

Factors of wine demand in the Czech Republic and in the neighbouring wine-growing countries

Faktory poptávky po víně v ČR a sousedních vinařských zemích

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Abstract: The paper is focused on the analysis of the wine demand and chosen factors which influence the wine demand in the Czech Republic, in Slovakia, in Austria, and in Germany. In the Czech Republic, the wine consumption per inhabitant went up slightly in 1994–2003, the wine demand has a rising trend. The wine demand has the rising trend in Germany as well. In Slovakia, the year wine consumption per inhabitant decreased by 14.9% from 1994 to 2003; in Austria by 7.7%. There is a downward trend of development in these countries. The influence of the analyzed factors on the development of the wine demand is different in the particular countries. The dependence is possible to follow at the total level of incomes in comparison with the consumer's price of wine.

Key words: demand, wine, consumption of wine, consumer's price, average wages, Germany, Austria, Czech Republic, Slovakia

Abstrakt: Příspěvek je zaměřen na anýzu poptávky po víně a vybrané faktory, které ji ovlivňují v České republice, na Slovensku, v Rakousku a Německu. V České republice se spotřeba vína na jednoho obyvatele ve všech sledovaných letech mírně zvyšovala, poptávka vykazuje vzestupný trend. Vzestupný trend lze sledovat také v Německu. Naproti tomu na Slovensku poklesla roční spotřeba vína na jednoho obyvatele od roku 1994 do roku 2003 o 14,9 %, v Rakousku o 7,7 %. V těchto zemích je trend vývoje sestupný. Vliv analyzovaných faktorů na vývoj poptávky je v jednotlivých zemích různý. Závislost lze sledovat u celkové výše příjmů v porovnání s vyšší spotřebitelných cen vína.

Klíčová slova: poptávka, víno, spotřeba vína, spotřebitelské ceny, průměrná hrubá měsíční mzda, Německo, Rakousko, ČR, Slovensko

INTRODUCTION

The size of the market, its growth and the period of the industry life cycle are the basic characteristics of an industry. They are important for the evaluation of the intensity of rivalry among businesses in the industry. They are the key criteria for the evaluation of the industry attractiveness. The size of the market is determined by the size of the demand.

Tomšík, Žufan (2004) evaluated the size of the market in the wine-production sector in the Czech Republic and its development from the point of view of its influence on the attractiveness. The Czech Republic is the country where the size of the mar-

ket went up step by step in the past ten years. The analyzed industry is very attractive from this point of view. It is possible to expect a rising trend in the development of the wine demand in the future (Žufan 2004).

The wine demand determines the total amount of the production, which can be realized in the market. The increasing demand means that the business can increase its market share without doing it at the expense of the market share of its competitors. The development of demand coheres with the development of the industry and with the period of the industry life cycle. But the factors, which influence demand, are very important too.

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SURVEY OF LITERATURE AND METHOD

The aim of the paper is to analyze the factors which influence the wine demand and the development of wine demand in the Czech Republic and in the neighbouring wine-growing countries – Austria, Germany and Slovakia. The aim also is to describe the trends of development of these factors and their influence on wine demand in all of the analyzed countries.

The individual demand for goods (the demand of one consumer) depends on price of goods, on income of consumer, and on prices of other goods. If the demand increases with the growth of consumer's income, it is the common goods. For the necessary goods, the demand quantity grows more slowly than the consumer's income, for the luxurious goods, the demand quantity grows faster than the consumer's income. The influence of price change of goods is negative for the normal goods – the demand quantity moves contrary to the price. Substitute products and complementary products are distinguished from the point of view of the influence of prices of other goods on demand. The demand turns into in the same direction to the price of substitute products and in the contrary direction than the price of complementary products. Market demand is a sum of individual demands of particular consumers. In case of market demand, other influences also affect the decision making – e.g. psychological or ethical factors. The demand of particular consumers and their groups are in an interaction. In case that the individual demand grows in consequence of the growth of bought amount by other consumers – it is a "fashion" effect. In case that the individual demand falls with the growth of number of consumers – it is a "snobbish consumption" effect (Soukupová 1996).

Porter (1994) speaks about the long-run changes in growth of the market concerning to the demand. These changes depend on:

- demographic changes, which are one key determinant of the size of buyer pool and thereby the rate of growth in demand. The potential customer group for a product consists of buyers characterized by the particular age groups, income levels, educational level, or geographic locations,
- needs, which are affected by changes in the lifestyle, tastes, philosophies, and social conditions of the buyer population,
- relative position of substitutes – if the cost of substitute falls in relative terms, or if its ability improves to satisfy the buyer's needs, the industry growth will be adversely affected (and vice versa),
- position of complementary products – the effective cost and quality of many products to the buyer

depends on cost, quality, and availability of complementary products,

- group of new customer – most of the very high industry growth rates are the result of increasing sales to new customer rather than to repeated customer.

Wine demand and its development are described by the average year consumption of wine per inhabitant in the paper. The analysis comes partially from the managerial and partially from the micro-economic concept. Consumer's prices of wine, income levels, unemployment rate, and development of beer consumption are compared and evaluated in all of the analyzed countries.

The information for this analysis were drawn from the Situation and Perspective Bulletin for the commodity wine in the Czech Republic and in Slovakia, from web site of the Austrian and the German Institute for Wine, from the information of the Czech and Slovak Wine Producers Union, from the Ministry of Agriculture of the Czech Republic and of the Slovakia, from the Research Institute of Agricultural Economics, from the State Agricultural Intervention Fund, and the Czech, Slovak, Austrian and German Statistical Office.

RESULTS AND DISCUSSION

Wine demand in the Czech Republic has the rising trend; it went up slightly in all analyzed years. It was 16.3 litres per inhabitant in 2003; it rose almost by 6% since 1994.

The similar development is also possible to observe in Germany. The average year wine consumption per inhabitant increased almost by 5% from 1993 to 2004, but it varied around 24 litres per inhabitant per year – it is by 33% more than in the Czech Republic.

The lowest wine consumption per inhabitant is observed in Slovakia from all of the analyzed countries. The average year wine consumption was only 10.3 litres per inhabitant in 2003, it is also the lowest level in the past 10 years in Slovakia. In addition, wine consumption went down step by step from 1994 (excepting 1996 and 1997). It came to the decline of wine consumption by 17.6% in comparison of 2003 to 1997, and to the decline by 14.9% in comparison of 2003 to 1994.

The development of wine demand has also the downward trend in Austria (it fell almost by 8% in the analyzed years). But the level of consumption is the highest from all of the analyzed countries; it varied around 30 litres per inhabitant. Austria mostly

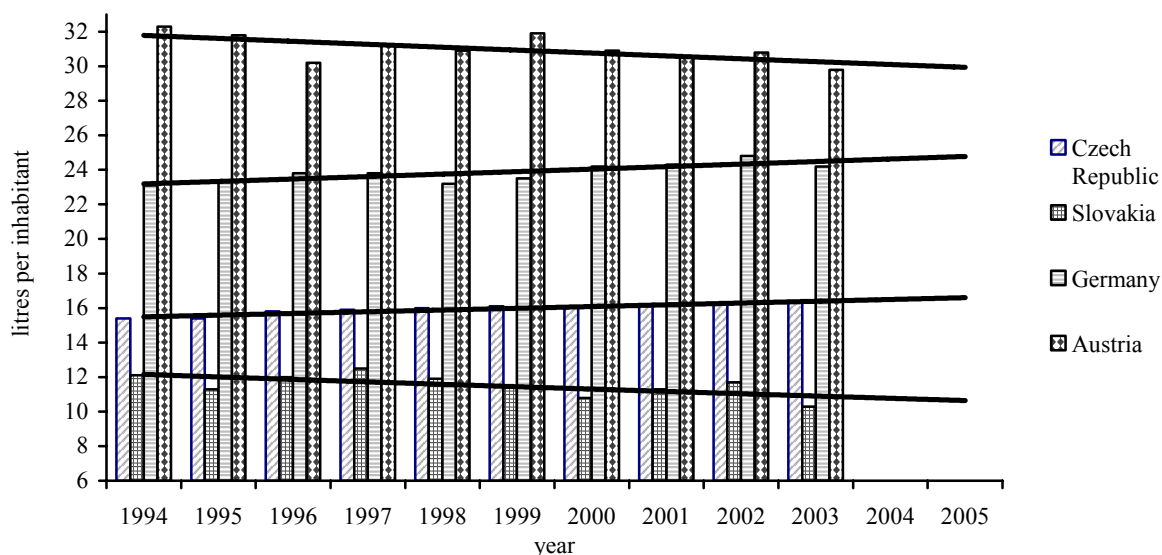


Figure 1. Development and trend of development of the average year wine consumption in the Czech Republic, in Slovakia, in Germany, and in Austria (litres per inhabitant)

Source: Situation and Perspective Bulletin for the commodity wine 2004, FAOSTAT Database Results, own calculations

approximates to the average year wine consumption per inhabitant in the countries EU-15¹, where it varied around 34 litres per inhabitant.

Wine consumption in the Czech Republic reaches only 47% of the average year wine consumption in the countries EU-15; wine consumption in Slovakia only 32% of the European average year wine consumption; but it is 73% in Germany, and 91% in Austria.

Figure 1 describes the development of the wine demand measured by the development of the average year wine consumption per inhabitant in the Czech Republic, in Slovakia, in Germany, in Austria, and in the countries EU-15. Figure 1 also presents the trend of development.

Development of consumer's price

Consumer's prices of wine in the Czech Republic went up in the analyzed years. The growth was higher in the red wine – 24% from 1997 to 2003. The growth was only 16.4% in the white wine in the same period (Table 1).

The sharp increase of the average year consumer's prices in 2002 and 2003 compared to 2001 followed the change of methodology of consumer's prices monitoring. From 2002 the prices are monitored only at the white and red quality wine (the monitoring devolved from the Research Institute of Agricultural Economics of the State Agricultural Intervention Fund).

Table 1. The average year consumer's prices of wine in the Czech Republic (CZK per litre)

| Wine sort | | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Index 03/97 | Index 03/00 |
|-----------|-------|-------|-------|--------|--------|--------|--------|--------|-------------|-------------|
| White | 1 l | 53.26 | 54.94 | 55.50 | 55.47 | 55.75 | 63.67* | 61.97* | 116.4 | 111.7 |
| Red | 1 l | 57.94 | 59.97 | 60.14 | 60.28 | 64.80 | 73.11* | 71.85* | 124.0 | 119.2 |
| Sparkling | 0.7 l | 97.30 | 99.96 | 101.11 | 103.75 | 100.02 | ** | ** | – | – |

Source: <<http://www.vuze.cz>>,<<http://www.szif.cz>>, own calculations

* only quality wine, ** the data is not available

¹15 countries of the European Union, which were the EU-members before the integration of new countries including the Czech Republic and Slovakia on 1st of May 2004.

The development was similar in Slovakia. Consumer's prices of white wine increased by 16.8% compared to 1997. The growth of consumer's prices of red wine was 20.1% compared to 1997, and consumer's prices of sparkling wine increased by 32.3% from 1997 to 2003. The development of consumer's prices of wine has the rising trend (Table 2).

Germany is the only one of the analyzed countries, where it came to the fall of consumer's prices in the analyzed years – the average consumer's prices of the white wine went down almost by 10% from 1997 to 2003. The consumer's price of the red wine falls from 2000 too – the fall was almost 7% from 2000 to 2003 (Table 3).

It is possible to observe the increasing trend in the development of consumer's prices of wine in Austria from the data which are available. The dynamic of the increase is high – it came to the growth of the average consumer's prices of wine by 25.3% from 2000 to 2003 (Table 4).

The conversion of prices in the Czech Republic and in Slovakia by the actual average year exchange rate towards the EUR was achieved for the comparison

of the level of the average year consumer's prices of wine in all of the analyzed countries (according to <<http://www.cnb.cz>> and <<http://www.snb.sk>>) – Figure 2. Figure 2 also presents the trends of development.

The lowest average consumer's prices of wine were in Slovakia in 2003 (1.60 EUR per litre). It was even higher in the Czech Republic – 2.05 EUR per litre. The average consumer's prices varied about 3 EUR per litre in Germany and in Austria. It was 2.87 EUR per litre in Germany and 3.32 EUR per litre in Austria in 2003. The consumer's prices in Austria went up in contrast to Germany, they exceeded the consumer's prices in the German wine market in 2002 and they are the highest of the analyzed countries at present.

Level of incomes

The level of average incomes increases in all of the analyzed countries, but the dynamic of the growth is different. The average monthly gross wages increased by 146.3% in the Czech Republic from 1994 to 2003,

Table 2. The average year consumer's prices of wine in Slovakia (SKK per litre)

| Wine sort | Unit | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Index 03/97 | Index 03/00 |
|-----------|-------|-------|-------|-------|-------|-------|--------|--------|-------------|-------------|
| White | l | 54.23 | 55.57 | 57.75 | 59.31 | 61.71 | 62.60 | 63.33 | 116.8 | 106.8 |
| Red | l | 61.18 | 63.19 | 67.41 | 70.14 | 72.56 | 73.50 | 73.48 | 120.1 | 104.8 |
| Sparkling | 0.75l | 84.92 | 86.79 | 91.90 | 92.33 | 97.57 | 103.12 | 112.34 | 132.3 | 121.7 |

Source: Situation and Perspective Bulletin for the commodity – wine in Slovakia, own calculations

Table 3. The average year consumer's prices of wine in Germany (EUR per litre)

| Wine sort | Unit | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Index 03/97 | Index 03/00 |
|-----------|------|------|------|------|------|------|------|------|-------------|-------------|
| White | l | 3 | 2.86 | 2.92 | 2.92 | 3.05 | 2.77 | 2.72 | 90.7 | 92.3 |
| Red | l | 3.05 | 3.12 | 3.32 | 3.36 | 3.29 | 3.12 | 3.09 | 101.3 | 93.2 |
| Total | l | 3.02 | 2.97 | 3.1 | 3.11 | 3.21 | 2.94 | 2.87 | 95.0 | 92.0 |

Source: <<http://www.deutscheweine.de>>, own calculations

The data is available only about the white wine, red wine and total

Table 4. The average year consumer's prices of wine in Austria (EUR per litre)

| Wine sort | Unit | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Index 03/97 | Index 03/00 |
|-----------|------|------|------|------|------|------|------|------|-------------|-------------|
| Total | l | - | - | - | 2.65 | 2.84 | 3.14 | 3.32 | - | 125.3 |

Source: <<http://www.weinausosterreich.at>>, own calculations

The data is available only about the wine in sum and only from 2000

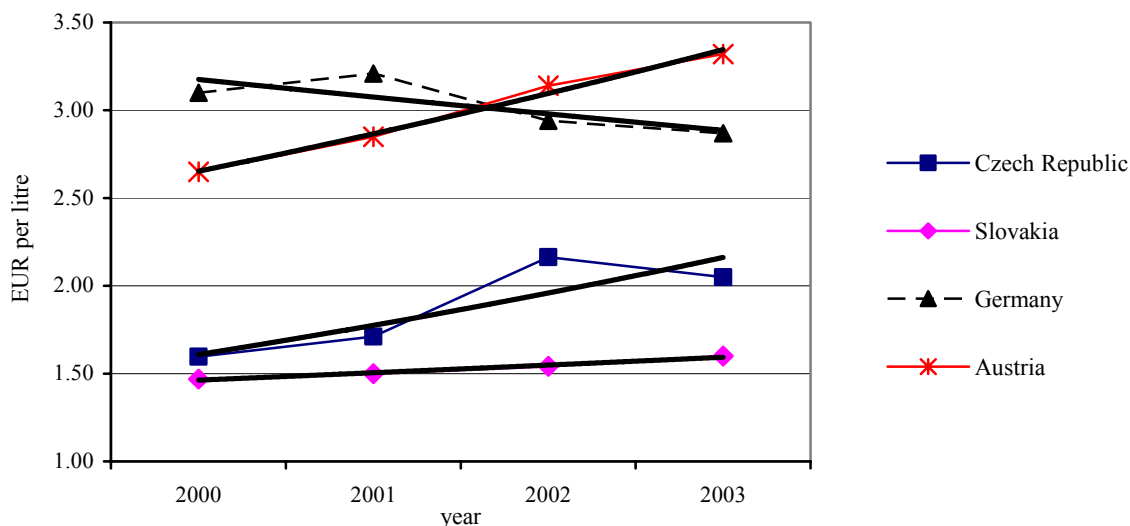


Figure 2. The development and the trend of development of the average year consumer's prices of wine in the Czech Republic, in Slovakia, in Germany, and in Austria in 2000–2003 (EUR per litre)

Source: <<http://www.weinausoesterreich.at>>, <<http://www.deutscheweine.de>>, <<http://www.cnb.cz>>, <<http://www.snb.sk>>, Situation and Perspective Bulletin for the commodity – wine in Slovakia, <<http://www.vuze.cz>>, <<http://www.szif.cz>>, own calculations

by 128.2% in Slovakia, by 27.5% in Germany, and by 18.1% in Austria in the same period.

The average monthly gross wages was 16 920 CZK in the Czech Republic in 2003, and 14 365 SKK in Slovakia in 2003. If we use the average exchange rate of the CZK and SKK towards the EUR in 2003 (according to <<http://www.cnb.cz>> and <<http://www.snb.sk>>) and we recount the average wages, then we can see that

the average gross monthly wages in Slovakia were only 65% of the Czech average gross monthly wages. And the shares in the average incomes in Germany and in Austria were very low. The average gross monthly wages in the Czech Republic reached only 16% of the average gross monthly wages in Germany and 21% of the average gross monthly wages in the Austria in 2003. The average gross monthly wages in Slovakia were

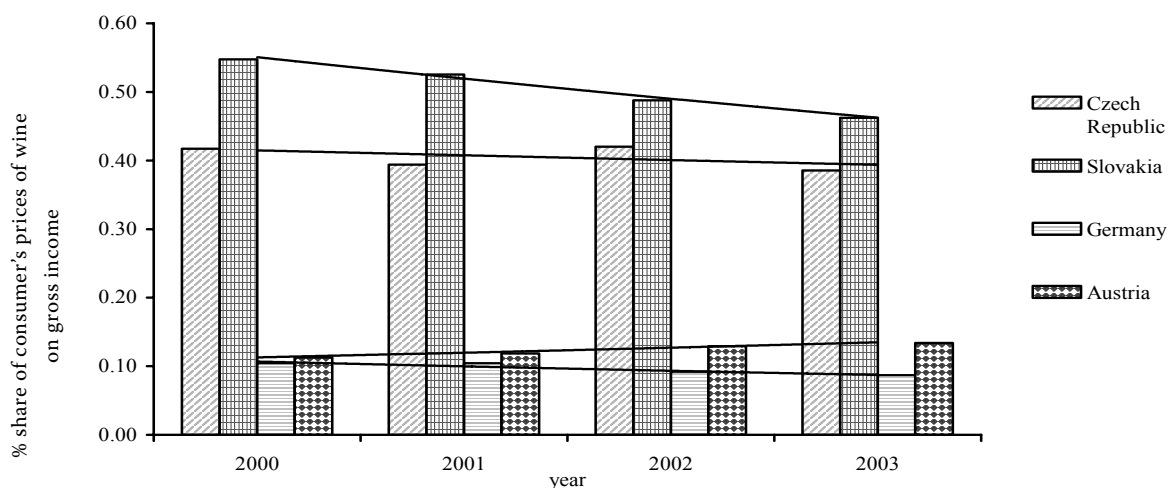


Figure 3. The development and the trend of development of the share of the average consumer's prices of wine on the average gross monthly wages in the Czech Republic, in Slovakia, in Germany, and in Austria in 1994–2003 (%)

Source: <<http://www.weinausoesterreich.at>>, <<http://www.deutscheweine.de>>, <<http://www.cnb.cz>>, <<http://www.snb.sk>>, Situation and Perspective Bulletin for the commodity – wine in Slovakia, <<http://www.vuze.cz>>, <<http://www.szif.cz>>, own calculations

even only 10.5% of the average gross monthly wages in Germany and 14% of the average gross monthly wages in Austria in 2003.

The Figure 3 describes the development and the trend in development of the share of the average consumer's prices of wine in the gross incomes of inhabitants. It is possible to see the unfavourable situation in the wine market in Slovakia. The share of the average consumer's prices of wine in the average gross monthly wages is the highest there – around 0.5%. Though it is positive that the prices went up slower than the gross income in the analyzed years – the trend of development is downward. This share stagnates and varies around 0.4% in the Czech Republic. The low shares are in the German and in the Austrian wine market – only about 0.1%. But in case of Austria, the trend of development is negative because the growth of the consumer's prices of wine is higher than the growth of the average incomes.

Unemployment

The unemployment measured by the common unemployment rate increased in all of the analyzed countries from 1994 to 2003 in contrast to the average of the countries EU-15. That came to the fall almost by 25% from 1994 to 2003.

The slightly fall of the unemployment rate came in the Czech Republic and in Slovakia from 2001 to

2003. The reason of this development was the positive development of employment and the slightly improvement of the situation in the labour market. Other way round, the unemployment rate slightly increases in Germany and in Austria from 2001.

The Czech Republic reaches a comparable unemployment rate with the average of the countries EU-15 (8% in 2003) and even a lower unemployment rate than in Germany (9.3% in 2003). Austria has the lowest unemployment rate (4.4% in 2003), and on the contrary, Slovakia has the highest unemployment rate (17.2% in 2003). The unemployment rate in Slovakia is by 115% higher than the average of the countries EU-15.

The development of the common unemployment rate in the Czech Republic, in Slovakia, in Germany, and in Austria compared with the countries EU-15 is described in Figure 4. Figure 4 also presents trends of development.

Development of beer consumption

All the analyzed countries can be included among "beer countries". Beer consumption per inhabitant in all four analyzed countries exceeds the average of the countries EU-15 (Figure 5). In the Czech Republic, it is even by more than 100%. The Czech Republic is also the only one of the analyzed countries, where the beer consumption per inhabitant increased by 3% in the

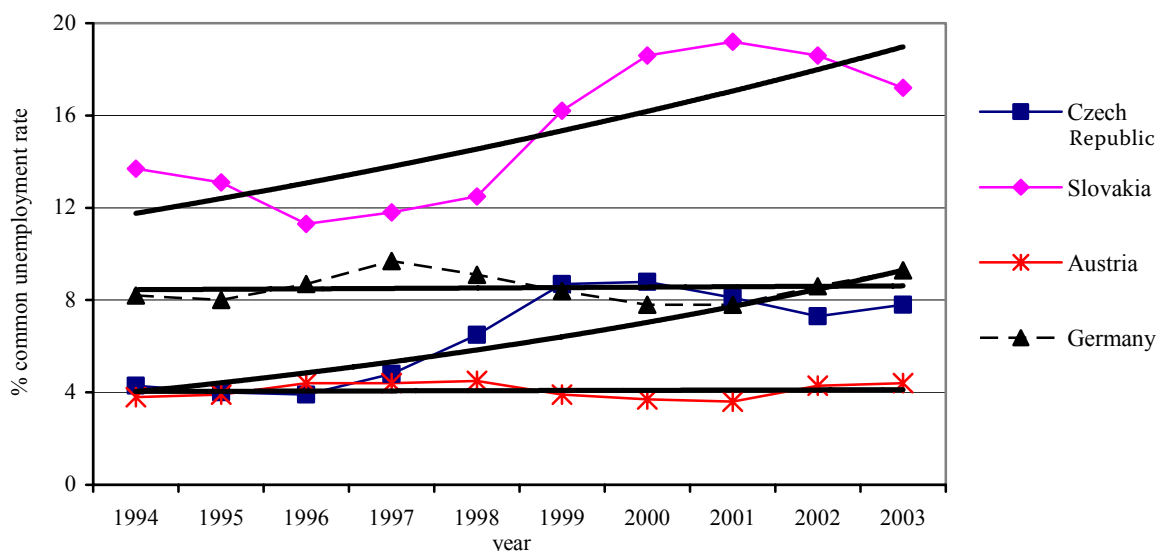


Figure 4. The development and the trend in development of the common unemployment rate in the Czech Republic, in Slovakia, in Germany, and in Austria in 1994–2003 (%)

Source: <<http://www.czso.cz>>, <<http://www.statistics.sk>>, <<http://www.statistik.at>>, <<http://www.destatis.de>>, own calculations

analyzed years 1994–2003. The high bier consumption also is in Germany (117.5 litres per inhabitant in 2003), but it went down slowly every year from 1994 to 2003. The similar situation is in Austria. The bier consumption varied around 90 litres per inhabitant in Slovakia.

CONCLUSION

Wine demand in the Czech Republic and in Germany has a rising trend. The wine consumption per inhabitant in the Czech Republic went up slightly in all analyzed years. It grew almost by 6% from 1994 to 2003. The growth was 4.8% in Germany in the same period.

On the other hand, the average year wine consumption per inhabitant in Slovakia fell down by 14.9% in the same period. Wine consumption in the Austria reaches 30 litres per inhabitant, but the trend of development is downward too – it came to the fall by 7.7% from 1994 to 2003.

The direct dependence between the development of wine demand and the development of some of the analyzed factors does not follow from the results of the analysis.

The level of incomes went up in all four analyzed countries, but the trend in the development of wine consumption is different in the particular countries. From the point of view of the development of wine demand, the markedly lower total level of incomes

in comparison to the other countries is rather important.

It is the case of Slovakia. In the analyzed years 1994–2003, the average gross monthly wages in Slovakia increased by 128% in comparison with Germany, where the growth was only 27.5%, though the wine demand falls down (in contrast to Germany). But the average gross monthly wages in the Slovakia were by 90% lower than in Germany, by 85% lower than in Austria, and by almost 40% lower than in the Czech Republic in 2003. And the share of consumer's prices of wine in the average gross incomes of inhabitants was the highest.

The high unemployment rate in Slovakia affects the wine demand negatively as well. Though from the development of income and demand in this paper it is not possible to appreciate if the wine is luxurious goods, from the results of the wine market research provided in the Czech Republic in 2004 (see Chládková et al. 2004) it followed, however, that the wine consumption belongs to the higher lifestyle. The high unemployment must affect wine consumption negatively from this point of view.

The fall of the wine demand in Austria rather coheres with the high growth of the consumer's prices of wine in the past four years. They grew faster than the gross incomes of inhabitants and they are even higher than the average year consumers' prices of wine in Germany from 2002. In addition, there is not a big space for the further increasing of wine consumption per inhabitant in Austria, because wine consumption

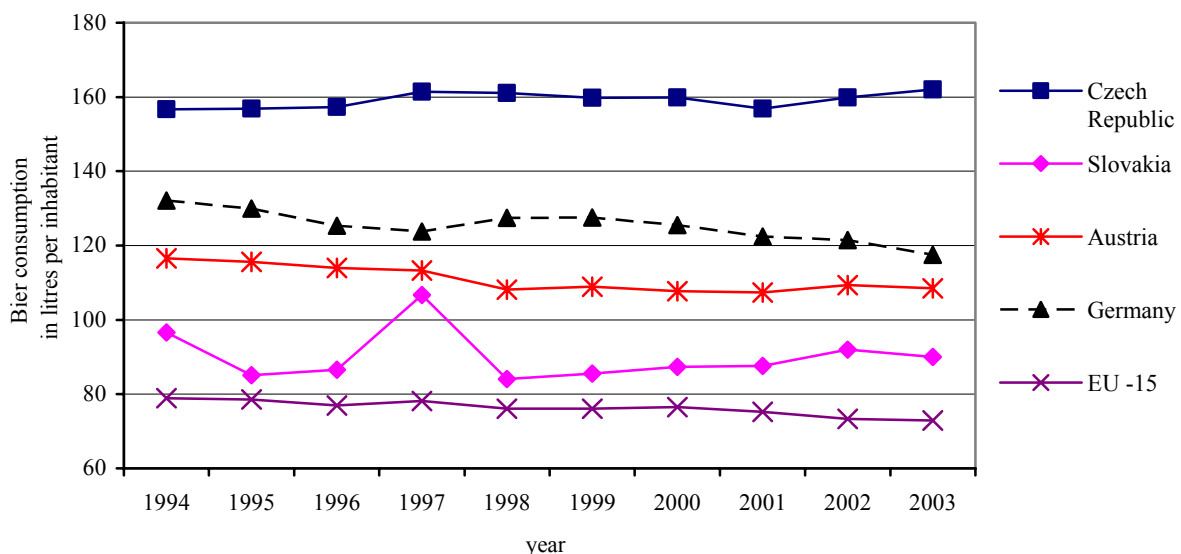


Figure 5. The development of the average bier consumption in the Czech Republic, in the Slovakia, in the Germany, in the Austria, and in the countries EU-15 in 1994–2003 (litres per inhabitant)

Source: <<http://www.czso.cz>>, FAOSTAT Database Results

is the highest of all analyzed countries here, it reaches almost the average of the countries EU-15. Austria is not a "Wine Power" like for example France, and there is not even such a big consumption of the table wine like for example in Portugal or in Italy, where the wine consumption per one inhabitant varies high above the average of the countries EU-15.

The positive development of wine demand in Germany is possible to conclude as the consequence of the decrease of consumer's prices of wine and together of growing income, which is the highest of all analyzed countries. This development sinks the share of consumer's prices of wine in the average incomes of inhabitants, and it affects wine demand positively. Though the unemployment rate increased slightly, its level is still comparable with the average of the countries EU-15, and the size of consumption is by 9 litres per one inhabitant lower than the average of the countries EU-15, the further space for the growth in demand still exists here.

The interesting situation is in the Czech Republic, wine demand increased by 6% in the analyzed years and the increasing trend of development can also be expected in the following years. But though the growth of the gross incomes of inhabitants is high (by 146% from 1994 to 2003), consumer's prices of wine grew fast as well and their share in the gross incomes of inhabitants did not decrease. The unemployment rate grew by 81% in the analyzed years, and in addition the Czech Republic is the country with the highest bier consumption per inhabitant in the world. The reasons of the positive development in wine demand in the Czech Republic follow rather from the wine market research provided in the Czech Republic in 2004 again (see Chládková et al. 2004) than from the development of factors analyzed in this paper. The consumers mentioned that they drink wine more because the offered wine in the market is of higher quality now than in the past, and the consumers like it more. There is also a markedly higher offer of wine in the market now and the consumption of wine is a prestigious thing and it belongs to the higher lifestyle.

The analyzed factor, which does not affect the development of wine demand, is the bier consumption (bier was considered as the substitute of wine). Though

bier consumption per inhabitant in all four analyzed countries exceeds the average of bier consumption in the countries EU-15, it is possible to conclude, that wine has a special position in the market of alcoholic drinks – for its exceptionality as an alcoholic drink suitable for leisure, and an important complement of culinary arts. Bier or other alcoholic drinks are only distant substitutes of wine, their prices and levels of consumption are not important for the development in wine demand.

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