# Factor conditions of the viniculture and wine sector in the EU member states, in the Czech Republic and in the selected candidate countries

*Faktorové podmínky odvětví vinohradnictví a vinařství v členských státech EU, v České republice a ve vybraných kandidátských zemích*

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**Abstract:** The paper is a part of the solution of the research plan of the FBE MUAF in Brno, No. GAMSM 431100007, and it is focused on the analysis of factors influencing competitiveness of the wine-growing and viniculture. This paper is based on the hypothesis that the competitiveness of the viniculture and wine sector could be influenced, amongst other things, by specific national conditions as defined by "Porter's diamond". This essay deals with factor conditions like the total area of vineyards, the average per hectare yield of grapes, the total wine production and wine consumption including the foreign trade with this commodity. The comparison of the chosen national conditions is made within the EU member states and also within six candidate countries – Cyprus, Estonia, Hungary, Poland, Slovenia and the Czech Republic.

**Key words:** EU, candidate countries, viniculture and wine sector, area of vineyards, per hectare yield of grapes, wine production, wine consumption, export, import

**Abstrakt:** Příspěvek je součástí řešení výzkumného záměru PEF MZLU v Brně GAMSM 431100007 a je zaměřen na analýzu faktorů ovlivňujících konkurenceschopnost vinohradnického a vinařského oboru. Příspěvek vychází z hypotézy, že konkurenceschopnost daného sektoru může být ovlivňována mimo jiné specifickými národními podmínkami definovanými v tzv. Porterově diamantu. Práce se zabývá faktorovými podmínkami jako jsou celková plocha vinic, průměrný výnos hroznů na hektar, celková produkce vína a jeho spotřeba včetně údajů o zahraničním obchodě s touto komoditou. Srovnání vybraných národních podmínek je provedeno v rámci členských států EU a šesti kandidátských zemí s důrazem na Českou republiku.

**Klíčová slova:** EU, kandidátské země, vinohradnictví a vinařství, plocha vinic, hektarový výnos hroznů, produkce vína, spotřeba vína, vývoz, dovoz

## INTRODUCTION

In 1993, the EU member states took a decisive step towards enlargement at the Copenhagen European Council. They agreed that "*associated countries in Central and Eastern Europe that so desire shall become members of the European Union"*. Since then, enlargement is not anymore a question of if, but of when. The answer is: "*Accession will take place as soon as an associated country is able to assume the obligations of membership by satisfying the economic and political conditions required*".

The Czech Republic belongs to the first six candidate countries with which negotiations were launched at the Luxembourg European Council in 1997. Official negotiations for the Czech Republic's membership were launched on 31st March 1998. The integration brings many changes for all industries in our national economy. It is necessary to make reform of legislation, economy, agriculture, and many other areas if the Czech Republic wants to benefit from its membership. It is a question of whether our country and particular sectors are already prepared for higher competition from the EU countries and on the other hand for new and bigger markets.

These problems apply also to viniculture and wine producing sector, which indeed does not belong to main pillars of agriculture, but wine-growing has a long history in our country and according to experts our wine is one of products that are able to compete in the European Union market.

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## LITERARY SURVEY AND METHODS

The purpose of this paper is to analyze some of the factor conditions that according to Michael Porter (1990) can influence competitiveness of sectors as well as particular countries. Porter's model allows analyzing why some nations are more competitive than others, and why some industries within nations are more competitive than others. This model of determining factors of national advantage has become known as Porters Diamond. It suggests that there is the national home base, which plays a very important role in achieving advantage in global markets. This home base provides basic factors which support or hinder organizations (sectors) from building advantages in global competition. Porter distinguishes four determinants: Factor conditions, Demand conditions, Firm strategy, structure and rivalry and Related and supporting industries.

Factor conditions often provide initial advantages, which are subsequently built upon. In vine and wine sector, the factor conditions make, according to Homolka (2001), the main production side of competitiveness, which in agricultural production reposes in the area of favorable or unfavorable natural conditions for cultivation of particular plants. Each country has its own particular set of factor conditions; hence, in each country, there will develop those industries for which the particular set of factor conditions is optimal.

The paper concentrates on specific factor conditions important for wine and vine sector like the total area of vineyards and the average per hectare yield of grapes. Next a comparison is made of the total wine production and wine consumption including the foreign trade with this commodity. All of these indicators are made for the EU member states and for the first six candidate countries with a stress on the Czech Republic.

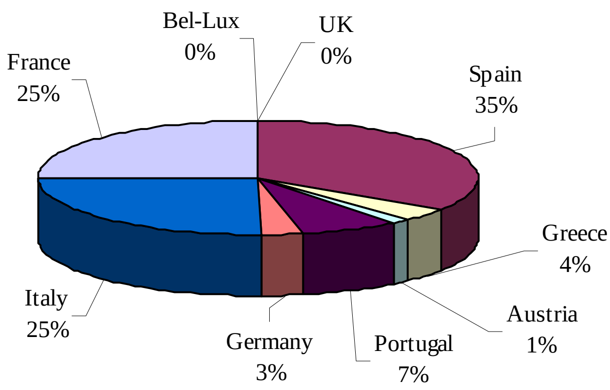


Figure 1. Shares of particular member states in total vineyards area in the EU (year 2000)

Source: Faostat Database Results

## RESULTS AND DISCUSSION

### Factor conditions in the European Union

Nowadays, the EU member states cultivate total 3.48 million ha of vineyards, which represents 47.49% of an area of vineyards in the world and 84.7% of the area under vineyards at the European continent. Figure 1 describes that the largest area of vineyards is situated in Spain (1 200 thousand ha), Italy (876 thousand ha) and France (873 thousand ha). These countries belong at the same time to the biggest grape producers. Their share in the total grape production of all EU member states, which was 28.15 million tons in the year 2000, is around 84%. Among the EU countries without wine growing belong Finland, Sweden, the Netherlands, Ireland and Denmark. However, the last named – Denmark – has been classified as a wine country since August 2000 with the area of vineyards under 10 ha.

An indicator of grape per hectare yield is one of the main indicators of a profitability and whole economy of wine growing. In case of different natural conditions, but also different technical and technological equipment, there is a big difference among countries in the achieved yield of grapes per hectare and next in produced amount of wine. The comparison of this indicator within the EU is described in Figure 2. In the year 2000, Belgium – Luxembourg (17.69 tons) and Germany (16.35 tons) had the highest yield per hectare, as the contrary the lowest yield

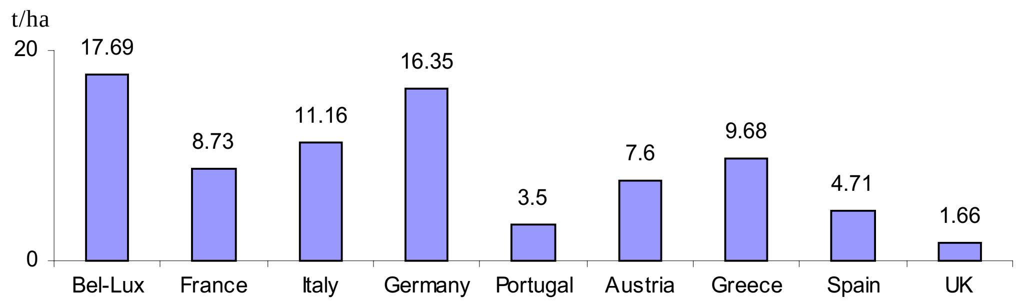


Figure 2. Grape yield per hectare in the EU member states in the year 2000

Source: Faostat Database Results

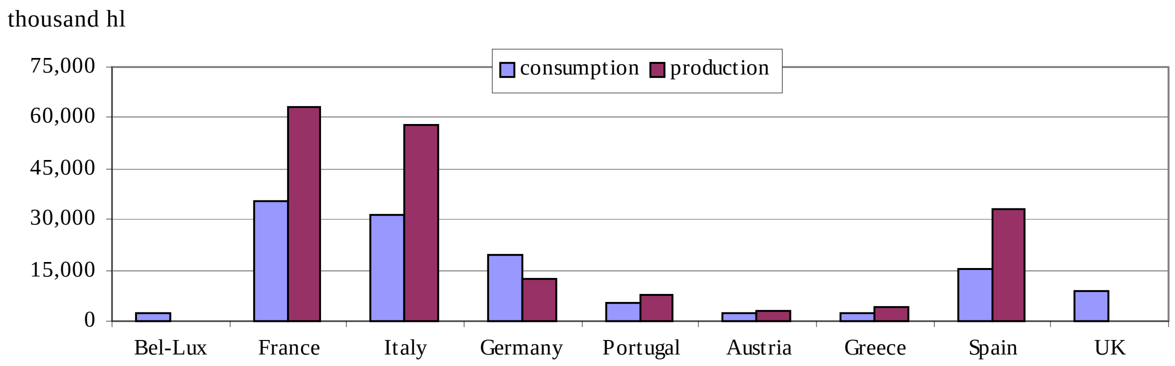


Figure 3. Wine consumption and production in the EU countries in the year 1999

Source: Faostat Database Results (Faostat produces international statistical databases; therefore there are some data only till the year 1999)

had UK. Spain is the example where the biggest area of vineyards within the EU member states do not guarantee the biggest wine production. Old technology and old vineyards in this country create this. Regarding comparisons of per hectare yields in particular member states for longer time, it is possible to say that there are minimal changes and the situation described in Figure 2 is valid not only for the year 2000.

The further indicators chosen for comparison of particular member states in this sector are wine production and wine consumption. Wine production in the EU countries reaches up to 64.08% of the total world wine production. The biggest wine producers in the world are France (62.9 mil. hl), Italy (58.1 mil. hl) and Spain (33.3 mil. hl), which together represent 85.01% of total wine production in the EU and 54.47% of total world wine production.

The average annual wine consumption in the EU reaches the amount around 129.07 mil. hl, thereof the countries without wine growing and self-production consume 6.05 mil. hl (it is 4.69%). The countries with the biggest wine consumption are France (35.28 mil. hl), Italy (31.50 mil. hl), Germany (19.27 mil. hl) and Spain (15.50 mil. hl).

From the comparison of the total consumption of a concrete country with the number of its inhabitants, it is possible to get annual wine consumption per capita. In the consumption per capita then excell Southern countries like France with 59.5 l, Italy 54.8 l, Portugal 50.6 l and Spain 38.8 l. On the other hand, North countries prefer beer and drink less wine, for example Finland has a consumption about 5.5 liters on the head and per year.

The wine consumption considerably fluctuates in particular countries, but generally the annual consumption per capita has a decreasing trend. The world annual wine consumption per capita decreased from 4.2 liters in the year 1991 to 3.8 liters after ten years, it is decline about 9.52%. In Europe the decline is more marked, for the annual wine consumption per capita decreased during ten years from 30.1 liters to 21.1 liters, so about 30%. This decline is minimally caused by consumers' changes in EU countries, where average annual wine consumption per capita indeed declines from 35.95 liters (1991) to 34.26 liters in the year 2000, but this decline in value 4.7% was caused together by increasing number of inhabitants by 2.7%. The decline of total consumed amount of wine in EU countries between the years 1991 (131 860 thousand hl) and 1999 (129 070 thousand hl) was thus only 2.1%.

The average annual wine production in EU countries that is around 181.52 mil. hl, it exceeds its consumption every year by 40.64% (it is around 52.5 mil. hl). Stores of wine are continually increased and growers in many countries do not renew their vineyards. This disequilibrium between wine supply and demand a crisis causes in the EU, especially with table white wine. Figure 3 describes how particular member states from the EU share in this overproduction. Nearly all the surplus is made in Southern countries, where the situation is being solved by support of distillation or by subsidy for stopping wine growing. However, the solution in the form of distillation of wine surplus is not financially interesting for Northern countries with higher costs of wine growing like Germany, Austria and after the EU entry, also for Czech Republic.

### Export and import of wine within the EU member states

The European Union is also the biggest world importer and exporter of wine commodities. In average the foreign trade of the EU countries holds 71.04% of total world trade with wine. In the year 1999, wine import to the EU reached 66.2% of the world wine import, which was 62 130 thousand hl in this year, and wine export from the EU reached 75.6% of the world wine export, which was around 66 700 thousand hl. It is valid withal, as Figure 4 shows, that wine export from the EU is constantly higher than wine import and it is in an interval from 4 910 thousand hl (1991) till to 10 930 thousand hl (1998).

Wine import to the EU countries has increased since the 1991 by 27.4% to the amount 41 130 thousand hl. The total amount of imported wine was influenced mainly by

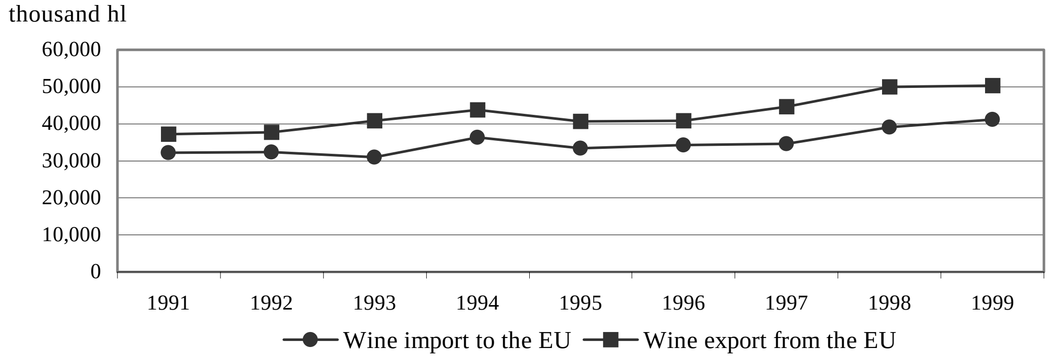


Figure 4. Trends of wine import and export within the EU in the years 1991–1999

Source: Faostat Database Results

imports to Germany (29.81%), UK (22.30%) and France (14.34%). Wine export from the EU countries increased more markedly in the same period. In the year 1999, the exported amount of wine reached 50 390 thousand hl and it means a growth of about 35.49% from the 1991. Among EU countries with the biggest share in the total wine export, there belong Italy 38.5%, France 31.9% and Spain 17.4%.

**Factor conditions in the Czech Republic**

In the Czech Republic, wine made from grapes has been made every year for over 1,700 years, although local wine regions are some of the most north located in Europe. Presently, viniculture and wine-growing in the CR take part in final plant production at around 6%, however in certain areas they take on an exceptional meaning. For example the South-Moravian region holds 96% of the wine-growing area in the CR. The Břeclav district alone holds 1/3 of the wine-growing areas in the country, where over half of the registered wine growers produce wine. In certain wine-growing communities, the portion of registered growers represents 1/3 of the working population.

Nowadays, the CR has 11 236 ha bearing vineyards according to the RIAE (Buchtová et al. 2001). This area is divided into the Bohemian and Moravian regions. In the Bohemian wine-growing region, there are found six sub-regions which hold only 3.5% of the total area under vine. The Moravian region is consists of ten wine-growing sub-regions. The biggest sub-region are Mikulovsko (2 947.9 ha), Velkopavlovicko (2 560.9 ha) and Znojemsko (1 913.5 ha), which together represent the whole 64% of the total vine-area in the CR. Vineyards in the CR include more than 350 wine-growing communities.

Only for comparison, vineyards in the CR represent 0.2% of the world vineyards and 0.45% of the European Union vineyards. By expert forecasts of RIAE and the Ministry of Agriculture CR it is possible to expect that final areas of vineyards in a moment of our country entering the EU will be at a maximal level of 16 000 ha and this area will be limited in the future.

From the development of vineyards, as Table 1 shows it is obvious that the expedted area 16 000 ha with that the CR should entry into the EU is higher then the actual area 15 574 ha by the Czech Statistical Office (2001). In the period of the last 20 years, the area of vineyards was only twice higher than requisite area and this was in the year 1986 when the area under vine was 16 206 ha. Vineyards area rather declined. From the year 1990 when the area amounted 15 814 ha, it declined by about 240 ha in the year 2000 (it is decline about 1.52%). Table 1 also describes the development of grape yields, which are mostly the lowest in comparison with the EU member states. The average per hectare yields in the CR amount to 5.8 tons between years 1991–2000. By RIAE a limit of profitability gets around the per hectare yield from 6.3 to 8 tons and the optimal yield is in a range 8–12 tons per hectare.

Table 1. The development of vineyards area, crop and grape yield per hectare in the CR

| Indicator | Unit | 1990 | 1995 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|
| Vineyards area | ha | 15 814 | 15 633 | 15 504 | 15 507 | 15 494 | 15 574 |
| Area of bearing vineyards | ha | 11 122 | 10 679 | 11 183 | 11 232 | 11 110 | 11 236 |
| Rate in % | | 70.33 | 68.31 | 72.13 | 72.43 | 71.71 | 72.15 |
| Total crop of grapes | t | 81 152 | 42 620 | 35 758 | 55 172 | 67 073 | 66 937 |
| Grape yield per hectare | t | 7,30 | 3,99 | 3,20 | 4,91 | 6,04 | 5,96 |

Source: ČSÚ, VÚZE

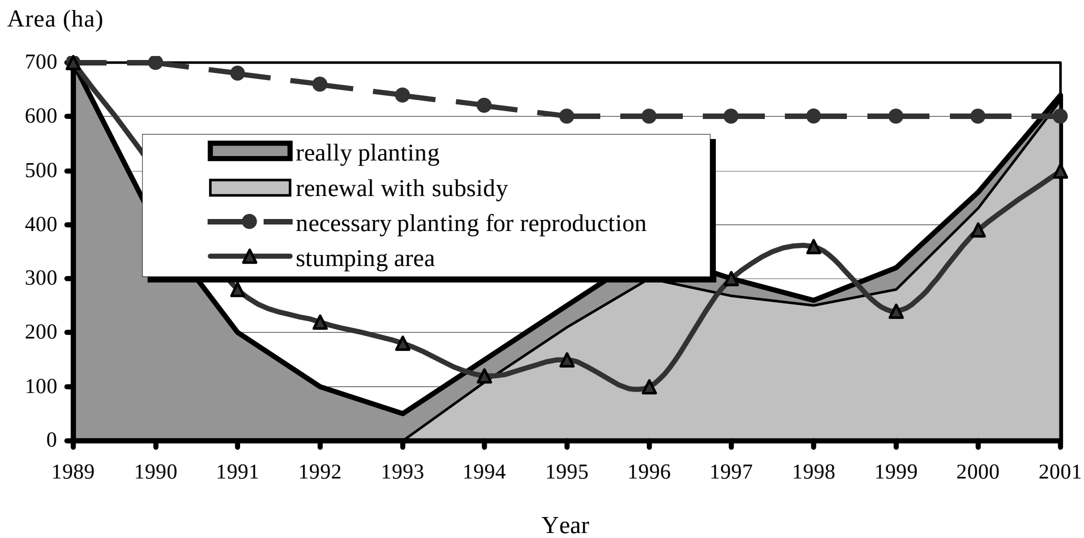


Figure 5. The renewal and stumping of vineyards in the CR in the years 1989–2001

Source: ČMVVU, MZe ČR

Another negative characteristic of the last ten years caused by unprofitable grape production and high financial entry barriers was a low interest in a renewal of vineyards. In the years 1995–2000, the ratio of bearing vineyards to the total area was in the range 68.3–72.4%, the optimal value withal is 88–90%. For maintenance of current vineyards in an optimal age structure, it is necessary to revive annually in average 3.5–4% of vineyards. As Figure 5 shows, the renewal of vineyards reached 4% level only in the year 1989 and 2001, other values were between 0.31–2.88% (2000).

During the past ten years, the renewal of vineyards was not made sufficiently, but the situation is improving. Since 1994 there are some subsidies for renewal and planting new vineyards, which is afforded through the Ministry of Agriculture CR. In the year 2001, there were planted 640 ha new vineyards (630 ha with subsidy), it is the most from the 1990. First the necessary area for reproduction was covered by really planting (exactly 106.7%). As the reason of a lower planting than is needed (600 ha per year), there is some gap of the renewal in value 4 020 ha (it is 35.8% current area of bearing vineyards).

Many firms try to set forward the stumping of old vineyards and it has a very negative impact on profitability of wine growing and production. Nowadays, the average age of vineyards reaches 17 years, in the Bohemian region even more than 20 years. It means that our vineyards age and in comparison with the situation in the 1989, they are about 4 years older. In the financial expression, it means decline of the total vineyards value about 3 billion CZK, so 300 million CZK annually.

The annual wine production in the CR is around 600 thousand hl. It is only 0.33% of the total production in the EU. Domestic grape production in recent years covers roughly 45% of our consumption, 55% of wine consumed in the CR is imported. At the same time, the existing processing capacity is at a level that would enable Czech growers to meet total wine consumption. Since 1995, domestic wine in relationship to the vintage is formed of 20% to 50% table wine, 45 to 75% quality wine and 1% to 6% is quality wine with special attributes.

The annual wine consumption per capita ranges between 13–16 liters, but the higher number includes the consumption of fruit wine too. The total wine consumption fluctuates around 1.3 million hl and it has an increasing trend. In recent years, especially the demand for red wine has increased and since there are few blue varieties here, more red wine is imported than white.

**Export and import of wine in the CR**

The foreign trade with wine commodity is divided according to customs statistic to four categories: sparkling wine, wine must, wine in bottles and in barrels. The specific mark of our foreign trade with wine is a very high amount of imported wine and, on the other hand, minimal export. In recent years, the CR has imported between 500–700 thousand hl wine for about 1 billion CZK. Since 1996 the EU is our biggest supplier of wine, earlier it was CEFTA, especially Slovakia. The import of sparkling wine (1.66%) and must (0.2%) is very low. The CR imports the most wine in barrels, it is imported mainly from Italy, Austria, Slovakia and Hungary. The main supplier of wine in bottles are Hungary, Spain and Slovakia, but Slovak share decreases every year (look at Figure 6).

The wine export from the CR reaches only 3% of the total imported wine volume and 9% from the total import value. Since 1996 the amount of exported wine increases every year up to 32.8 thousand hl, in 2000 when the CR exported wine for 91.2 million CZK and it is the biggest amount in general. As Figure 7 shows, the CR exports wine more to the CEFTA states, especially to Slovakia, than to the EU member states, where the exported amount continually declines. The bigger export of wine in bot-

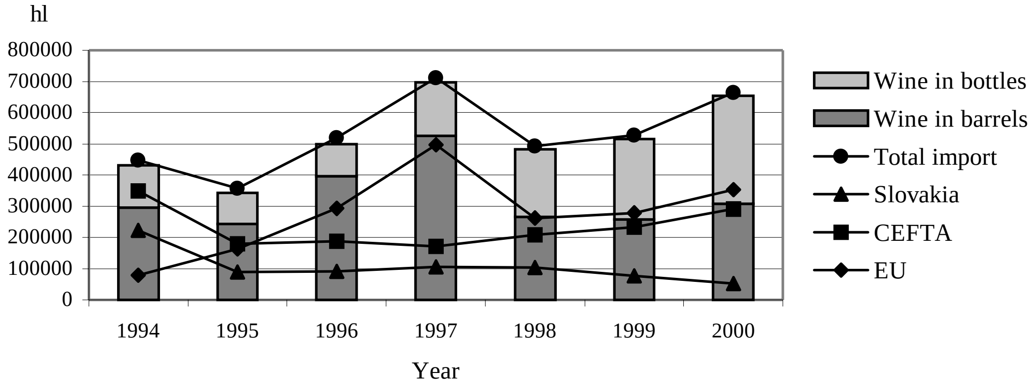


Figure 6. Trend of wine import to the CR

Source: The Customs Statistics Results

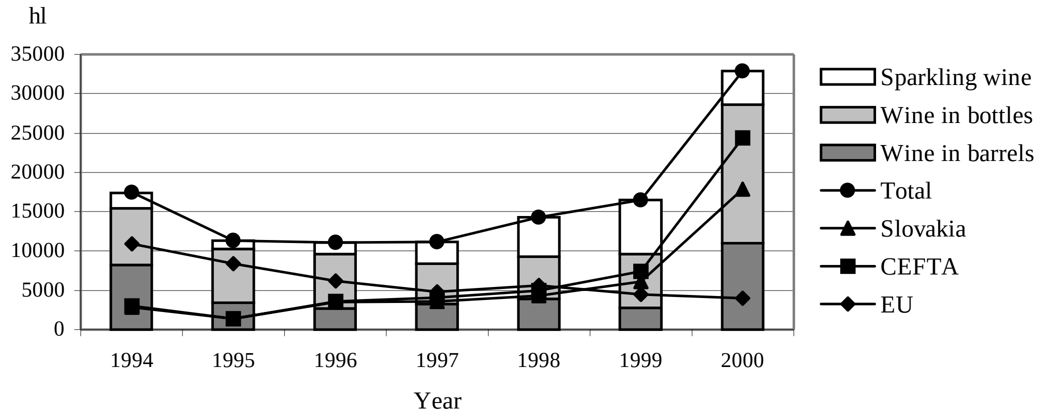


Figure 7. Trend of wine export from the CR

Source: The Customs Statistics Results

tles than wine in barrels is very positive, because our country should export quality bottled wine and should leave market with table wine, where it cannot compete. The CR mostly exports wine in smaller volume to around 65 countries. The biggest consumers are Slovakia and Hungary; next Finland, Vietnam, Poland, Bulgaria, Spain, Germany, Croatia and Sweden.

**Factor conditions in the chosen candidate countries**

For the comparison, there are chosen the first six countries with which negotiations was launched at the Luxembourg European Council in 1997. Besides the Czech Republic, they are Poland, Hungary, Estonia, Slovenia and Cyprus.

*Poland and Estonia* can be classed among the countries without viniculture sector. Their northern location does not allow them to produce grapes and, consequently, wine. Simultaneously, these two countries have the lowest annual consumption per capita, which is in Poland 1.28 liters and in Estonia 5.03 liters. Estonia has, apart from lower number of inhabitants, also the lowest share in the total wine consumption in the EU, only 0.05%. Estonia is specific for a long lasting tradition in production of fruit and berry wines. These are produced in small quantities for domestic use in households but also in larger quantities by processing companies for marketing in sales network. The production is about 3 million liters and the consumer is usually a target group with a relatively low income.

According to number of inhabitants, *Cyprus* is the smallest country aspiring on membership in the EU. From the Table 2, it results than Cyprus has very advantageous position in its current vineyards area regarding to its number of inhabitants and total wine consumption. The total area under vine is there 16 800 ha and it is the second largest area after Hungary, which makes it possible to produce 607.1 thousand hl wine. The annual consumption per capita amounts to 10.75 liters, which represents 31.38% of the average consumption in the EU and this amount is comparable with the CR. In the second part of Table 2, you can find that Cyprus produces 7x more wine than needed for satisfaction of its demand. In Cyprus, there is wine mainly produced by the four major wineries (97%) and by a large number (45) of regional wineries situated around the Island. A specific feature is that wine producers in Cyprus are not necessarily grape producers. The grape is produced by 23 000 growers who deliver the crop to the wineries for wine pro-

Table 2. The comparison of the CR and other candidate countries with the EU (year 2000)

| Indicator – absolute | EU | CR | Poland | Hungary | Estonia | Slovenia | Cyprus |
|---|---|---|---|---|---|---|---|
| Number of inhabitants (thousand) | 376 722 | 10 272 | 38 605 | 9 968 | 1 393 | 1 988 | 784 |
| Vineyards area (thousand ha) | 3 479.4 | 11.2 | 0.0 | 89.0 | 0.0 | 14.8 | 16.8 |
| Wine production (thousand hl) | 181 520.0 | 602.4 | 0.0 | 3 851.4 | 0.0 | 837.1 | 607.1 |
| Wine consumption (thousand hl) | 129 070.0 | 1 345.6 | 492.9 | 3 145.7 | 70.0 | 845.7 | 84.3 |
| Annual consumption per capita (l) | 34.26 | 13.10 | 1.28 | 31.56 | 5.03 | 42.54 | 10.75 |
| Indicator – relative in % | EU | CR | Poland | Hungary | Estonia | Slovenia | Cyprus |
| Number of inhabitants (thousand) | 100.00 | 2.73 | 10.25 | 2.65 | 0.37 | 0.53 | 0.21 |
| Vineyards area (thousand ha) | 100.00 | 0.32 | 0.00 | 2.56 | 0.00 | 0.43 | 0.48 |
| Wine production (thousand hl) | 100.00 | 0.33 | 0.00 | 2.12 | 0.00 | 0.46 | 0.33 |
| Wine consumption (thousand hl) | 100.00 | 1.04 | 0.38 | 2.44 | 0.05 | 0.66 | 0.07 |
| Annual consumption per capita (l) | 100.00 | 38.24 | 3.73 | 92.11 | 14.67 | 124.17 | 31.38 |
| Coverage of consumption by domestic production | 140.64 | 44.77 | 0.00 | 122.43 | 0.00 | 98.99 | 720.30 |

Source: ČSÚ, Copa/Cogeca

duction or distillation. So Cyprus has wine producers and grape producers.

*Slovenia* has its priority in the annual per capita consumption, which reaches till 42.54 liters, so more than the average consumption in the EU (124.17%). An indicator of the cover consumption by domestic production signalizes a positive situation in Slovenia. The country is able, not with standing the very high consumption, to satisfy domestic demand by self-production up to 98.99%. Areas under vines in Slovenia are classified into three wine regions and 14 wine districts, suitable for the production of quality wines called PSR. The current area of vineyards 14 800 ha is mostly 3x smaller than it was in the mid 70s when total wine-growing areas covered 32 500 ha.

*Hungary* has the biggest area under vine from all selected candidate countries, whole 89 thousand ha, which represents 2.56% of the total area in the EU. Regarding to this area, Hungary produces also the highest amount of wine – 3 851.4 thousand hl. The consumption per capita is equal to the average consumption per capita in the EU member states and it is 31.56 liters. Not with standing this high consumption, Hungary is able to cover demand by domestic wine and moreover it makes some surplus for export like the indicator self-sufficiency rate in value 122.43% shows. Hungary could be marked as a country with the best-balanced values according relative indicator in the second part of Table 2.

*The Czech Republic,* has from countries with wine-growing sector, the smallest area under vine (11 236 ha). The share in the total area in the EU is only 0.32%. A very negative aspect of our country is the value of the indicator describing our ability to satisfy wine demand by domestic production, which moves around 45%. According to this, it will be necessary to increase area of vineyards minimally twice. Moreover the wine consumption in the CR still has not reached half of the average consumption per capita in the EU and every year it slowly but constantly increases.

## CONCLUSION

The EU is the biggest producer, consumer, exporter and importer of wine. At present, the EU member states hold together 3 479 thousand ha vineyards. The largest area under vine is situated in Spain, Italy and France. These countries are simultaneously the biggest grape producers with 84% share of the total grape crop in the EU. The average grape yield is very different in individual states; Belgium-Luxembourg and Germany have the highest yield per hectare (17–16 tons), UK has the lowest (1.6 tons). The EU annually produces around 181.5 million hl of wine, which represents 64% of total world wine production. The most of that is made in Southern countries as France, Italy and Spain, which are also the biggest wine producers in the world. The wine consumption slowly decreases in the EU. Annually, member states consume around 129.07 million hl. In the consumption per capita there excel again Southern countries, their consumption ranges from 38.8 till to 59.5 liters per capita. A very big problem for the EU is disequilibrium between supply and demand for wine, where the wine production exceeds the consumption by 40% every year and it means a surplus around 52.5 mil. hl. The Southern countries produce most of this surplus.

Negative factors influencing the wine market in the EU are the big surplus of wine, especially table white wine; bad quality of produced wine and slowly decreasing consumption. The EU solves it through regulations: the prohibition of planting new vineyards (since 1976), support of stopping grape-growing by premium (since 1981), obligatory distillation of some table wine (since 1982). Next, the EU tries to support a direct use of wine must and storing of wine at the time of overproduction. Since 1st August 2000, there is the new Statute about common organization of the wine market with the purpose of reforming and improving this sector.

The Czech Republic has 15.5 thousand ha under vine, of which 11.2 thousand ha (72%) are really used for grape production. Wine-growing area is divided into Bohemian and Moravian region with 16 sub-regions in total, where whole 96.5% of the area is situated in Moravia. The average grape yield fluctuates around 5.8 tons per hectare, which is lower than it is in majority of other countries. The CR has opposite problem than the EU, our wine production covers roughly 45% of domestic consumption and 55% of consumed wine must be imported. Moreover, wine consumption slowly increases every year and today it fluctuates around 1.3 mil. hl. It means the import of any type of wine is very important to satisfy domestic demand. The CR imports wine mainly in barrels and then in bottles. Since 1996, the EU is our biggest supplier, especially Italy, Spain and Austria. A high amount of wine is also imported from Slovakia and Hungary. The CR imports wine for about 1 billion CZK and exports for 90 millions CZK (it is 9% of the import). So our export is minimal and the CR exports mostly small amounts to about 65 countries.

The CR has a problem with the lower area under vine than it needs, slow renewal of vineyards and their high age, lower grape yield per hectare than the neighboring countries and very small export of own wine caused by lack of marketing and trade supports.

From the comparison of the selected candidate countries, we can see that Hungary has the best value of analyzed indicators and its self-sufficiency rate is over 122%. Hungary seems to be the best-prepared country for a new large market within the EU.

## REFERENCES


Buchtová I. et al. (2001): The positional and perspective statement. Vine, wine. Praha, MZe ČR; ISBN 80-7084-178-8.

Czech Statistical Office (2001). Statistical yearbook of the Czech Republic 2001. Praha, Scientia; ISBN 80-7183-250-2.

COPA/COGECA (2001). Report on the Wine Sector in different Candidate countries. Brussels.

Homolka J. (2001): Economic and legal consequences of competitiveness. In: Svatoš M. et al.: Agrarian sector before the entrance to the EU. Praha, ČZU PEF, pp. 119–122.

Porter M.E. (1990): Competitive Advantage of Nation. New York: Macmillan.

Sedlo J. (2002): Wine-growing legislation in the Czech Republic and in the EU. Valtice, ČMVVU.

<http://www.evropska-unie.cz>

<http://www.fao.org>

<http://www.mze.cz>



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