THE ECONOMIC SIGNIFICANCE OF THE BREWING SECTOR IN THE EUROPEAN UNION

Joanna Smoluk-Sikorska, Sławomir Kalinowski Poznań University of Life-Sciences

Abstract. The paper presents the role of the brewing sector in the economy of the European Union countries and four other countries, which are: Croatia, Norway, Switzerland and Turkey. The value added, state budget revenues generated by the production and distribution of beer as well as employment in the brewing sector were discussed in the paper. The authors also concentrated on exports and imports of beer. It was found that the brewing industry has particularly great significance in generating state budget revenues in countries with high level of fiscalism, and where the production and consumption of beer is quite high. The analysed sector assures many workplaces, especially in the distribution sphere (mainly in hospitality sector).

Key words: brewing sector, production, consumption, value added, taxes, employment

INTRODUCTION

The European Union plays a key role in global production of beer. Brewing industry is currently one of the most significant branches of the European economy. In spite of changing economic conditions, the demand for beer and its consumption are systematically growing. This process is favoured by a change in alcohol consumption, particularly in Central and Eastern Europe and Asia. It is worth to stress that the development of the sector is related to some certain benefits not only for the producers of beer, but also for the whole economy. The production of beer is accompanied by the defined fiscal burdens, such as excise duty and value added tax, which increase the state budget revenues.

The aim of the paper is to identify and evaluate the role of the brewing industry in the economy of the European Union and four other countries, which are: Croatia, Norway, Switzerland and Turkey. These four countries were chosen due to their strong economic and political relation with the European Union, their large share in trade and their meaning for the development of the EU economy as a whole.

Corresponding author – Adres do korespondencji: Joanna Smoluk-Sikorska, Sławomir Kalinowski, Katedra Ekonomii, Uniwersytet Przyrodniczy w Poznaniu, ul. Wojska Polskiego 28, 60-637 Poznań, e-mail: smoluk@up.poznan.pl, kalinowski@up.poznan.pl

In order to achieve the goal, the volume of beer production and consumption, value added generated by production and sale of beer as well as exports and imports in particular countries were discussed in the paper.

PRODUCTION AND CONSUMPTION OF BEER

Beer is produced and consumed around the world; however the most significant in this area are the European Union countries. In 2009 the production and consumption of beer in the 31 discussed countries amounted respectively to 382650.8 and 374532.8 thousand hl (including 363675.8 and 354805 thousand hl in the EU), which is nearly 31% of the global production and consumption of beer. The first place in Europe in this area took Germany (production of over 98 million hl and consumption of almost 90 million hl) (Figure 1). The second place went to the United Kingdom (with production of 45 million hl and consumption over 46 million hl) and the third – to Poland (35 and

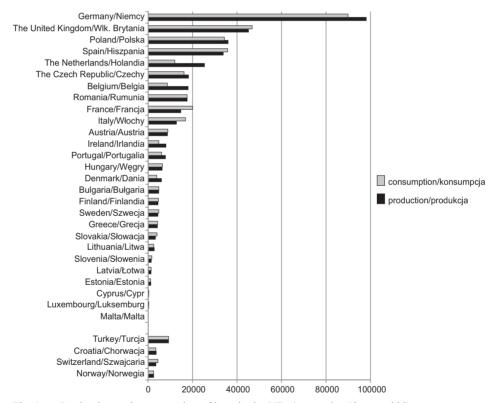


Fig. 1. Production and consumption of beer in the UE+4 countries (thousand hl)

Rys. 1. Produkcja i konsumpcja piwa w krajach UE+4 (tys. hl)

Source: Authors' own elaboration based on The Beer Statistics 2010 Edition. The Brewers of Europe. www.

brewersofeurope.com.

Źródło: Opracowanie własne na podstawie The Beer Statistics 2010 Edition. The Brewers of Europe. www. brewersofeurope.com.

34 million hl). The least significant were smaller countries, such as Malta, Luxembourg or Cyprus.

In most countries there are merely slight disproportions between production and consumption of beer, only in case of Germany, Belgium, the Netherlands or Ireland the production significantly exceeds the consumption, which is related to the huge share of exports. In turn, in France, Italy and Spain the consumption is higher and the consequence of that is an increase in imports. It may be a result of the fact that those countries have a developed tourism industry, including hospitality sector, which may contribute to the increased consumption of beer.

It is worth to mention that the largest consumption of beer per capita in the world is also specific for the European countries. The first place in this field took the Czech Republic with the average annual consumption of 160 l of beer per person, the second place went to Germany (110 l per person) and the third place – to Austria (107 l per person). Additionally, the high average consumption of beer is also typical for such countries as Ireland, Finland, Slovenia and Poland.

BREWING INDUSTRY IN THE ECONOMY OF THE EUROP EAN UNION COUNTRIES

High value added in a given sector may prove the significance of the sector in the economy, as it is a measure of the sector contribution to the GDP. The production of beer generates quite small value added, however distribution of beer, either through retail chains or hospitality sector, generates much higher value added [Huculak 2006]. In 2009 the value added in production and sale of beer¹ amounted to approximately 59 billion euro in the analysed countries (Figure 2). The hospitality sector and production of beer had the highest share in this area (respectively 32.9 and 12.3 billion euro).

The highest value added in the whole sector was noted in Germany (over 13 billion euro), the United Kingdom (over 10 billion euro) and Spain (almost 6 billion euro) (Figure 3). In turn, the value added in production of beer only was the highest also in Germany (nearly 2.8 billion euro), Spain (almost 1.3 billion euro), Belgium (over 0.9 billion euro) and the Netherlands (over 0.8 million euro), which confirms great significance of those countries in production of beer in Europe and in the world. The small value added was noted in the Baltic countries, Malta and Cyprus.

It is worth to mention that the share of beer production in the total value added generated in production and sale of beer amounted to nearly 21%. The highest share was

¹ The direct value-added in the brewing sector was obtained by Ernst & Young [2010] through brewing associations and through Eurostat data. The value added in other sectors resulting from the production and sale of beer was estimated on the basis of the employment effects. The value-added in a particular sector was calculated by multiplying the employment effect by the apparent labour productivity (Gross value added per person employed) in the sector. If no data on labour productivity for a particular country was available, estimates were made based on statistics of national statistics agencies or the OECD. Nevertheless, Eurostat statistics had provided useful data covering all or most of the considered countries.

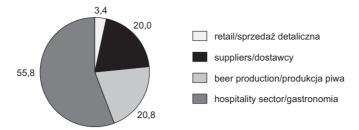


Fig. 2. The structure of value added generated by production and sale of beer in the EU+4 countries in 2009 [%]

Rys. 2. Struktura wartości dodanej wytworzonej w produkcji i sprzedaży piwa w krajach UE+4 w 2009 r. [%]

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst & Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst & Young. Amsterdam, 2010.

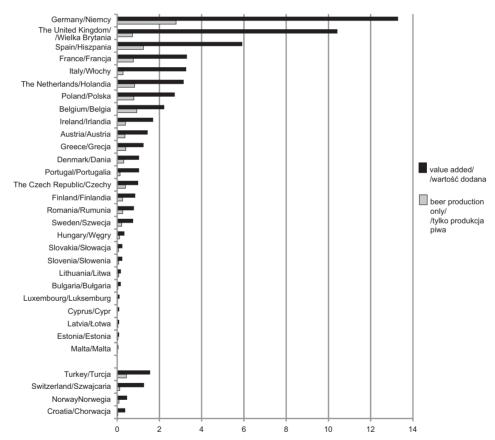


Fig. 3. The value added generated by brewing sector and sale of beer in the UE+4 countries in 2009 (billion euro)

Rys. 3. Wartość dodana wytworzona w sektorze browarniczym i sprzedaży piwa w krajach UE+4 w 2009 r. (mld euro)

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

noted in Latvia (48.2%), Estonia (47.5%) and Lithuania (46.3%), which is a result of short distribution chains and large share of retail in total sale (Figure 4). The smallest share is typical for such countries as Italy and the United Kingdom (respectively 8.6% and 6.9%). It may come from the fact that those countries are characterized by highly developed distribution sphere, particularly hospitality, which favours generating the value added in that sector.

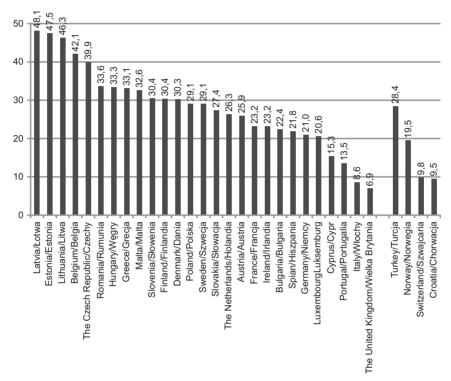


Fig. 4. The share of the brewing sector in total value added in production and sale of beer in the EU+4 countries in 2009 [%]

Rys. 4. Udział browarnictwa w wartości dodanej wytworzonej w produkcji i sprzedaży piwa w krajach UE+4 w 2009 r. [%]

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst&Young, Amsterdam, 2010.

It should be mentioned that the highest share of production and sale of beer in total value added generated in the economy was noted in Ireland (1.16%), Poland (0.99%), Malta (0.92%) and in the Czech Republic (0.79%). In turn, a smaller share was observed in Italy (0.24%), Norway and France (both 0.19%) (Figure 5). Surprisingly, quite small share of the brewing sector was noted in Germany, the Netherlands and the United Kingdom, which are characterized both by large production and consumption of beer. Nevertheless, economies of those countries are very strong and brewing sector is one of many branches, which results in smaller share of the sector in total value added.

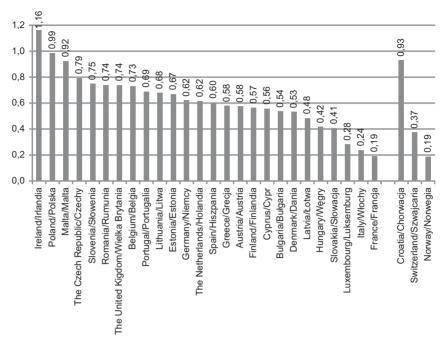


Fig. 5. The share of the value added generated by brewing sector and sale of beer in total value added generated in the economy in the UE+3 countries in 2009 [%]

Rys. 5. Udział wartości dodanej wytworzonej w sektorze browarniczym i sprzedaży piwa w całkowitej wartości dodanej wytworzonej w gospodarce w krajach UE+3 w 2009 r. [%]

Source: Authors' own elaboration based on EUROSTAT data and The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie danych EUROSTAT oraz The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

The brewing industry also plays a significant role on labour market. According to Ernst&Young [2010] estimates, in 2009 the employment in the sector in the discussed countries amounted to almost 2.5 million people, which was 1% of the all employed. The production of beer assured about 160.5 thousand workplaces, furthermore, the suppliers employed 363 thousand people (37% of them worked in agriculture) and over 150 thousand people worked in retail. Nonetheless, the hospitality sector assured the most workplaces – nearly 1.8 million, which was almost l' of the all workplaces in the whole brewing sector. Concerning particular countries, the most people were employed by the brewing sector in Germany (over 1/5 of the all employed in whole sector in the analysed countries), the United Kingdom (16%), Spain (9%) and Poland (8%). It is worth to mention that in 2009 the average value added per one employed in brewing sector amounted to about 23.7 thousand euro.

The production and sale of beer generates a quite large share of the budgetary revenues, most as the excise duty, value added tax, income tax and social contributions. In 2009 total government revenues were estimated for 57 billion euro, equivalent to nearly 50% of total beer sale value in 2009.

Generally, the level of the budgetary revenues is related to the level of fiscalism in a given country, which usually means that the higher fiscal burdens are, the higher the revenues are, unless the burdens are too high, then the level of budgetary revenues falls. Still, the budgetary revenues in high degree also depend on production and consumption volume, particularly in case of alcoholic beverages. Therefore, the highest budgetary revenues resulting from production and sale of beer were achieved in the United Kingdom (over 13 billion euro), Germany (above 12 billion euro), Spain and Italy (both over 4 billion euro) and Poland (3 billion euro) (Figure 6). In other countries those revenues were lower. They had marginal meaning in the Baltic countries and in Luxembourg, Malta or Cyprus.

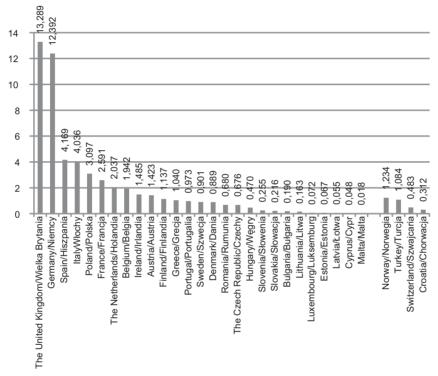


Fig. 6. The budgetary revenues for production and sale of beer in the EU+4 countries in 2009 (billion euro)

Rys. 6. Przychody budżetowe wynikające z produkcji i sprzedaży piwa w krajach UE+4 w 2009 r. (mld euro)

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Źródło: opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

The countries with the highest share of the budgetary revenues for production and sale of beer in 2009 were Ireland and Poland (both with nearly 2.7%). The next places went to the United Kingdom (2.1%) and Romania (1.8%) (Figure 7). That proves the significance of brewing industry for the state finances in those countries.

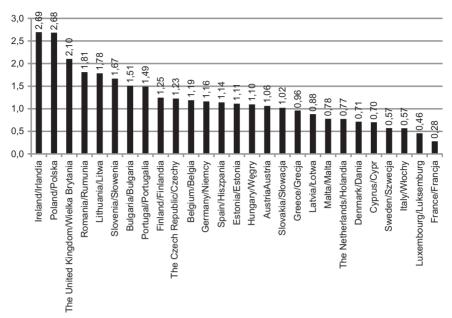


Fig. 7. The share of budgetary revenues for production and sale of beer in total budgetary revenues in the EU countries in 2009 [%]

Rys. 7. Udział przychodów budżetowych z tytułu produkcji i sprzedaży piwa w całkowitych przychodach budżetu państwa w krajach UE w 2009 r. [%]

Source: Authors' own elaboration based on the EUROSTAT data. Źródło: Opracowanie własne na podstawie danych EUROSTAT.

In Poland the fiscal burdens constitute about 40% of the beer price. In spite of the fact that the budgetary revenues are lower than in case of spirits, fuel or tobacco products, for the last 10 years they have grown almost twice, while the revenues for the excise duty on spirits have remained quite stable [Gołaś, Ścibek 2010; ZPPP 2010].

The excise duties and value added tax for sale in hospitality sector generally have the highest share in budgetary revenues for beer. In 2009 the highest revenues due to excise duty were noted in the United Kingdom (4 592 million euro), Poland (787 million euro), Turkey (620 euro), Norway (514 million euro), Italy (466 million euro), Denmark (463 million euro), Ireland (427 million euro) and Finland (405 mln euro) (Table 1). It is worth to mention that the countries with the highest excise duty rates are Norway (240 euro/hl/12ş Plato), Finland (124.8 euro), The United Kingdom (102.7 euro), Sweden (78.2 euro) and Ireland (75.4 euro), and the countries with the lowest rates are Romania (9 euro), Bulgaria (9.2 euro), Germany (9.4 euro) Luxembourg (9.5 euro) and Spain (10 euro). Due to the economic crisis there is a tendency to increase those rates (e.g. in 2011 the rates have been increased in Malta, Norway, the United Kingdom and Portugal) [Excise... 2011]. One can observe that the excise duty rates for beer correspond to the level of revenues for excise duty, but not necessary to the total budgetary revenues for production and sale of beer. The good examples are Germany and Spain, which are the countries with very high budgetary revenues and relatively low excise duty rates.

Table 1. The value of taxes and social contributions due to production and sale of beer in the UE+4 countries in 2009 (million euro)

Tabela 1. Wartość przychodów budżetowych z tytułu podatków i składek na ubezpieczenia społeczne wynikających z produkcji i sprzedaży piwa w krajach UE+4 w 2009 r. (mln euro)

Kraj	The value of the excise duty Wartość podatku akcyzowego	The value of the VAT in retail Wartość podatku VAT w detalu	The value of the VAT in hospitality sector Wartość podatku VAT w gastronomii	The value of income tax and social contributions in beer production Wartość podatku dochodowego i składek na ubezpieczenie społeczne z tytułu produkcji piwa
Austria/Austria	190,0	150,0	314,0	65,0
Belgium/Belgia	191,0	111,0	545,0	140,0
Bułgaria/Bulgaria	43,0	48,0	48,	5,0
Cypr/Cyprus	10,0	6,0	15,0	4,0
The Czech Republic/Czechy	133,0	83,0	152,0	47,0
Denmark/Dania	463,0	113,0	254,0	50,0
Estonia/Estonia	27,4	24,1	4,1	0,4
Finland/Finlandia	405,0	243,0	154,0	52,0
France/Francja	312,0	344,0	727,0	116,0
Germany/Niemcy	313,0	1032,0	2949,0	656,0
Greece/Grecja	60,0	58,0	385,0	14,0
Hungary/Węgry	137,0	69,0	80,0	17,0
Ireland/Irlandia	427,0	99,0	543,0	94,0
Italy/Włochy	466,0	292,0	1330,0	62,0
Latvia/Łotwa	15,0	16,0	6,0	3,0
Lithuania/Litwa	37,0	46,0	11,0	25,0
Luxembourg/Luksemburg	4,0	4,0	22,0	3,0
Malta/Malta	1,2	1,4	6,5	2,0
The Netherlands/Holandia	318,0	193,0	514,0	105,0
Poland/Polska	787,0	686,0	475,0	344,0
Portugal/Portugalia	91,0	60,0	388,0	21,0
Romania/Rumunia	163,0	174,0	160,0	18,0
Slovakia/Słowacja	58,0	45,0	49,0	7,0
Slovenia/Słowenia	59,0	19,0	68,0	9,0
Spain/Hiszpania	313,0	285,0	1410,0	165,0
Sweden/Szwecja	307,0	186,0	157,0	48,0
The United Kingdom/Wlk. Brytania	4592,0	947,0	2791,0	269,0
Croatia/Chorwacja	110,0	52,0	126,0	2,0
Norway/Norwegia	514,0	188,0	150,0	113,0
Switzerland/Szwajcaria	67,0	28,0	124,0	20,0
Turkey/Turcja	620,0	183,0	145,0	3,0

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst & Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst & Young. Amsterdam, 2010.

The highest budgetary revenues for value added tax for sale of beer in retail were achieved in Germany (over 1 billion euro), the United Kingdom (almost 950 million euro) and Poland (nearly 690 million euro). Those countries are the ones of the largest beer consumers in the world, which results in large sale and high budgetary revenues for value added tax in retail. In turn, the VAT in hospitality sector was the highest in such countries as Germany (nearly 3 billion euro), the United Kingdom (almost 2.8 billion euro), Spain (1.4 billion euro) and Italy (1.3 billion euro), where certain beer consumption patterns occur, e.g. consumption of that beverage in pubs or restaurants.

The income tax and employers' social security premiums have less meaning, besides Germany, Poland and the United Kingdom, where those premiums constitute quite significant amount (round 650, 344 and 270 million euro) due to high employment in brewing sector.

The previous considerations indicate that brewing sector have quite large share in budgetary revenues in the European countries. On the other hand, there occur some feedbacks: the budgetary revenues strongly influence the brewing industry as well. Improperly adjusted level and kind of taxation may have a negative impact on economic activity and willingness to invest [Guziejewska 2010]. The Oxford Economics [Impact... 2008] estimates indicate that the growth of the excise duty in the United Kingdom by 9.1% and planned increase in alcohol duty rates by 2 per cent above the rate of inflation by 2013 would lead to a serious decrease in sale, employment (nearly 43 thousand people would lose their jobs, mainly in hospitality) and drop in budgetary incomes (by about 120 million Ł). In turn, the calculations of PriceWaterhauseCoopers [Taxing... 2010] prove that increase of excise duty by 20% in all European countries would cause the loss of 70 thousand workplaces in the brewing sector. Additionally, the growth of fiscal burdens influences the decrease of beer affordability, which is followed by the fall in touristic attractiveness of some countries, especially known for a long brewing tradition, e.g. Ireland [The Irish... 2011].

In addition to value-added, employment and tax revenues, the brewing sector also generates social benefits to the European countries. Brewing companies are very active in sponsoring a variety of cultural and sports events. In many countries in Europe, salaries in the brewing sector are relatively high when compared to most other sectors. One cannot also underestimate the social benefits of groups of friends coming together to socialise over a beer and converse.

EXPORTS AND IMPORTS

The level and forms of linkages in international exchange is related to operators' economic activity, economic openness of a given country and fundaments for free flow of goods and services [Mucha-Leszko 2003]. The significance of beer trade is increasing in the world, mainly due to the growth of interest in commonly known beer brands (often owed by the European producers) in Asia and Central and Eastern Europe [Sankrusme 2008; Huculak 2006]. Therefore, the growth of exchange is not related to the lack of resources necessary to produce beer, but mainly to the diversification of purchasers' preferences resulting from the transfer of certain patterns of alcoholic beverages consumption.

Approximately 17% of European beer production is exported. It is estimated that about 42% of total exports comprises exports within Europe and the rest is destined for countries outside Europe. Exports is especially important for such countries as the Netherlands, Belgium, Ireland and Denmark, where the share of exports compared to the total domestic beer production varies between 45 and 62%. In 2009 the most important exporters of beer were the Netherlands (over 16 million hl), Germany (15 million hl) and Belgium (10.5 million hl), which were also the ones of the largest beer exporters in the world (Figure 8). It is worth to mention, that eight European countries are among 10 major world beer exporters. Moreover, besides the United States and Mexico, Germany has the largest share in the global sale of beer [Gołaś, Ścibek 2009].

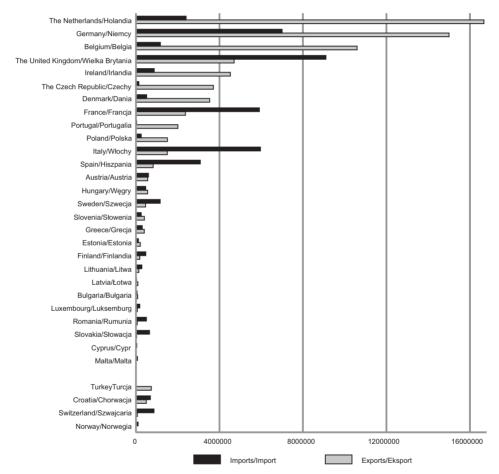


Fig. 8. The volume of exports and imports of beer in the UE+4 countries in 2009 (hl)

Rys. 8. Wielkość eksportu i importu piwa w krajach UE+4 w 2009 r. (hl)

Source: Authors' own elaboration based on The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Źródło: Opracowanie własne na podstawie The Contribution made by Beer to the European Economy. Ernst&Young. Amsterdam, 2010.

Concerning imports, in 2009 the first place went to the United Kingdom (over 9 million hl), the second to Germany (7 million hl) and the next ones to France and Italy (both nearly 6 million hl). It should be mentioned that the United Kingdom and Germany play a significant role in the international beer trade, both on the exports and imports side. It results from diverse consumers' preferences and long tradition of production of popular beer brands.

CONCLUSIONS

The European countries have a significant meaning in global beer production, which results in great economic importance of the brewing sector. The production of beer in the analysed countries amounts to almost 31% of the global beer production. The highest share in this area have Germany, the United Kingdom and Poland.

The European beer brands are very popular around the world, therefore almost 17% of the European beer production is exported. Exports is especially important for such countries as the Netherlands, Belgium, Ireland and Denmark, where the share of exports varies between 45 and 62% in the total production of beer.

Brewing sector generates high value added and assures a number of workplaces. In 2009, the value added generated in the brewing sector in the analysed countries amounted to 59 billion euro, in which the hospitality sector had the highest share (almost 56%). The highest value added for the whole sector was noted in Germany, the United Kingdom and Spain, but on the other hand, relatively the highest share of the brewing sector in the total value added was observed in Ireland and Poland, which proves the economic significance of the brewing industry in those countries.

The employment in the brewing industry amounted to almost 2.5 million people (1% of the all employed in the analysed countries). The highest employment in the sector was noted in Germany, the United Kingdom, Spain and Poland (jointly over 53% of the all employed in the sector in the discussed countries).

It is worth to mention that the production and sale of beer generates a quite big share of budgetary revenues (mostly in form of excise duty and value added tax), which in 2009 in the analysed countries were estimated for 57 billion euro (50% of total beer sale value). The highest revenues were noted in the United Kingdom, Germany and Spain, but relatively the highest share of the budgetary revenues was observed in Ireland and Poland. In conditions of crisis, there is a tendency to raise the tax rates. Nevertheless, very high fiscal burdens may constitute a certain threat for the brewing industry, because they do not favour the growth of economic activity, on the contrary, they can influence the drop in production volume, employment and paradoxically the budgetary revenues.

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ZNACZENIE GOSPODARCZE SEKTORA BROWARNICZEGO W UNII EUROPEJSKIEJ

Streszczenie. W artykule przedstawiono rolę sektora browarniczego w gospodarce krajów Unii Europejskiej oraz czterech krajów pozaunijnych: Chorwacji, Norwegii, Szwajcarii i Turcji. Skoncentrowano się głównie na wartości dodanej, przychodach budżetowych związanych z produkcją i dystrybucją piwa oraz zatrudnieniu. Omówiono również wielkość importu i eksportu piwa. Stwierdzono, że browarnictwo ma szczególnie duże znaczenie w generowaniu przychodów budżetowych w krajach o wysokim stopniu fiskalizmu oraz gdzie jednocześnie występuje duża produkcja i konsumpcja piwa. Analizowany sektor zapewnia również wiele miejsc pracy, zwłaszcza w sferze dystrybucji (głównie w branży gastronomicznej).

Słowa kluczowe: sektor browarniczy, produkcja, konsumpcja, wartość dodana, podatki, zatrudnienie

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