with a higher percentage the agricultural GDP. Particularly significant is the positive degree of specialization of Macedonian wine. Important part of the wine production in Macedonia is the use of favorable natural and climatic conditions for the production of quality wine in bottles.

PDO and PGI, represent a powerful tool for promotion, which send a clear message to the consumer. Therefore, they can be used as a strong marketing strategy to increase the competitiveness of Macedonian wine. By emphasizing the origin and the quality on the label of the final product, should be prevented consumer misleading and information asymmetry. This is especially important for Macedonia, which has developed a market economy, so the penetration of the international market can be easier and price premium for the products can be reached.

Protection PDO and PGI, shall indicate that Macedonia has a tradition of wine production and serious wine producers who use the favorable natural resources and local “know-how”, in order to produce quality wine and maintain the origin of the product. This might raise consumers’ curiosity to taste the Macedonian wine, to increase the demand, and thus, to activate the unused capacities for production of bottled wine.

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