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The Contribution made by Beer to the European Economy

Full Report
European & Country Chapters
Edition 2009

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Amsterdam, August 2009

A report commissioned by The Brewers of Europe and conducted by
Ernst & Young Tax Advisors and Regioplan Policy Research

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About the study

Second edition

This Contribution made by Beer to the European Economy report is the second edition; the first was published in January 2006. The report has been compiled by Ernst & Young, Regioplan Policy Research and The Brewers of Europe members. A separate EU-27 edition is available and can be requested at info@brewersofeurope.org.

Methodology

The study focuses on the economic impact of the brewing sector in 27 European Union Member States plus four other countries (Croatia, Norway, Switzerland and Turkey). The methodology used for estimating this economic impact is described in Annexes I to III. Annex VI reports on the differences between the 2006 study and this current one.

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About Regioplan Policy Research

Since 1983 Regioplan Policy Research has been active in the Netherlands as a policy research agency specialising in social and economic research in a wide field of expertise. Regioplan offers a number of services, such as research studies, monitoring and evaluation, policy advice, product development and secondment for most knowledge areas within policy research. In addition to assignments for Dutch organisations, Regioplan Policy Research is also very active in the international market for policy research. One of Regioplan's large international clients is the European Commission and its various Directorates General. Regioplan was a subsidiary of Ernst & Young until 1 July 2008. For more information and for new requests for proposals please consult our international webpage at http://www.regioplan.nl/pagina/english

About The Brewers of Europe

For European institutions and international organisations, The Brewers of Europe, founded in 1958 and based in Brussels, is the voice of the European brewing sector. It has 27 members, comprising 24 national brewers' associations from EU Member States plus Norway, Switzerland and Turkey. For more information: www.brewersofeurope.org.

Key messages

In the spring of 2009 Ernst & Young carried out a study on the impact of the production and sale of beer. This study was commissioned by The Brewers of Europe and covered 31 countries in Europe: the EU-27, Norway, Switzerland, Croatia, and Turkey. Our study makes clear that in 2009 beer's contribution to the European economy is still significant. The main contributions are:

Key messages of the Contribution Made by Beer to the European Economy

- In total **2.5 million jobs** are directly or indirectly related to the production and sale of beer
- The total value-added attributed to the production and sale of beer in Europe is estimated at approximately **59 billion euros**
- The total revenues for the national governments are estimated at approximately **57 billion euros**
- Europe is the **number one** producer of beer worldwide.
- There are **3,733 breweries** in Europe.

In addition to employment, value-added and tax revenues for governments, **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. Brewing companies are concerned about the well-being of the local communities in which they work and they also invest in the working conditions of their employees. In many countries in Europe, salaries in the brewing sector are also high when compared to most other sectors. Lastly, but probably most importantly, one cannot underestimate the social benefits of groups of friends coming together, often over a beer, to socialise and converse, and the integral role that local bars, pubs and cafés often play in the fabric of local communities across the whole of Europe. Investigating these social benefits, some of which are difficult to quantify, has not been part of our study.

The contributions mentioned above are realised because **European breweries produced 427 million hectolitres** of beer, and **Europeans consumed 394 million hectolitres** (one hectolitre equals 100 litres) in 2008. Europe is the number one producer of beer worldwide. The production and consumption of beer has a major impact on other important European sectors. For example, the brewing sector has a strong impact on the agricultural sector from malting barley, which is needed for production of beer, and for the production, marketing and sales processes, and breweries buy goods and services in supplying sectors, mostly within Europe. The **annual expenditure of European breweries on goods and services is worth 24.5 billion euros.** Mainly as a result of a strong European beer sector, **Europe is the number-one producer of hops, malt and malting barley.**

Although there are some countries in which the brewing sector is still growing, for example in Eastern Europe where investment in modernising brewing facilities in recent years has led to higher efficiency, there are some developments impacting on the contribution of the beer sector to the European economy. The main developments are:

- Higher production prices
- Economic downturn
- Changing structures of alcohol taxation
- Higher tax burden
- Changing patterns in beer consumption.

These developments have in common that they can influence consumption and production of beer and ultimately affect the contribution of beer to the European economy.

1 The European beer market

1.1 Highlights

Highlights of the European beer market

- Europe is the number-one beer producer.
- There are 3,733 breweries in Europe.
- The European breweries together produce 427 million hectolitres of beer annually.
- Almost 17% of the production (72 million hectolitres) is exported (both intra-European and extra-European trade).
- The annual beer consumption in Europe is approximately 394 million hectolitres and has a value of 124 billion euros (including VAT).
- More than 10% (43 million hectolitres) of the beers consumed are imported beers moving across national borders (both intra-European and extra-European trade).
- Approximately 40% of the consumption volume is sold in the hospitality sector (bars, restaurants etc.). This equals 72% of the value of total beer sales in euros.

1.2 Production

In 2008, 3,733 breweries (including microbreweries) together produced 427 million hectolitres of beer in the EU-27, Switzerland, Turkey, Croatia and Norway. The number of breweries is somewhat underestimated, because some countries were unable to provide us with complete figures. This means that the actual number of breweries is even higher than 3,733.

With the total production volume of 427 million hectolitres of beer, **Europe is the world's most important beer producer**, followed by China and the United States (around 393 and 234 million hectolitres respectively).[1]

European beer brands are sold worldwide, either produced in Europe and exported, or manufactured abroad under licence or by subsidiaries of European brewing companies (AB InBev, SABmiller, Heineken and Carlsberg). A significant number of independent small and medium brewing companies and microbreweries also contribute to the variety of beer brands. We cannot provide an exact breakdown. What is important is that the number of breweries is constantly changing as microbreweries spring up across the European landscape.

Countries differ in the number of breweries operating within their borders. Germany is the country with the most breweries within its borders (1,330). Eight other countries have 100 or more breweries per country: United Kingdom (667), Italy (272), Switzerland (270), Austria (173), France (132), the Czech Republic (128), Belgium (135) and Denmark (120). In the other twenty two countries the number of breweries differ from 72 in the Netherlands to just one in Malta.

[1] Source: Barth-Haas Group; *The Barth Report 2007-2008*.

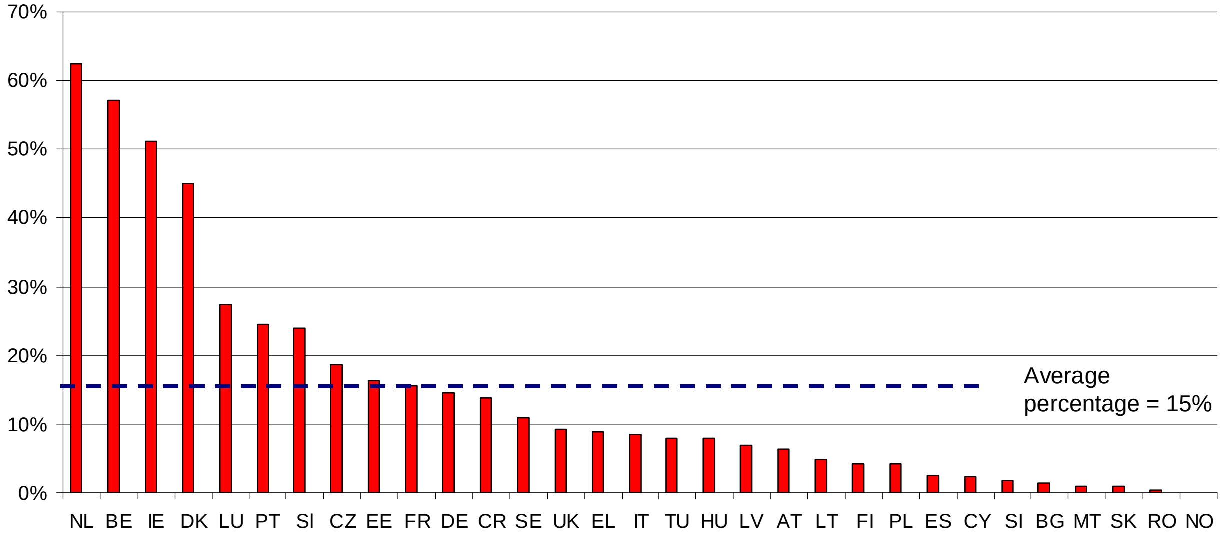
1.3 Exports and imports

Some 72 of the 427 million hectolitres of beer produced are exported outside national borders (around 17% of total beer production) and 43 million hectolitres are imported. These export and import figures, which we received directly from the national brewery associations, relate to 'between countries' flows of beer. The exact destination or origin of these exports and imports could not be deduced from these figures. Based on Eurostat data[2] we estimate that approximately 42% of the total exports comprises exports within Europe, while the other 58% is destined for countries outside Europe.[3]

The export and import figures illustrate that the beer market is an open and global one. Although consumers in many countries prefer to drink beers brewed domestically and locally, European beers are appreciated worldwide. This explains why so much beer is exported to countries outside Europe, with the United States as the most important target market.

Exports are especially important for countries such as the Netherlands, Belgium, Ireland and Denmark where the percentage of exports compared to total domestic beer production varies between 45 and 62%. The strong export position of these countries is partly explained by the fact that they are home to some of the world's largest brewing companies, and that these are traditional brewing companies famous for their high-quality beers.

Exports as percentage of production per country



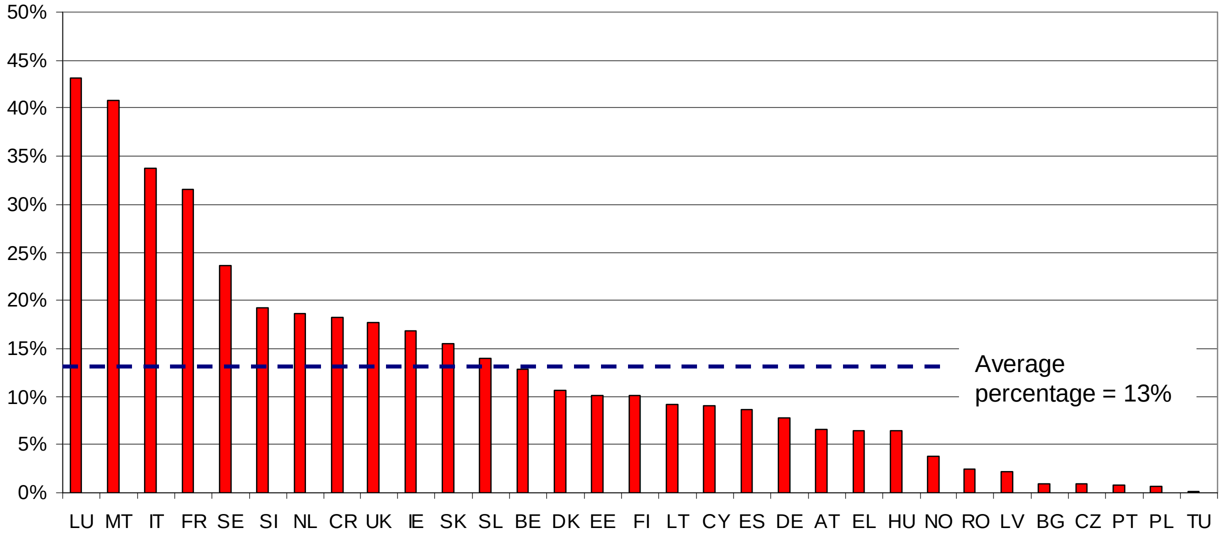
Sources: Ernst & Young questionnaire among brewers' associations (2009) ;Canadian "Global beer trends" (2008)

2 Source: Eurostat*: EU27 Trade Since 1995 By SITC (DS_018995).*

3 These figures only relate to the 27 EU members. Norway, Switzerland, Croatia and Turkey are not included.

Main European importers of beer (import in terms of both intra-European and extra-European trade) are Luxembourg, Malta, Italy and France where the percentage of imports compared to the total consumption of beer lies between 31 and 43%. For Malta and Luxembourg this can be explained by the small size of these countries. In Italy and France one of the larger brewing companies, active at those markets, brews a high share of their beer outside these countries. This explains the high share of imports in these countries.

Imports as share of consumption per country



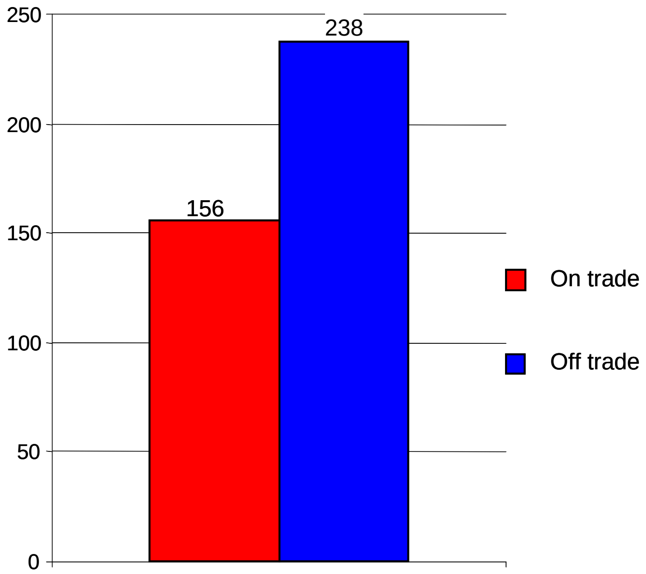
Sources: Ernst & Young questionnaire among brewers' associations (2009); Canadian "Global beer trends "(2008)

1.4 Consumption

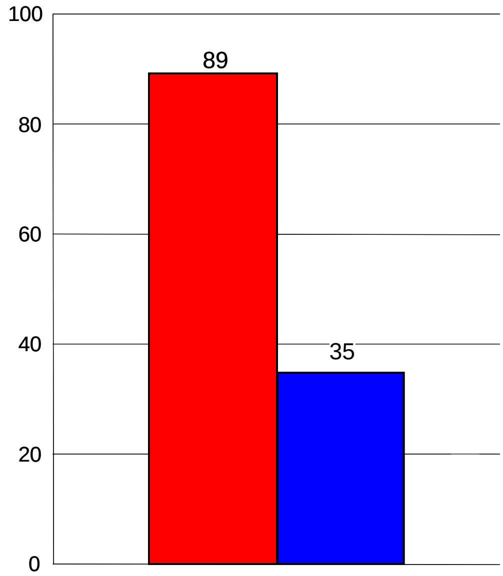
In 2008 some 394 million hectolitres of beer were consumed in the EU-27 and Switzerland, Norway, Turkey and Croatia. Of this European consumption, it is estimated that over 60% is purchased in supermarkets and other retail outlets, which is referred to as ‘off-trade’. The other 40% is consumed in the hospitality sector (pubs, restaurants et cetera), which is referred to as ‘on-trade’.

The size of the European Beer market can also be estimated in euros. The total value (paid by consumers) of European beer consumption is estimated at approximately 124 billion euros (including VAT). Almost 72% consists of turnover in pubs and restaurants. In terms of euros the retail channel is less important.

Volume in million hl in EU-27 + Switzerland, Turkey, Norway and Croatia



Value in billion euro in EU-27 + Switzerland, Turkey, Norway and Croatia



Source: Ernst & Young calculation based on input from the National Brewery Associations (2009)

2 Purchases made by breweries

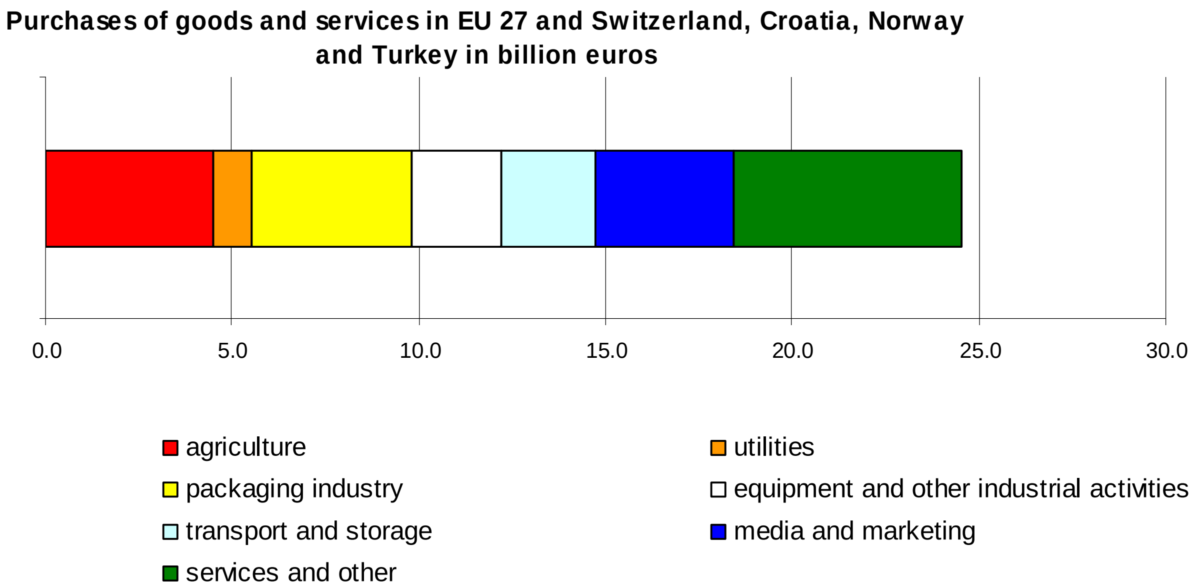
2.1 Highlights

Highlights of purchases made by breweries

- The annual expenditure of European breweries on goods and services is 24.5 billion euros.
- Most money is spent in the services sector, agriculture and the packaging industry.
- Europe is the number-one producer of hops, malts and malting barley. The existence of a strong brewing sector is the main explanation for this position.

2.2 Purchases by sector

The annual production of 427 million hectolitres of beer is only possible because various sectors provide the necessary goods and services, ranging from barley, hops and malt to energy and transportation capacity, and including a variety of industrial products and services. In total the brewing sector purchases goods and services from supplying sectors with a value of 24.5 billion euros.



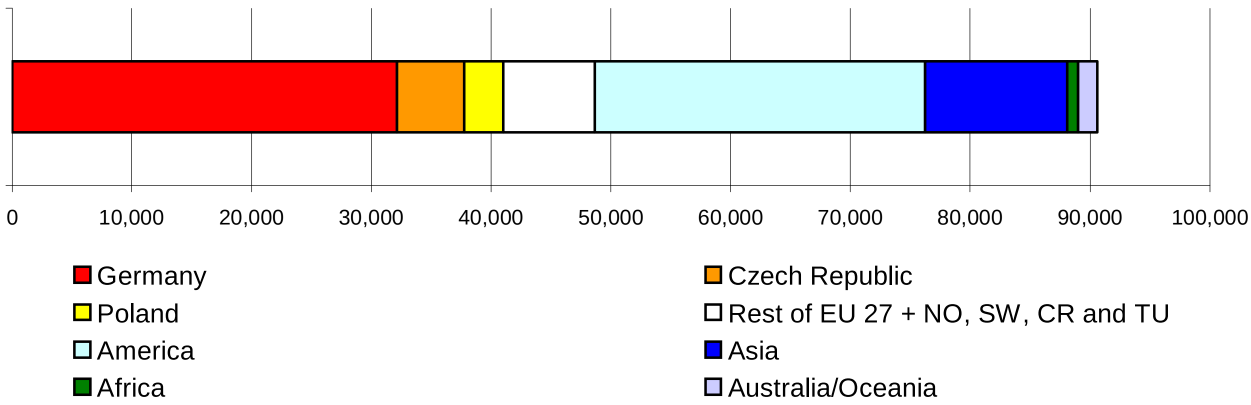
Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

A large share (40%) of the purchases made by European breweries is carried out in the services sector (including marketing and media). Another important supplying sector for breweries is agriculture. Some 18% of the breweries' total expenditure is spent in this sector.

2.3 Hops, malting barley and malt

Important ingredients of beer are hops, malting barley and malt. It is no coincidence that because Europe is the world's largest beer producer, that Europe is also the number-one producer of malting barley, malt and hops. Around 53% of global hops production is of European origin. Germany is by far the most important hops-producing country, followed by Poland and the Czech Republic. The United States accounts for some 30% of global hops production.[4]

Production of hops (tons)

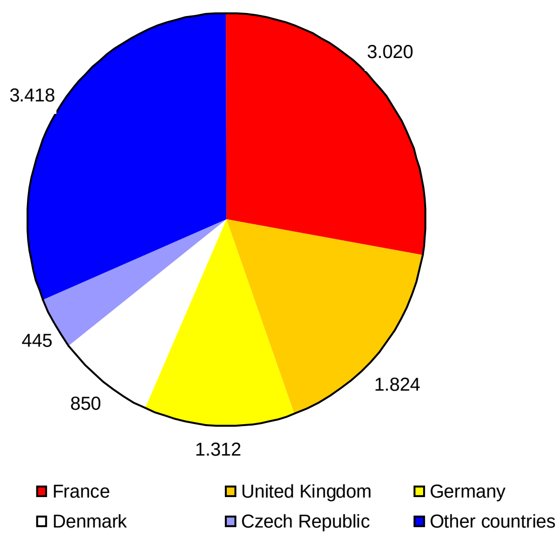


Source: Barth-Haas group, The Barth Report (2007/2008)

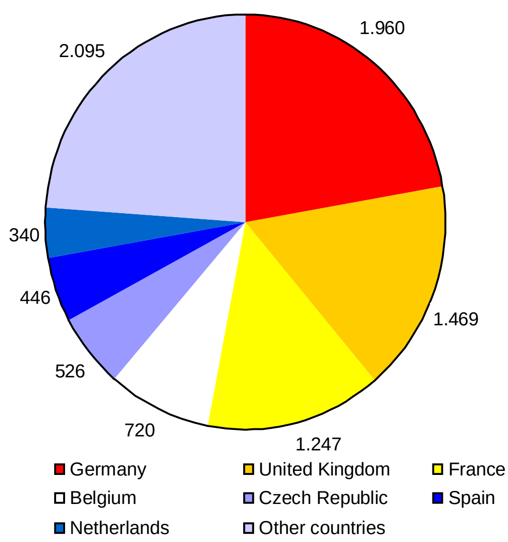
Europe is the world's largest producer of malting barley, with some 55% of the global output being produced in Europe. France, the United Kingdom and Germany are major producers of barley malt and malt in Europe.[5]

It is important to note that the beer sector is not the only one using hops, malting barley and malt. This means that a substantial proportion of the production of hops, malting barley and malt is purchased by other sectors. This study has therefore taken into account the fact that not all hops, malting barley and malt production is for beer, when measuring the impact of beer on the economy and jobs in these sectors.

Malting barley production in Europe (in million tons)



Malt production in Europe (in million tons)



4 Barth-Haas group, The Barth Report (2007/2008).

5 Euromalt, data on malting barley and malt (2008).

3 A high employment effect

3.1 Highlights

Highlights of employment effect of beer
► 2.5 million jobs in Europe can be attributed to the production and sale of beer.
► Approximately 6% of these jobs are created directly by the breweries in the 31 countries.
► For each job offered in the European brewing sector, one job is generated in retail, two in the supplying sectors and more than 12 in the hospitality sector.
► 1% of all jobs in the European Union (EU-27) plus Norway, Switzerland, Turkey and Croatia can be attributed to the production and sale of beer

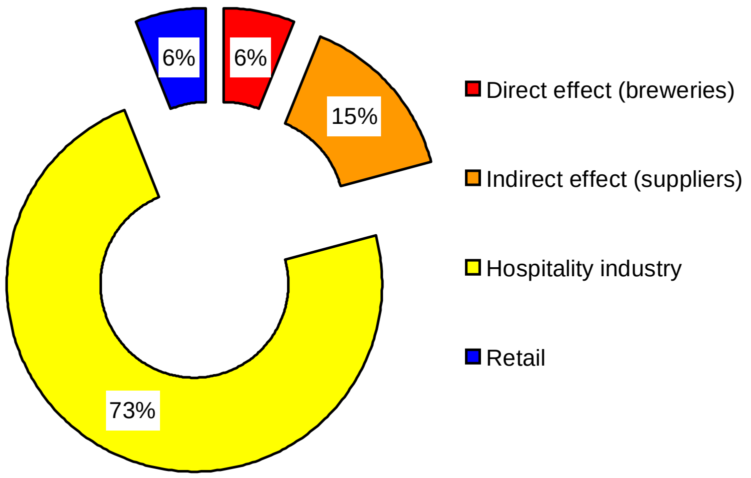
3.2 Total employment

The preceding chapters pointed out that Europe has a strong brewing sector which spends a lot of money on goods and services within Europe. The consumption of beer also leads to a large turnover in the retail and hospitality sectors. Considering this, it is not surprising that the contribution of beer to the European economy is considerable. One of the main effects is the employment generated from the production and sale of beer. In 2008, 3723 breweries in Europe leads to 2.5 million jobs.

If we express this figure as a share of the total number of jobs in the European Union (EU-27), Norway, Switzerland, Turkey and Croatia (approximately 251 million jobs[6]), it becomes clear that approximately 1% of all jobs can be attributed to the production and sale of beer. The total employment effect of the brewing sector is comparable to the total employment of countries such as Finland (2.5 million jobs[7]) Norway (2.5 million jobs) or Slovakia (2.4 million jobs).

6 Estimate based on Eurostat: European Union Labour Force Survey, 2008.
7 Source: Eurostat: European Union Labour Force Survey, 2008.

Total employment because of beer in EU-27 + Norway, Switzerland, Turkey and Croatia: 2.5 million jobs

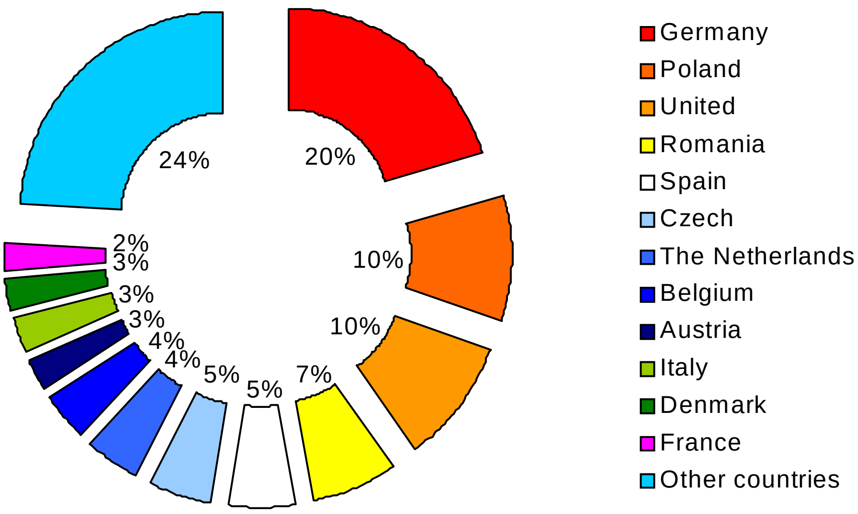


Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

3.3 Direct employment

The European breweries together provide 150,600 jobs; this is the so-called direct employment effect. These jobs are spread across Europe. Germany has the largest number of employees (approximately 30,700 jobs) followed by Poland, the United Kingdom and Romania.

Direct employment: 150,600 jobs

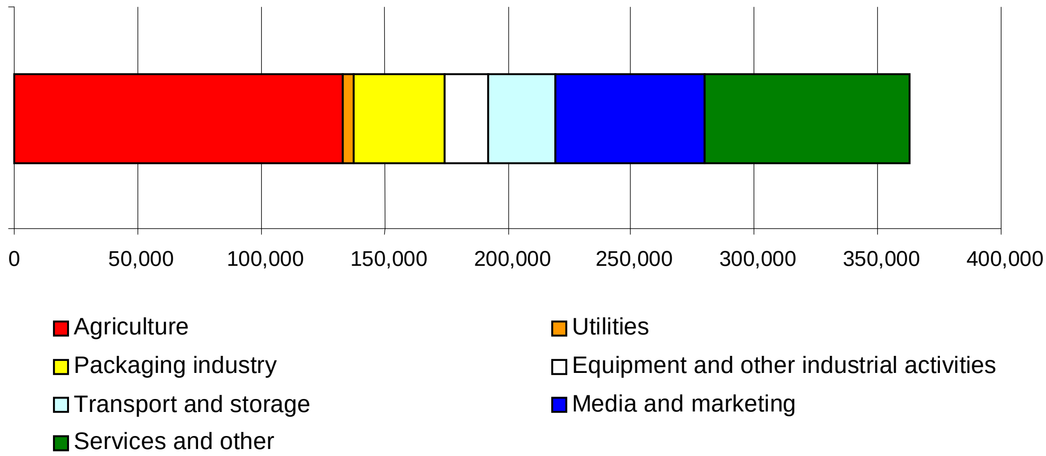


Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology).

3.4 Indirect employment

The brewing sector also generates a considerable indirect employment effect. The production and sale of beer by breweries is only possible because various sectors provide the necessary goods and services, ranging from barley, hops and malt to energy and transportation capacity, and including a variety of industrial products and services. Some 363,100 jobs in these supplying sectors can be attributed to the production and sales of beer.

Indirect employment in EU 27 and Switzerland, Norway, Turkey and Croatia



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology).

Chapter 2 stated that almost 40% of the total purchases made by European breweries involve the services sectors (including marketing and media), and 18% the agricultural sector. The figure above and table 1 below show that the service sector and media and marketing sector together generate 40% of the indirect employment, and agriculture 37%. The share of the agricultural sector in the employment effect is much higher than its share in the total purchases by the brewing sector. Although 37 percent of the total number of jobs generated by the brewing sector consists of jobs in agriculture, only 18 percent of the purchases by breweries occurs in this sector. This is explained by the relatively low turnover and labour costs per employee in the agricultural sector in comparison with other sectors. A one million euro impulse in the agricultural sector generates approximately 30 jobs, whereas the same impulse into for example marketing and media or other services generates only 15 jobs.

Table 1: Number of jobs generated per sector due to beer sales.

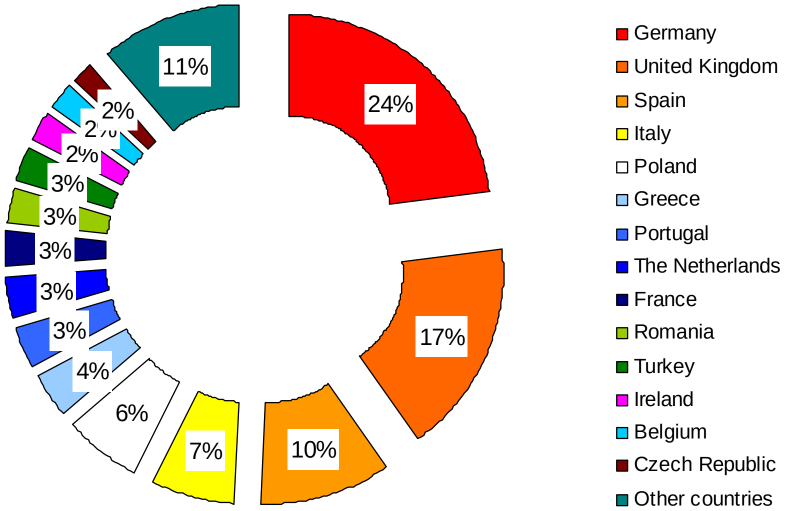
Sectors	Number of jobs	Share in total indirect employment
Agriculture	133,100	37%
Utilities	4,900	1%
Packaging industry	36,500	10%
Equipment and other industrial activities	17,400	5%
Transport and storage	27,400	8%
Media and marketing	60,800	17%
Services and other	83,000	23%
Total	363,100	100%

Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology).

3.5 Induced employment

In addition to the direct and indirect impact of the brewing sector, the number of jobs created by beer sales in the hospitality and retail sectors exhibits a far greater effect. Almost 1.8 million jobs of the total of 11.7 million jobs in the hospitality sector can be attributed to the sales of beer. This means that approximately 15 percent of the jobs in the hospitality sector can be attributed to the sale of beer. The other jobs in the hospitality sector can be attributed to the sale of other products. In countries where the majority of beer is sold in the hospitality sector, the induced employment effect turns out to be very high. Examples are Ireland, Spain, Greece and Portugal with over 60% of beer being sold in pubs and restaurants. The largest number of jobs in the hospitality sector related to beer sales is however found in Germany. In the retail sector another 150,100 jobs can be attributed entirely to the sales of beer.

Employment in the hospitality sector: 1.8 million jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology).

4 High value-added

4.1 Highlights

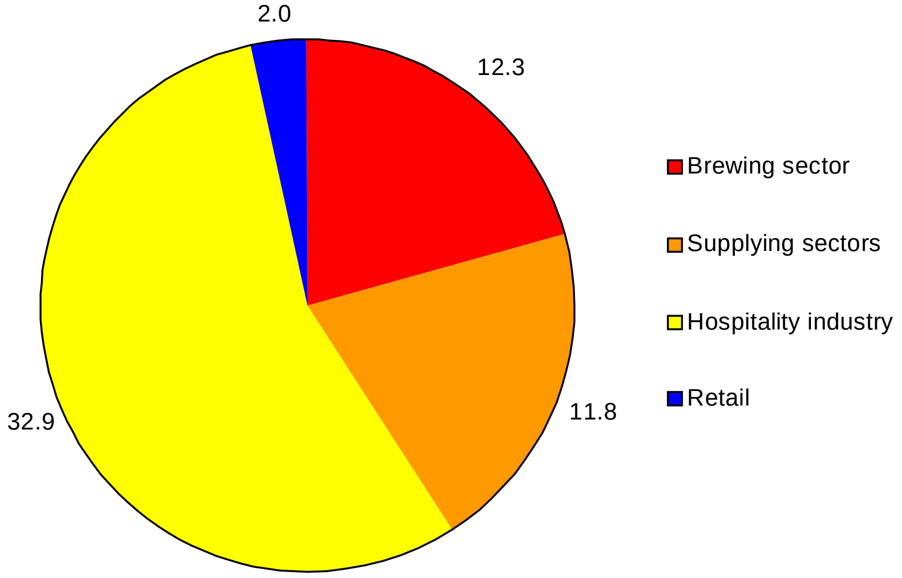
Highlights of value-added

- The total value-added created directly and indirectly by beer in Europe is estimated at approximately 59 billion euros.
- Compared to other sectors, employees of European breweries have relatively high productivity.

4.2 Value-added by sector

Another contribution of the beer industry is the value-added it creates, and the value-added created by the supplying, the retail and the hospitality sectors. Value-added can be defined as the difference between the production value and the value of purchased inputs (goods and services). In economic terminology value-added is also defined as the reward for all production factors (mainly labour, capital, entrepreneurship). For the governments in Europe the value-added is important because they levy a tax on it (VAT, see next chapter). We estimate the total value-added related to the production and sale of beer in the European economy at approximately 59 billion euros.

Value added due to the production and sale of beer EU-27 Turkey, Croatia, Norway and Switzerland: 59.0 billion euros



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology).

This total of 59 billion euros of value-added is generated by 2.5 million employees working in the brewing sector, in supplying sectors and in the hospitality and retail sectors. This only includes jobs due to beer; jobs due to other sectors are not included. The average value-added per employee is therefore some 23,700[8] euros a year.

The average value-added per European brewery employee is far higher, namely approximately 81,300 euros a year. This illustrates the relatively high productivity of employees in the brewing sector in comparison with other sectors. The average brewery productivity in terms of value-added per employee is also much higher than the average productivity in other industrial sectors such as packaging and equipment.

The total value-added related to the production and sale of beer (59 billion euros) can be compared to the gross domestic product of countries like Slovakia (65 billion euros in 2008) or Croatia (47 billion euros).[9] The total gross domestic product (GDP) of the European Union (EU-27), Turkey, Switzerland, Norway and Croatia together was some 13,693[10] billion euros in 2008. This means that the brewing sector's contribution to the European economy is approximately 0.43% of total GDP.

8 This is calculated as follows: 58.8 billion euros divided by 2.5 million employees.
9 Source: Eurostat, Annual national accounts, 2008.
10 EY data calculation based on: Eurostat, Annual national accounts, 2008.

5 Government revenues due to Beer

5.1 Highlights

Highlights of government revenues

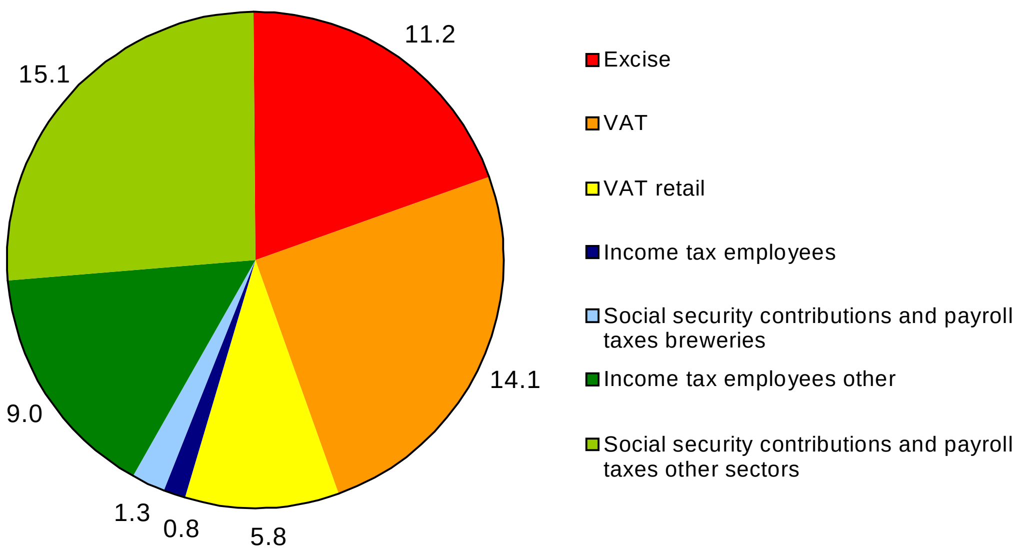
- The total government revenues arising from beer in terms of VAT, excise, income taxes, payroll taxes and social security contributions are estimated at 57 billion euros.
- The most important source of European government revenues is VAT, followed by social security contributions paid by employers and employees.
- Excise revenues, estimated at approximately 11.2 billion euros, also contribute significantly.

5.2 Government revenues

National governments benefit substantially from the production and sale of beer by receiving excise revenues, VAT revenues and income-related taxes and social security contributions paid by workers and their employers in the brewing sector and in other sectors whose jobs can be attributed to 'beer'. Besides the aforementioned taxes, governments also benefit from other taxes such as corporate taxes, property taxes, community taxes, environmental taxes (such as climate change levy), vehicle excise duty and stamp duty land tax.

The total revenues for the governments in the 31 European countries are approximately 57 billion euros per year. These revenues include only VAT, excises, income taxes, social security contributions and payroll taxes.

Government revenues due to the production and sale of beer EU-27 Switzerland, Norway, Croatia and Turkey: 57.2 billion euros



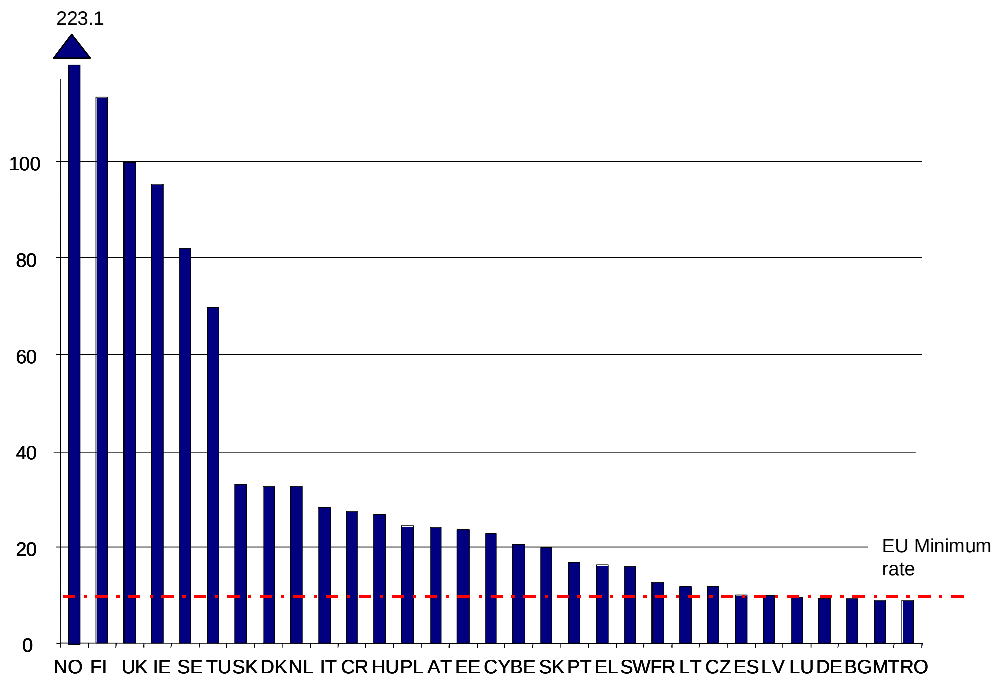
Source: Ernst & Young calculation (2009).

Due to data gaps it was not possible to estimate the government revenues from corporate and environmental taxes at national level. However, it is possible to provide a rough estimation of government revenues from these taxes at European level (EU-27 and Switzerland, Norway, Croatia and Turkey). These revenues from corporate and environmental taxes are estimated at respectively € 1.150 billion and € 125 million. As these taxes and other taxes as property taxes, community taxes and vehicle excise duties are not included in our estimation of government revenues, real government revenues from taxes will be even higher than the estimated 57 billion euros per year .

The most important source of European government revenues are Value Added Taxes (VAT). European consumers pay an average 18% VAT on their beer consumption. VAT revenues on beer sales in the retail and hospitality sector are estimated at 19.9 billion euros. Excise revenues also contribute significantly to the national treasuries. These revenues are estimated at approximately 11.2 billion euros.

As Member States of the EU-27 have a certain degree of flexibility in setting the levels of beer taxation, the excise rate differs between countries. For example Germany ‘s excise rate on beer is not as high as for breweries in the Nordic countries, which implement even higher excise rates. The variation in excise rates is shown by the following figure.

Excise duty rates per hectolitre of beer (12 degrees Plato, 4.8 % alcohol)



Source: The Brewers of Europe, Excise Duty Rates for Beer, situation as on June 2009.

Another source of government revenue consists of income and payroll taxes and social security contributions paid by employers and employees. These taxes and contributions are paid by employers and employees in the brewing sector, the supplying sectors, in retail and in the hospitality sector where jobs can be attributed to the production and sale of beer. These income-related taxes and contributions are estimated at 26.1 billion euros.

A total of 57 billion euros in tax revenues represents more or equals the total annual government expenditure of countries such as Hungary (52 billion euros) or the Czech Republic (63 billion euros)[11] in 2008, defined as the value of all goods and services purchased plus the value of all goods and services produced by these governments.

[11] Source: Eurostat: annual government finance statistics (2008).

6 A market under pressure

6.1 Market developments

The previous chapters made clear that in 2008 the production and sale of beer contributed significantly to the European economy in terms of employment, value-added and government revenues. However, we observed a number of developments in the beer market that may temper the contribution of beer to the economy in the years ahead. These main developments are:

► Higher production prices

There has been a significant increase in production prices in recent years. The market price of hops has risen drastically, resulting in higher costs of ingredients needed for production. These high prices are explained by disappointing hops production volumes in 2006 and 2007.[12] Production volumes in those years were not sufficient to meet brewing industry demand. The disappointing production volumes were caused by unfavourable weather conditions shortly before or during the harvest period. These higher hops prices had several consequences. Some of the breweries were forced to adjust their recipes and consumers were faced with increased prices.[13] The increased beer prices were inevitable because of the small profit margin on beer.

Besides increases in hops prices, breweries in Eastern and Central European countries were faced with significant increases in labour costs. On average gross earnings increased in 13 of the monitored Eastern and Central European countries, by 8 to 24% per year.[14] These higher wages lead to higher production costs, but another effect of the higher wages is that they lead to higher consumer expenditures. This means that consumers are able to spend more money on beer.

In most cases the increases in production prices have led to an increase in beer prices. Higher prices affect the demand for beer and may lead to lower consumption.

► Economic downturn

It can be expected that the current global economic slowdown will have its effect on the brewing sector. In the first half of 2009 for example, the brewers SABMiller[15] and Heineken[16] announced that consumer demand had been affected by the global economic slowdown.

To illustrate how the economic downturn can affect national markets, figures show that the market for beer in the United Kingdom suffered a 7.2% decline in the third quarter of 2008, compared to the same quarter in 2007. The fall in the fourth quarter of 2008 was 8.3% compared to the fourth quarter of 2007. The fall is the largest third-quarter decline for a decade.

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12 Barth-Haas group, The Barth Report, (2007/2008).
13 Cortissoz, A., With fewer hops, prices jump, The Boston Globe, 9 January 2008.
14 Database Central Europe, Rapid increase in labour costs in Central and Eastern Europe in 2008, 19 January 2009
15 RTT News, SABMiller FY09 Profit Declines on Costs, Stronger Dollar, Update, Tradingmarkets.com, 14 May 2009.
16 Agence France Presse (AFP), Economic crisis, smoking bans hamper beer sales: Heineken, 22 April 2009.

A total of 161 million fewer pints were sold between July and September compared against the same period last year - a fall of 1.8 million pints a day (1.02 million litres). Beer sales in pubs, bars and restaurants fell in the third quarter by 8.1% and in the fourth quarter by 9.9% over the same period. Sales in supermarkets and off-licences also fell 6% from July to September compared against the same period the previous year. [17]

The accelerating decline in beer sales is a clear sign of a worsening economy, worried households and weakening spending. It is also reducing the government's revenues from duties and VAT. It is estimated that tax income for the British government from duty and VAT are down £181 million since the March Budget, compared against the same period in 2007. This is despite the fact that beer taxes went up by 18% in 2008. [18]

The likely effects of the economic downturn in terms of reductions in direct and indirect employment, and the value-added to the European economy due to beer would need further investigation.

► Changing structures of alcohol taxation

The European Commission services are currently considering the need for modernising the directive on structures of alcohol taxation (Council Directive 92/83/EEC). This directive was designed to harmonise the structures of alcohol taxation i.e. specifying the categories of product subject to excise duty arrangements, amongst other things. On the other hand Directive 92/84 laid down minimum rates for the categories of product whereby, as long as these minimum rates were met, Member States could have a degree of flexibility in setting the levels of taxation they consider appropriate to their own circumstances. Both these directives have remained largely unchanged since 1992.

As mentioned in Chapter 5, European countries differ in their levels of taxation (rate of excise), so a change in European policy will affect some countries more than others. If the EC decided to raise their minimum excise rate on beer, breweries, for example in Germany, will face higher excise rates. Breweries in the Netherlands for example, or the Nordic countries, Ireland and the United Kingdom already face higher excise rates on beer than those laid down by the EC.

The European Commission is not alone in considering the need to modernise legislation on taxes. Various Member States are also considering changing their legislation on alcohol taxation or have already changed it. On 1 January 2009 the Dutch government increased the excise rates on beer by 30%. Other countries that increased their excise rate on beer in 2009 are Estonia, Greece, Lithuania, Latvia, Hungary, Portugal, Romania, Slovakia, Finland and the United Kingdom.

As shown by our study in the Netherlands, changes in tax policy can have serious consequences for the brewing sector.[19] The supplying sectors (e.g. agriculture, transport and the packaging sector) and the hospitality and retail sector which benefit from beer production and sales will also feel the consequences of such a change in tax policy.

Moreover, there are large differences in taxation between different kinds of alcoholic beverages. Beer is much stronger taxed than for example, wine, the latter which at the time of this report (June 2009) has a zero excise rate. This will have an even larger negative effect on the consumption of beer, and on the brewing sector.

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17 BBPA, UK Quarterly Beer Barometer, 27 January 2009.

18 BBPA, UK Quarterly Beer Barometer, 27 January 2009.

19 Increasing the Excise Duty on Beer. Penny Wise, Pound Foolish', Ernst & Young and Regioplan, Amsterdam (2008).

Increased tax burden

In the questionnaire distributed for the purposes of this study among National Brewery Associations and breweries, it was asked which taxes have been increased since our first study in 2005. The table below reinforces the perception that the tax burden on beer has changed. In most cases higher taxes lead to higher beer prices. Because of the small profit margin on beer, higher taxes are passed on to consumers. Furthermore, excises and VAT are so-called consumer taxes. These taxes are generally charged if a consumer purchases the relevant goods, in this case beer. These taxes are designed to be transferred to be charged to consumers.

Table 2: Changes in tax rates since 2005

	A slight increase	A moderate increase	A strong increase	A very strong increase
VAT	3 countries	2 countries		
Excise	3 countries	3 countries	6 countries	5 countries
Corporate taxes			1 country	1 country
Property taxes		1 country	3 countries	
Climate change levy (energy tax)		2 countries		
Vehicle excise duty		2 countries	2 countries	
Packaging taxes			2 countries	1 country
Fuel tax	1 country	3 countries	3 countries	
Other environmental taxes	1 country	1 country		

Source: 29 National Brewery Associations, situation as on June 2009. [20]

Interpreting the results of table 2 above, it can be observed that 17 countries have faced an increase in excise since 2005. Although excises are transferred to consumers, an increase in excises also affects the brewing sector. This is because the consumption of the more expensive beer in particular, comes under pressure if prices are raised.

Autonomous effects on beer consumption

There are also some autonomous effects leading to a lower beer consumption in Europe. In many countries consumers have changed their drinking habits over the 15 years. More people prefer to drink wine instead of beer. For example in the Netherlands, wine consumption per head has increased from 14.5 litres in 1990 to 21.6 in 2007.[21] In the same period the beer consumption per head has decreased from 88 to 77 litres. New generations of young people also seem to have shifted their preferences in favour of pre-mixed drinks and spirits at the cost of beer.

Another effect is that more beer is consumed at home (off-trade) instead of in the pub or other hospitality locations (on-trade).[22] This may be due to the increased prices in the hospitality sector when compared to the retail sector, but also due to other interventions (i.e. smoking bans in bars) that have led some consumers to change their consumption behaviour. The induced employment effect[23] of on-trade consumption is higher than the employment effect of off-trade consumption. This is explained by the much lower turnover per employee in the hospitality sector in comparison with the retail sector. The consequence of this switch from on-trade consumption to off-trade consumption is that fewer jobs are created because of the sale of beer.

20 The questionnaire was completed by 29 National Brewery Associations. The National Brewery Associations of Malta and Croatia did not complete this questionnaire.

21 Website of the National Statistics Office the Netherlands consulted in June 2009, http://statline.cbs.nl/statweb/.

22 Ernst & Young study on the Contribution Made by Beer to the European Economy (2009)

23 See Annex I for an explanation of the induced employment effect.

6.2 Summary of main developments in the brewing sector

The brewing sector is under pressure due to a number of developments. These main developments are:

Summary of the main developments in the brewing sector
► Higher production prices
► Economic downturn
► Uncertainty about pending tax changes
► Higher tax burden
► Changing drinking preferences at the cost of beer
► A switch from on-trade to off-trade

These developments have in common that they will affect the consumption of beer and may influence the success of the brewing sector.

7 Austria: Economic impact of beer

7.1 Highlights of the economic impact

Total production (in hectolitres[24])	8,900,000
Total exports (in hectolitres)	560,000
Total imports (in hectolitres)	600,000
Total consumption (in hectolitres)	9,100,000
Number of brewing companies[25] (including micro brewing companies)	164
Number of breweries (including microbreweries)	173

Source: Verband der Brauereien Österreichs (2008)

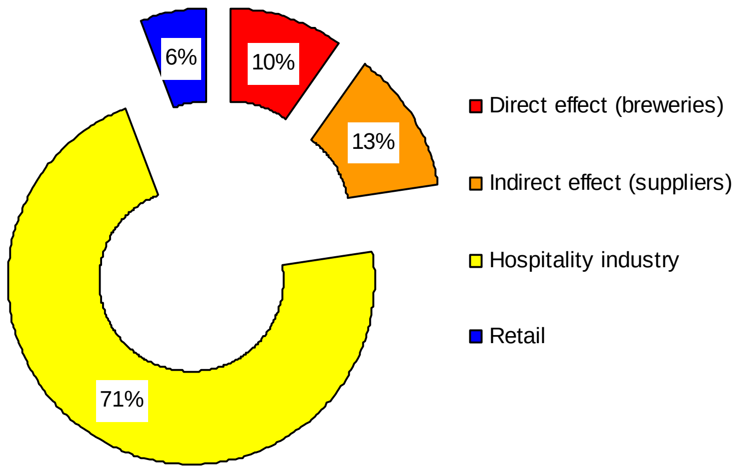
The economic impact of the brewing sector on the Austrian economy is substantial:

- Direct employment related to Austrian breweries is estimated to be 3,900 jobs.
- Employment in supplying sectors is very important with a total number employed in these sectors arising from the brewing sector of around 5,000.
- The impact on the hospitality sector is also considerable, with approximately 28,900 people earning a living in this sector due to beer sales.
- In retail another 2,400 jobs can be attributed to beer sales. The total employment effect of the Austrian beer industry in terms of employment is estimated at approximately 40,300 jobs
- The government also benefits from the production and sale of beer. Excise revenues, VAT revenues and social security contributions paid by brewery employees and workers in other sectors whose jobs can be attributed to 'beer' (especially the hospitality sector, retail and the supplying sectors) add up to 1.423 billion euros per year.

24 One hectolitre equals 100 litres.
25 Measured at the end of the year 2008.

The employment impact of the brewing sector is presented in the figure below:

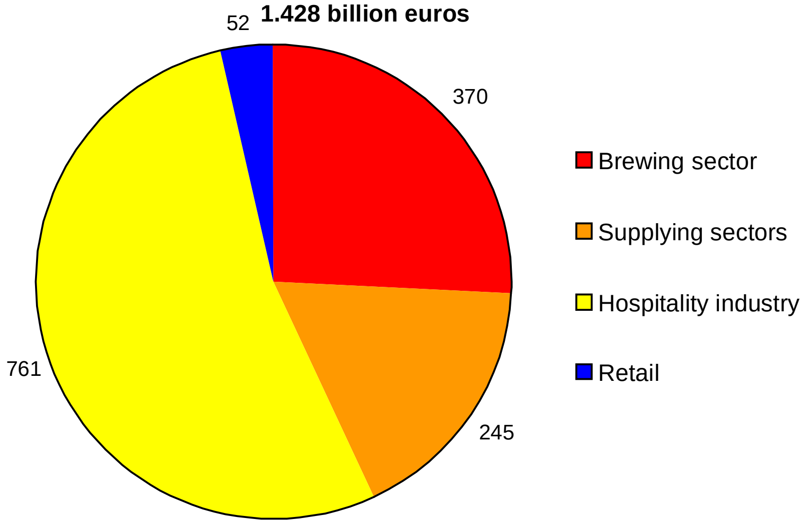
Total employment because of beer: 40,300 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on the methodology used).

The contribution of the brewing sector to the Austrian economy can also be expressed in terms of value-added. The total value-added generated by these 40,300 jobs is estimated at 1.428 billion euros:

Value added due to the production and sale of beer: 1.428 billion euros



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology used).

The share of the brewing sector in the overall value-added due to the production and sale of beer equals 26%, which is higher than the share of the brewing sector in total employment due to beer (10%). An important explanation for this is the high productivity of employees in the brewing sector, compared against sectors such as retail and hospitality in terms of value-added.

7.2 Industry and market structure, trends and developments

The production of beer in Austria, measured in hectolitres, is significant with 8.9 million hectolitres produced by Austrian brewers in 2008. Among the top of the European countries, Austria is a country of beer consumers; beer consumption per capita is high. Together with countries such as Germany, Belgium and the Czech Republic, Austria has a long tradition in the art of brewing and of beer culture. Beer consumers in Austria are loyal to their local beer (brand and type of beer).[26] Austrian beer is also famous as an attraction for tourism, along with visits to breweries as tourism attractions.

However, Austria, the country with the highest proportion of expenditure on beer out of total retail spending on alcoholic drinks, also saw consumer expenditure on beer fall during the review period. Reduced levels of tourism was a major factor in reducing expenditure on beer in Austria, also due to cross-border shopping, with levels of tax on beer higher in Austria than in nearby countries.

The production of beer in Austria, measured in hectolitres, has not changed significantly. In 2006 total production amounted to 8.8 million hectolitres , in 2007 it was slightly higher with a volume of 9 million hectolitres , and 2008 was an average of the two preceding years with 8.9 million hectolitres . Beer exports show some fluctuations from 670,000 hectolitres in 2006 up to 900,000 in 2007 and then down again to 560,000 in 2008. Beer imports have been relatively stable in the past three years accounting for 600,000 hectolitres. The number of employees employed by the brewing industry decreased only very slightly from 4,000 in 2006 and 2007 to 3,900 in 2008 a result of a natural decline.[27]

A single large company dominates the Austrian beer market. Brau-Union AG, which owns the Gösser, Zipfer, Schwechater, Wieselburger and Puntigamer breweries accounts for over half of Austrian beer sales. The top five companies dominate over 80% of the Austrian beer market. Austria has a well-developed cluster of supplying sectors to the brewing sector. Even though the country is relatively small, a large proportion of purchases by breweries are made domestically.[28]

A smoking ban has been implemented in Austria since January 2009. There is now a general smoking ban in Austrian bars and restaurants. This smoking ban is eased by a number of exceptions and leaves the innkeepers a certain freedom to choose.

26 Verband der Brauereien Osterreichs, Jahresbericht Juni 2007 bis Juni 2008
27 Verband der Brauereien Osterreichs, Jahresbericht Juni 2007 bis Juni 2008 Euromonitor International "Beer in Austria" (March 2008)
28 Euromonitor International "Beer in Austria" (March 2008)

7.3 Direct effect of the brewing sector

The direct economic impact of the brewing sector covers more than 3,900 employees who together produce beer representing a value of 920 million euros. It can therefore be concluded that there is a significant direct economic benefit of the brewing sector for the Austrian economy.

Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology used).

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 190 million euros and total VAT income for the Austrian government was estimated at 464 million euros. Income taxes and social security contributions paid by employees of the brewing sector add up to another 65 million euros.

The Austrian breweries together achieved an estimated 920 million euros in turnover. Approximately 40% of total turnover stays within these firms as value-added (370 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

7.4 Economic impact of breweries on goods and services suppliers

With 40% of the value of the output produced staying within the firm as value-added, the other 60% of the 900 million euros of total turnover accrues to a number of suppliers. This stimulus of 550 million euros has a significant economic impact on sectors outside the brewing sector. This effect can be observed in the following table.

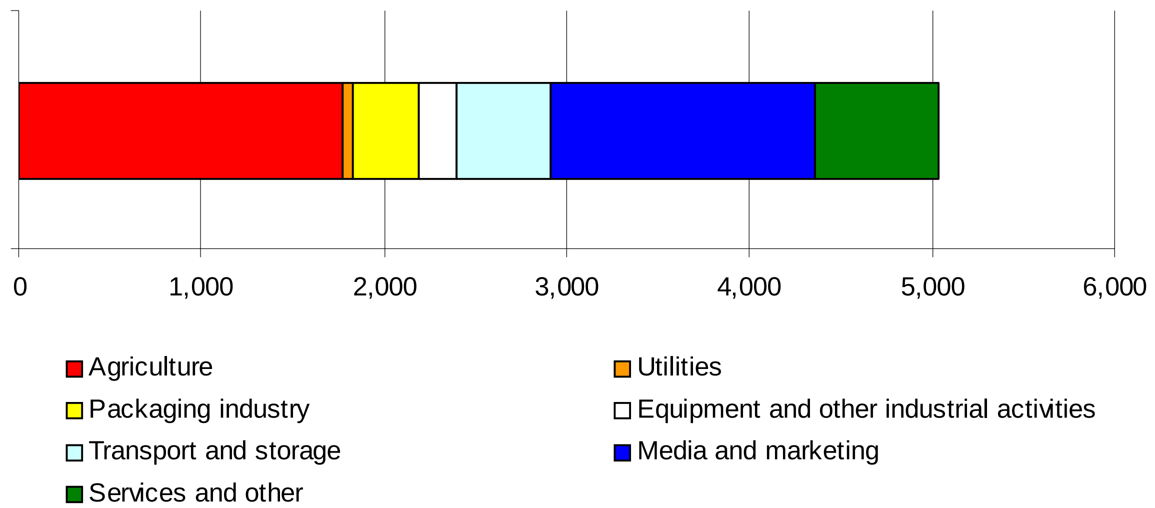
Sectors	Stimulus	Stimulus for Austria		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	81.04	58.0	46.98	40,835	1150
Utilities	25.67	100.0	25.67	721,900	36
Packaging industry	82.47	67.2	55.40	230,200	241
Equipment	59.21	51.2	30.32	230,200	132
Transport	64.93	97.9	63.57	188,000	338
Media, marketing	164.85	84.1	138.62	147,928	937
Services	72.12	90.7	65.45	147,928	442
Total	550.30		426		3,276
First-round impact as% of total impact					65
Total indirect effect of brewing sector (inclusive second-round effect)					5,040

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

Substantial sectors in which indirect employment is generated by the brewing sector are agriculture, media and marketing and services. The total first-round employment effect of the brewing sector on supplying sectors is almost 3,300 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 5,000 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology used).

7.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- Approximately 34% of all beer consumed in Austria is sold by the hospitality sector (on-trade), which means 3.1 million hectolitres is sold on-trade.
- The average consumer price of beer in Austrian pubs and restaurants is 6.08 euros a litre[29] (including VAT), so that total consumer spending on beer in the hospitality sector is 1.9 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 1.6 billion euros (using a 20% VAT tariff).
- With an average hospitality turnover of 54,200 euros (excluding VAT) per person, this results in 28,900 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Approximately 66% of total beer consumption (6 million hectolitres) in Austria is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.50 euros per litre (including VAT), total retail consumer spending on beer is estimated at 901 million euros. Total consumer spending excluding VAT is thus 751 million euros.
- With turnover per employee estimated at 319,000 euros (excluding VAT), this means 2,400 people owe their jobs to retail beer sales.

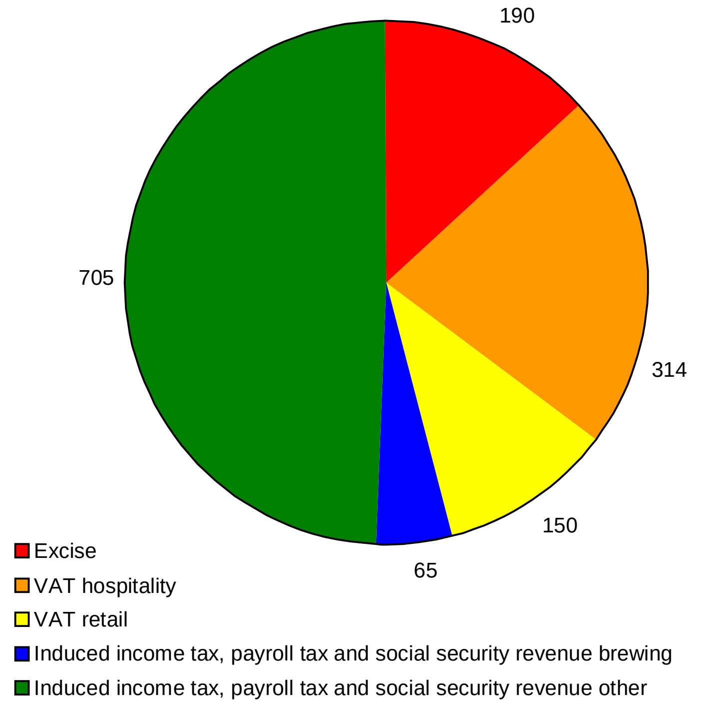
[29] Österreichisches Statistisches Zentralamt (ÖSTAT), (Austrian Central Statistical Office) (www.statistik.at)

7.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1.423 billion euros:

- The VAT revenues are estimated at 464 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total excise revenues on beer equal 190 million euros.
- Income-related revenues due to beer production and sales are approximately 770 million euros. They consist of 216 million euros income tax, 214 million euros social security contributions paid by employees and 340 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.423 billion euros



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology used).

8 Belgium: Economic impact of beer

8.1 Highlights of the economic impact

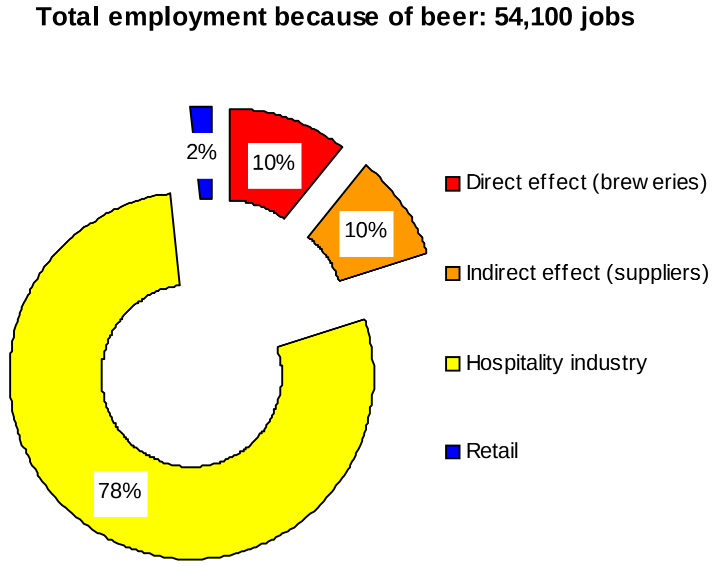
Total production (in hectolitres)	18,565,000
Total exports (in hectolitres)	10,597,000
Total imports (in hectolitres)	1,169,000
Total consumption (in hectolitres)	9,137,000
Number of brewing companies (including micro brewing companies)	124
Number of breweries (including microbreweries)	135

Source: The Union of Belgian Brewers (2008).

Belgium is the second beer-exporting country in Europe. Approximately 57% of total beer production (18.6 million hectolitres) is exported.

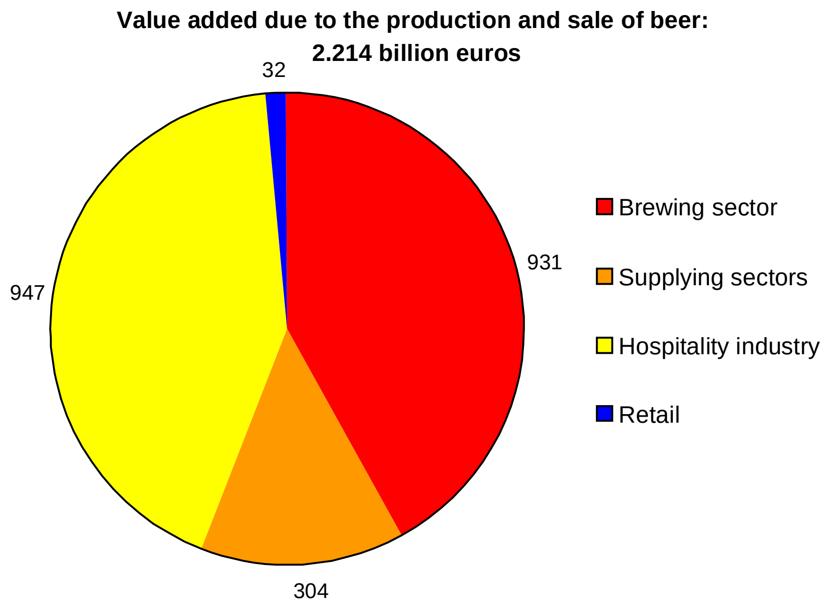
- Partly as a result, direct employment by Belgian breweries is significant with 5,660 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 5,100 supply industry jobs can be attributed to the brewing sector (beer sales), with the services and agriculture sectors benefiting the most.
- Besides these direct effects of employees working in the beer sector and indirect employment of employees working in the supply sectors, the hospitality sector and retailers also benefit significantly from beer sales. According to this current study, almost 42,300 jobs in the hospitality sector can be attributed to beer, while in retail approximately 980 employees owe their jobs to beer sales.
- The total employment impact is thus approximately 54,100 jobs.
- The government benefits from the brewing sector, receiving approximately 1.94 billion euros in taxes and excises. Excise revenues amount to 191 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 656 million euros, while revenues from direct income taxes and social security revenues paid by Belgian brewery employees, their suppliers and in hospitality and retail add up to approximately 1.095 billion euros.

The employment impact of the brewing sector is presented in the figure below:



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on the methodology used).

The contribution of the brewing sector to the Belgian economy can also be expressed in terms of value-added. The total value-added generated by these 54,100 jobs is estimated at 2.214 billion euros.



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 42%, which is higher than the brewing sector share in total employment arising from beer (10%). An explanation for this effect is the high productivity of brewing sector employees.

8.2 Industry and market structure, trends and developments

Together with the Netherlands, Denmark and Ireland, Belgium is Europe's largest beer-exporting country (measured as share of beer production), and ranks (in hectolitres) eighth in production.[30]

The actual volume of beer produced in Belgium increased by 2% in 2007. The number of breweries in Belgium has remained stable.

In 2007, 57% of the beer produced in Belgium was exported. Exports of beer have been exceeding domestic consumption since 2005. EU countries account for 90% of exports and the US for 5%. Sales of imported beer have also been growing, especially those from the Czech Republic. According to industry estimates, domestically-produced lager is by far the most important lager consumed in Belgium.[31]

The Belgian brewing sector is well established and encompasses several international players. Belgium is home to one of the world's largest brewing companies (AB InBev). Belgian brewers have a long tradition in brewing a range of beer types. A specific characteristic of the Belgian beer landscape is its diversity. Although lager forms the largest proportion of total beer consumption (with 81%), other unique beer styles such as Amber, Abbey, Trappist, White, Gueuze, Fruit beer or Strong Blond beer and several other regional specialities are also popular. Belgian brewers export increasing volumes, mainly within Europe, with France and the Netherlands as their largest export markets. Beer exports are important to the Belgian brewing sector, given that some 57% of total production is exported[32]. Exports have thus become a significant economic factor for the Belgian brewing sector.

Beer remains the most popular alcoholic drink in Belgium, but consumption has been falling in volume terms over the years. In particular, on-trade consumption has been declining annually, while off-trade sales have increased, although not sufficiently to fully offset the effect of falling on-trade sales. There are several partly interlinked trends behind this development: as in other Western European countries, the Belgian population is ageing, and thus less likely to go out drinking. GDP growth in real terms has also been mediocre, with a negative effect on beer consumption. Finally, there is an overall trend towards more at-home consumption, which is also underlined by the various beer keg systems launched by nearly all the major players over the review period. On-trade sales have suffered from an increase in hospitality establishments closing down. However, the café and bar culture in Belgium remains strong, and on-trade consumption still exceeds sales in the off-trade in Belgium.

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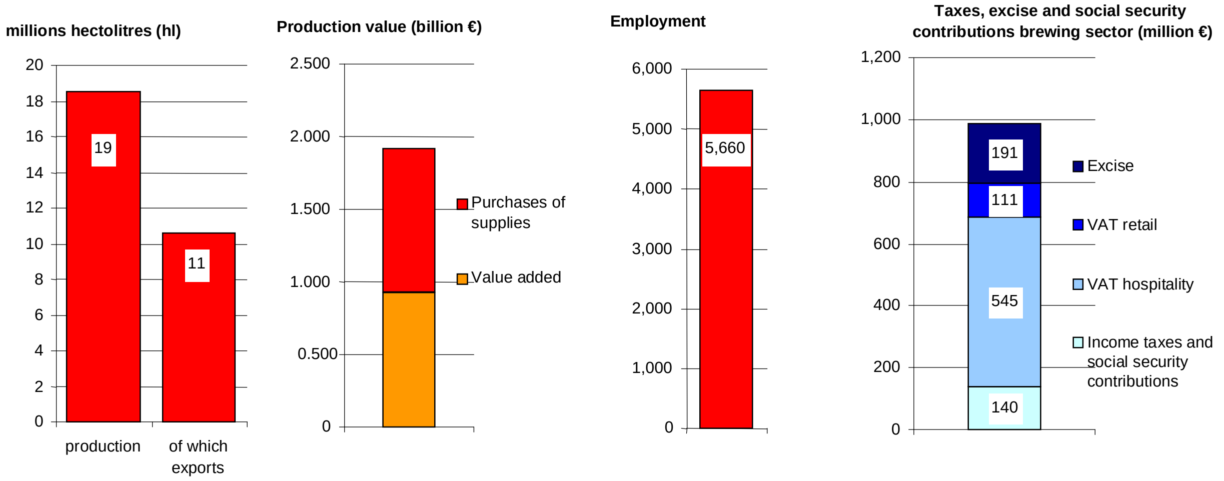
30 Euromonitor International "Beer in Belgium", 2009

31 Euromonitor International "Beer in Belgium", 2009.

32 In the rest of Europe only countries like Denmark, the Netherlands and Ireland exhibit such a high ratio of exports to total production.

8.3 Direct effect of the brewing sector

The direct economic impact of the brewing sector involves 5,660 employees, who together produce beer worth over 1.88 billion euros. Consequently, the direct economic benefit of the brewing sector for the Belgian economy is very significant.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 191 million euros and total VAT income for the Belgian government was estimated at 656 million euros. Direct income taxes paid by employees of the brewing sector add up to another 140 million euros.

The Belgian breweries together achieved an estimated 1.88 billion euros in turnover. About 50% of total turnover stays within these firms as value-added (931 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

8.4 Economic impact of breweries on goods and services suppliers

With 50% of the value of the output produced staying within the firm as value added, the other 50% of 1.88 billion euros in total turnover accrues to a number of suppliers. This stimulus of 991 million euros has a significant economic impact on sectors outside the brewing sector, as can be observed in the table below:

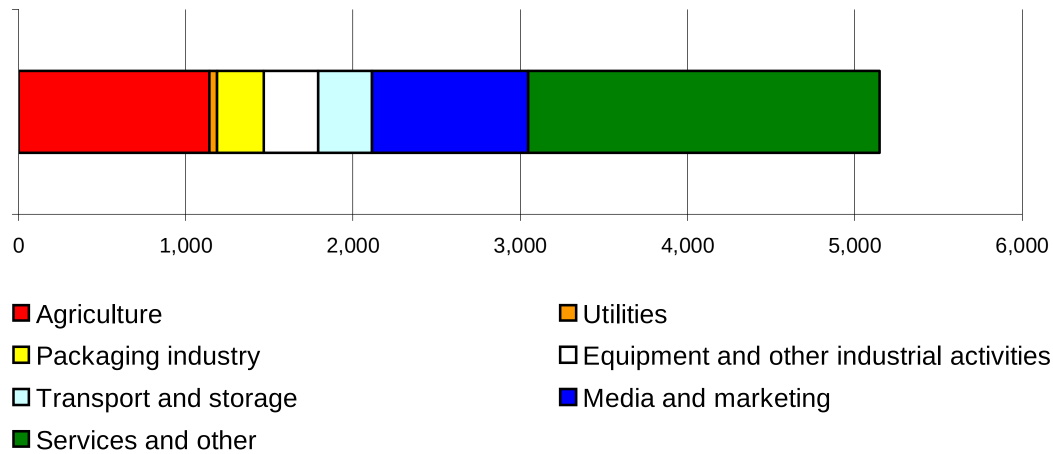
Sectors	Stimulus	Stimulus for Belgium		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	143.13	58.8	84.22	113,651	741
Utilities	49.70	100.0	49.70	1,591,200	31
Packaging industry	204.50	35.7	72.95	401,000	182
Equipment	134.92	62.4	84.21	401,000	210
Transport	60.05	91.3	54.83	260,800	210
Media, marketing	122.90	85.8	105.41	173,639	607
Services	276.00	85.9	237.10	173,639	1,365
Total	991.21		688		3,347
First-round impact as % of total impact					65
Total indirect effect of brewing sector (inclusive second-round effects)					5,149

Source: Ernst & Young Questionnaire among breweries (2009) and Eurostat (2006)

Half of all the indirect employment generated by the brewing sector is within the services sector. Other substantial effects can be observed in media and marketing, transport and agriculture. The total first-round employment effect of the brewing sector on supplying sectors is over 3,300 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be over 5,100 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

8.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 51% of all beer consumed in Belgium is sold by the hospitality sector (on-trade), which means almost 4.7 million hectolitres is sold on-trade.
- The average consumer price of beer in Belgian pubs and restaurants is estimated at 6.71 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 3.1 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 2.6 billion euros (using a 21% VAT tariff).
- With an average hospitality turnover of 61,400 euros (excluding VAT) per person, this results in 42,300 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

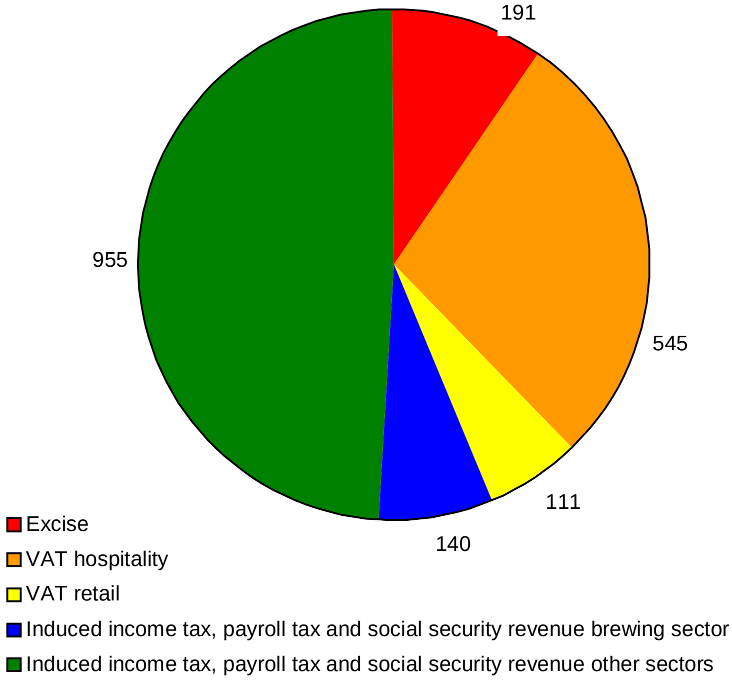
- Around 49% of total beer consumption (4.5 million hectolitres) in Belgium is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.44 euros per litre (including VAT), total retail consumer spending on beer is estimated at 642 million euros. Total consumer spending excluding VAT is thus 530 million euros.
- With turnover per employee estimated at 542,100 euros (excluding VAT), this means 980 people owe their jobs to retail beer sales.

8.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1.942 billion euros:

- VAT revenues are estimated at 656 million euros. The main portion of these VAT revenues is generated in the hospitality sector.
- The total of excise revenues on beer is 191 million euros.
- Income-related revenues due to beer production and sales are approximately 1.942 billion euros. They consist of 462 million euros income tax, 209 million euros social security contributions paid by employees and 423 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.942 billion euros



Source: Ernst & Young calculation (2009)

9 Bulgaria: Economic impact of beer

9.1 Highlights of the economic impact

Total production (in hectolitres)	5,360,000
Total exports (in hectolitres)	80,000
Total imports (in hectolitres)	51,000[33]
Total consumption (in hectolitres)	5,370,000
Number of brewing companies (including micro brewing companies)	9
Number of breweries (including microbreweries)	11

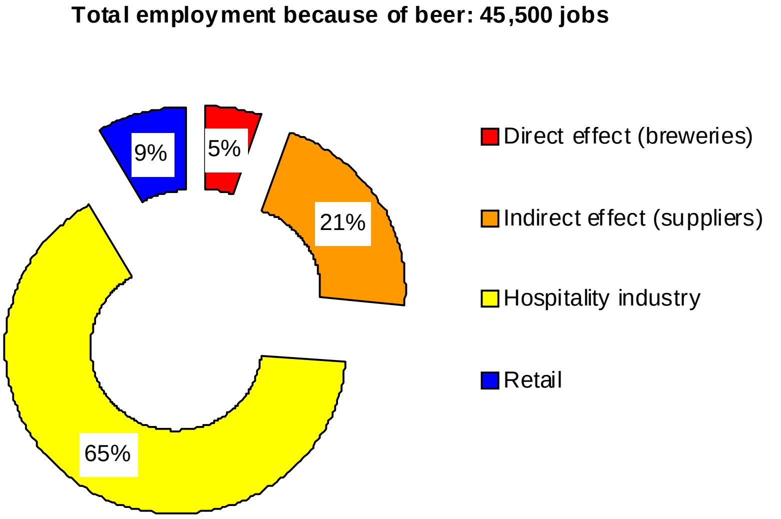
Source: Union of Brewers in Bulgaria (UBB) (2008)

The economic impact of the brewing sector on the Bulgarian economy is substantial:

- There are six medium and large brewing companies in Bulgaria together owning eight breweries. There are also three brewing pubs/ microbreweries.
- Direct employment at Bulgarian breweries is estimated at 2,400 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 9,600 supply industry jobs can be attributed to the brewing sector.
- Many jobs can also be attributed to beer sales in retail and especially in the hospitality sector. In the hospitality sector this is about 29,500 jobs and in retail another 3,900 jobs.
- The total employment due to beer production and sales is thus 45,500 jobs.
- The government also benefits from the brewing sector, receiving some 190 million euros in taxes and excises. Excise revenues amount to 43 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 96 million euros, while revenues from direct personal taxes paid by Bulgarian brewery employees, their suppliers and in hospitality and retail add up to some 51 million euros.

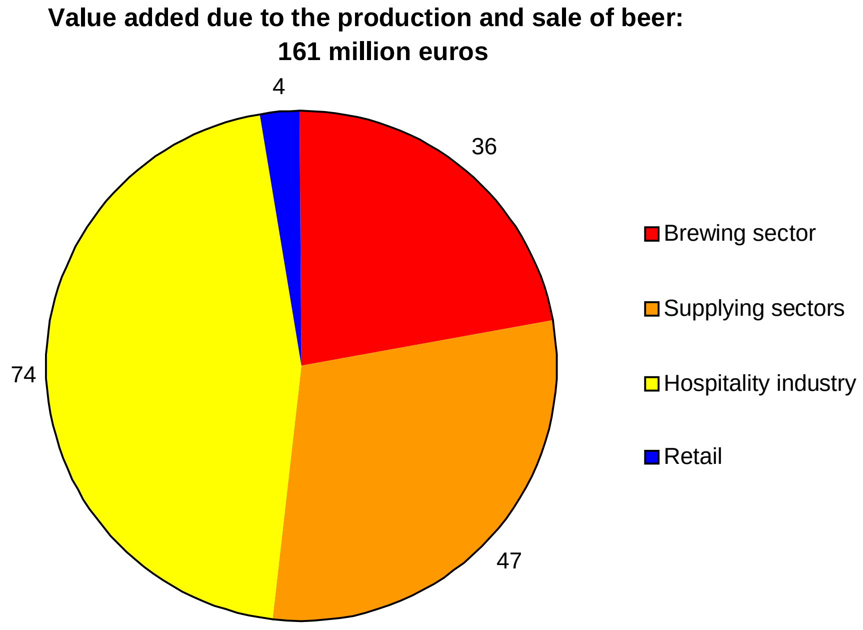
33 E&Y estimate, 2009.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009). (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Bulgarian economy can also be expressed in terms of value-added. The total value-added generated by these 45,500 jobs is estimated at 161 million euros:



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 22%, while the share in employment of the brewing sector is approximately 5%. A significant explanation for this is the high productivity of employees in the Bulgarian brewing sector.

9.2 Industry and market structure, trends and developments

The Bulgarian beer market has shown substantial growth in recent years. Production and consumption grew more than 8% over the last three years. According to the Union of Brewers in Bulgaria (UBB), production in 2008 was 5.36 million hectolitres of which 80,000 hectolitres were exported. Consumption was approximately 5.37 million hectolitres. The volume of imported beer on the Bulgarian market is limited (51,000 hectolitres). The average consumption per capita also grew substantially, increasing from 51 litres in 2002 to 74 litres in 2007.[34]

There are currently eight breweries in Bulgaria, operated by six companies.[35] There are also three microbreweries. Before democratic reforms in 1989 all Bulgarian breweries were owned by the state. After the fall of communism, the brewing sector privatised rapidly. Nowadays a large part of the beer market is in the hands of foreign investors who produce locally and internationally branded beer in Bulgaria. The three largest companies, which have market shares between 20 and 30%, are all part of multinational brewing concerns.

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Bulgarian economy:

Brewing sector internal characteristics:

- Excise rates have been increased many times in recent years. The latest increase was 43%.
- International brewing companies hold a large share of the Bulgarian brewing facilities.
- These international brewing companies invested large amounts in modernising the Bulgarian breweries, resulting in high productivity.

Context in which the brewing sector operates:

- Although the consumption of beer grew substantially over the last years, the average consumption per capita is still lower than in neighbouring countries.
- On 1 June 2009 the Bulgarian National Assembly adopted legislation for a public smoking ban which will be introduced for the Bulgarian hospitality industry on 1 June 2010. This might influence the sales of beer in Bulgarian pubs and bars.

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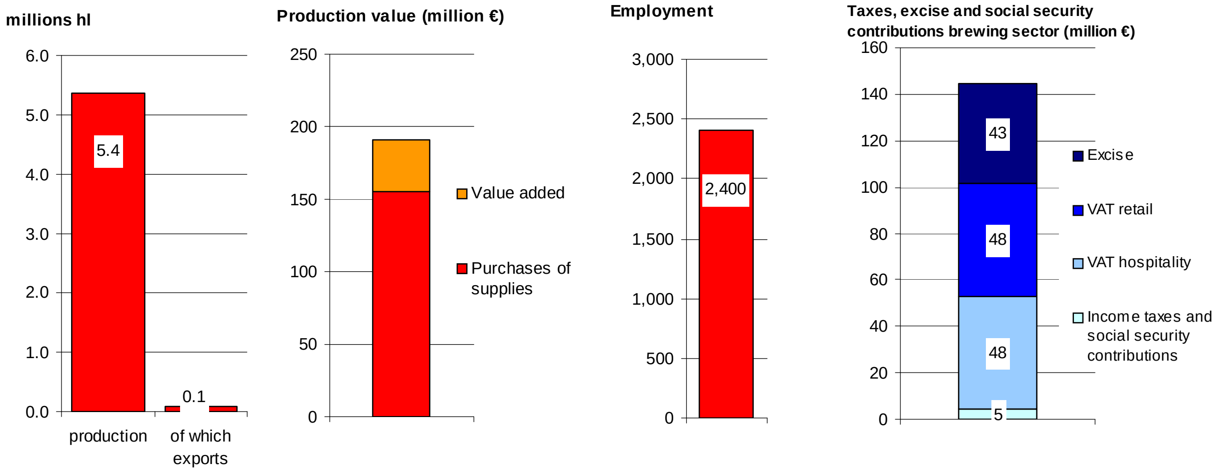
[34] Source: the Union of Brewers in Bulgaria (UBB), 2009.

[35] Source: the Union of Brewers in Bulgaria (UBB), 2009.

9.3 Direct effect of the brewing sector

According to the Union of Brewers in Bulgaria (UBB), direct employment related to Bulgarian breweries is 2,400 jobs.



Source: Ernst & Young calculation (2009)

The sector generates 36 million euros of value-added. Of a total production value of 191 million euros, an estimated 156 million euros is spent on goods and services produced by supplying sectors.

9.4 Economic impact of breweries on goods and services suppliers

Bulgarian brewers spent approximately € 156 million in supplying sectors, generating a substantial impulse in these sectors:

Sectors	Stimulus[36]	Stimulus for Bulgaria		Turnover per employee[37]	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	29.35	70.3	21	9,290	2222
Utilities	8.01	100.0	8	70,800	113
Packaging industry	36.4	58	21	26,200	806
Equipment	18.12	50	9	26,200	346
Transport	12.39	100	12	25,900	478
Media, marketing	30.46	83.6	25	19,738	1290
Services	20.88	93.2	19	19,738	986
Total	156		116	197,867	6,240
First-round impact as % of total impact					65
Total indirect effect of brewing sector					9,601

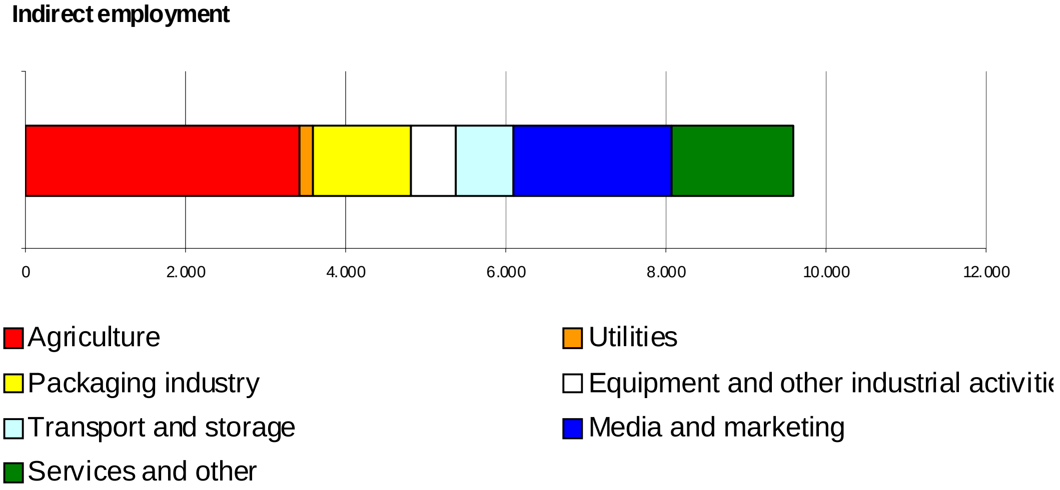
Source: Ernst & Young calculation (2009); Eurostat (2006)

[36] (Domestic) stimulus is calculated on basis of the questionnaire survey and Eurostat data.

[37] Turnover per employee is obtained from Eurostat.

Almost one-third of all the indirect employment generated by the brewing sector is within the agricultural sector. The effects in the packaging industry, the media and marketing sector and the services sector are also substantial. The total first-round employment effect of the brewing sector on supplying sectors is around 6,200 jobs. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 9,600 jobs.

Indirect employment effects are illustrated below:



Source: Ernst & Young calculation (2009)

9.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 30% of all beer consumed in Bulgaria is sold by the hospitality sector (on-trade), which means almost 1.6 million hectolitres is sold on-trade.
- The average consumer price of beer in Bulgarian pubs and restaurants is estimated at 1.8 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 290.7 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 242.2 million euros (using a 20% VAT tariff).
- With an average hospitality turnover of 8,200 euros (excluding VAT) per person, this results in 29,600 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

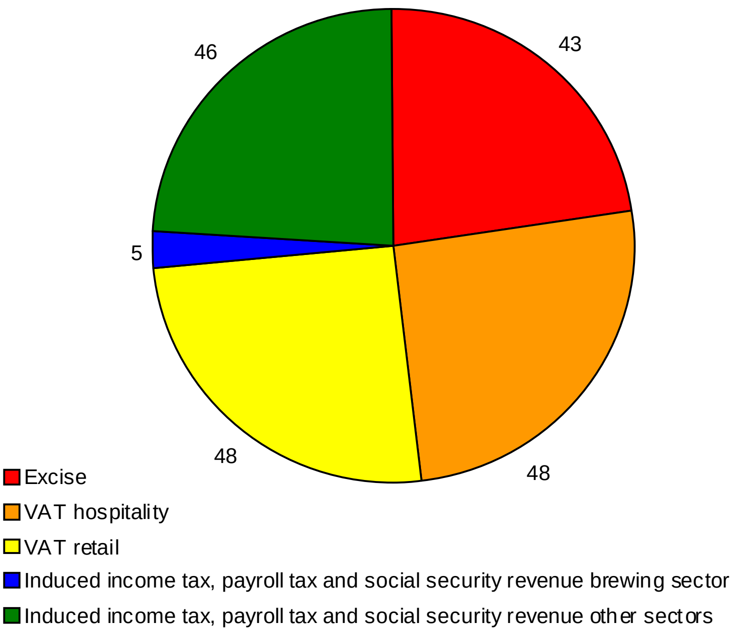
- Around 70% of total beer consumption (3.8 million hectolitres) in Bulgaria is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 0.77 euros per litre (including VAT), total retail consumer spending on beer is estimated at 288.3 million euros. Total consumer spending excluding VAT is thus 240.2 million euros.
- With turnover per employee estimated at 61,100 (excluding VAT), this means 3,900 people owe their jobs to retail beer sales.

9.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 190 million euros:

- VAT revenues are estimated at 96 million euros. Half of these VAT revenues are generated in the hospitality sector.
- The total of excise revenues on beer is 43 million euros.
- Income-related revenues due to beer production and sales are approximately 51 million euros. They consist of 11 million euros income tax, 11 million euros social security contributions paid by employees and 29 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 190 million euros



Source: Ernst & Young calculation (2009)

10 Croatia: Economic impact of beer

10.1 Highlights of the economic impact

Total production (in hectolitres)	3,587,000
Total exports (in hectolitres)	495,000
Total imports (in hectolitres)	688,000
Total consumption (in hectolitres)	3,780,000
Number of brewing companies (including micro brewing companies)	17
Number of breweries (including microbreweries)	17

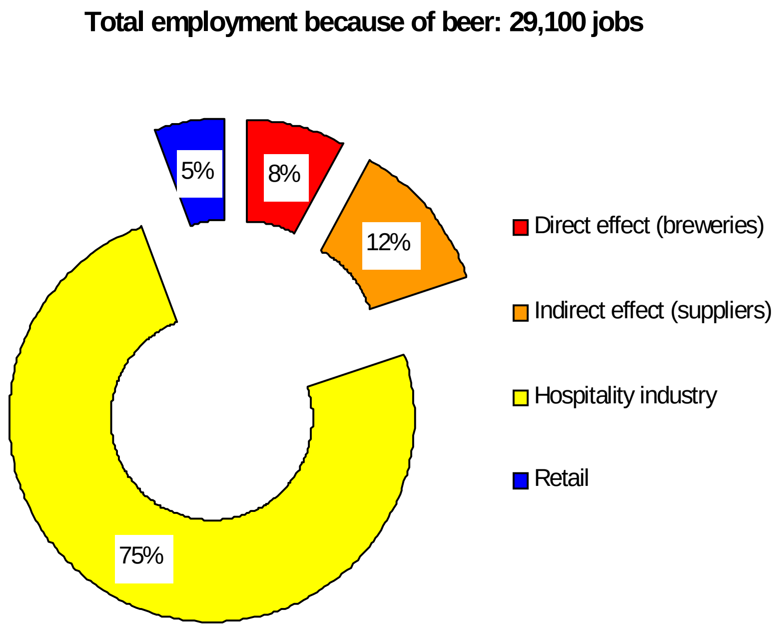
Source: Canadean, Global Beer Trends (2008), Country Profile Croatia (2008), and Ernst & Young, the Contribution Made by Beer to the European Economy, (2006).[38]

The economic impact of the brewing sector in Croatia can be expressed as follows:

- In 2007 Croatian breweries produced 3.6 million hectolitres of beer.
- Direct employment at Croatian breweries is estimated at 2,300 jobs.
- Another 3,500 jobs are generated through goods and services purchased by Croatian breweries within their own country.
- Further jobs are generated in the hospitality sector and in retail because of the sales of beer. The induced employment effect is estimated at approximately 21,700 jobs in the hospitality sector and at approximately 1,600 in retail.
- The government also benefits from the brewing sector, receiving some 312 million euros in taxes and excises. Excise revenues amount to 110 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 178 million euros, while revenues from direct personal taxes, social security contributions and payroll taxes paid by employers and employees in the brewing sector, supplying sectors and hospitality and retail sector add up to some 23 million euros.

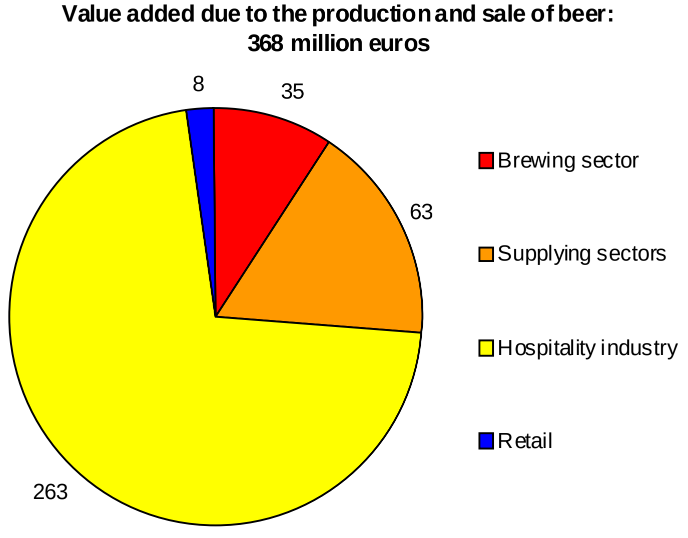
38 The National Brewers' Association of Croatia was not able to provide more recent figures. The figures on production, consumption, imports and exports are 2007 figures. Based on an Internet search it was assumed that the number of brewing companies and breweries have not changed very much since the previous Ernst & Young report.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Croatian economy can also be expressed in terms of value-added. The total value-added generated by these 29,100 jobs is estimated at 368 million euros:



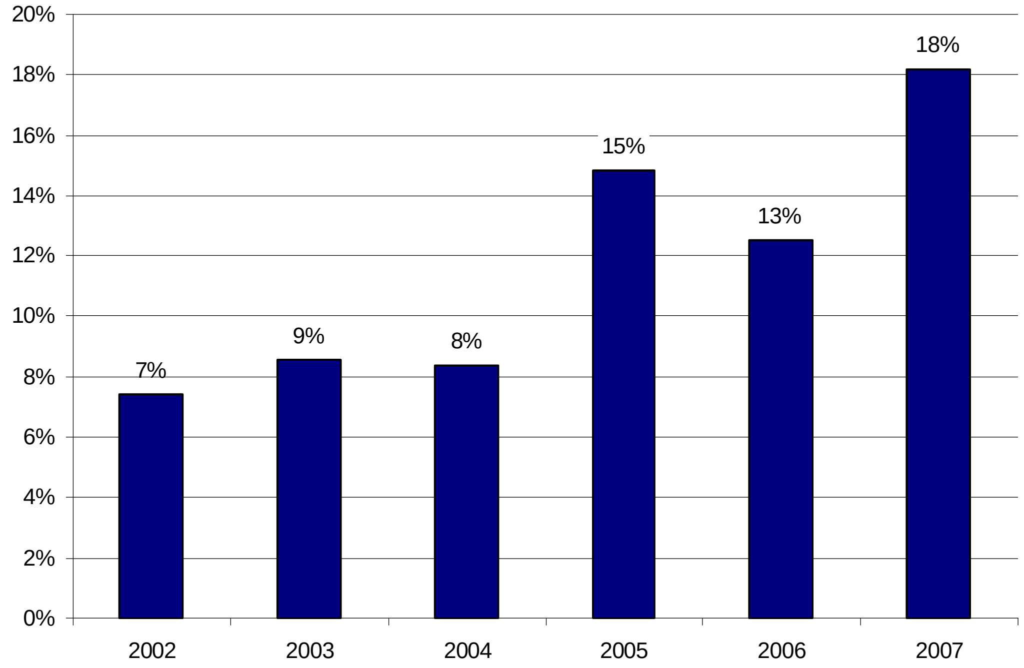
Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 10%, which is higher than the brewing sector share in total employment arising from beer (8%). A significant explanation for this is the slightly higher productivity of brewing sector employees.

10.2 Industry and market structure, trends and developments

The Croatian beer market is dominated by two breweries, Zagrebacka Pivovara and Karlovacka Pivovara. These breweries are both owned by two major European brewing companies. A third major European brewing company entered Croatia by acquiring Panonska brewery in 2002.

Both production and consumption have not changed much in recent years. The major part of the consumed beer is brewed in Croatia. But imported beers are gaining popularity. The following graph presents the share of imported beers in total beer consumption.



Source: Canadean, Global Beer Trends (2008), Country Profile – Croatia.

The economic impact of the brewing sector is influenced by the following other trends, developments and characteristics of the Croatian beer market[39]:

- The most popular alcoholic drink in Croatia is beer.
- The high popularity of beer is reflected in the relatively high per capita consumption of 85 litres in comparison with neighbouring countries such as Italy (32 litres), Serbia (59 litres), and Bosnia Herzegovina (60 litres). The per capita consumption is quite comparable with neighbouring countries Slovenia (90 litres) and Hungary (79 litres).
- Croatians have a so-called ‘café culture’. This means that the bars are filled with people the whole day. In the morning they usually serve hot beverages (coffee and tea), in the evening beer and liquor are most popular.
- Wine or beer is typically consumed with meals at least once a week (often every day), and drinking often takes place in restaurants, pubs and bars.
- There is a trend in Croatia towards drinking more cocktails made with tequila, whiskey, rum, gin and other spirits.

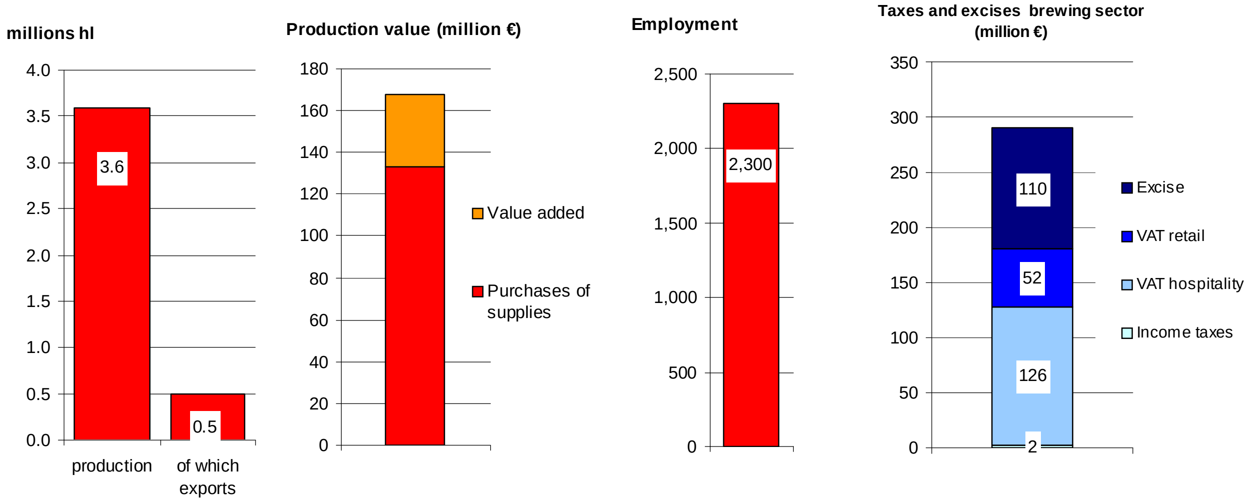
[39] Based on: Agri-Food Trade Service, The Hotel, Restaurant and Institutional Market, Market Brief-Croatia, November 2007, http://www.ats-sea.agr.gc.ca/europe/4553_e.htm; Royal Danish Embassy Zagreb, Food & Retail market in Croatia, Prepared for Landbrugsraadet, 2007; Canadean, Global Beer Trends 2008, Country Profile – Croatia.

Other relevant developments are[40]:

- Croatia became an official European Union candidate in 2004.
- The Croatian beer market for hotels, restaurant and cafés benefits substantially from tourism.
- Tourism is one of Croatia's main industries (accounting for about 10.6% of gross domestic product [GDP]).
- In August 2004 the Croatian government introduced a new law on road safety, entailing a complete ban on drinking and driving.

10.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers more than 2,300 employees who together produce 3.6 million hectolitres of beer.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 110 million euros and total VAT income for the Croatian government was estimated at 178 million euros. Personal direct taxes paid by brewing sector employees were estimated at 2 million euros.

Croatian breweries' production had an estimated value of 168 million euros. About 21% of total turnover stays within these firms as value-added (35 million euros). The value of purchased goods and services needed for the production and sale of beer are estimated at 133 million euros.

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[40] Based on: Agri-Food Trade Service, The Hotel, Restaurant and Institutional Market, Market Brief-Croatia, November 2007, http://www.ats- sea.agr.gc.ca/europe/4553_e.htm; Royal Danish Embassy Zagreb, Food & Retail market in Croatia, Prepared for Landbrugsraadet, 2007.

10.4 Economic impact of breweries on goods and services suppliers

This purchase of goods and services by breweries has a significant economic impact on the supplying sectors. The impulse to the sectors is estimated at 88 million euros.

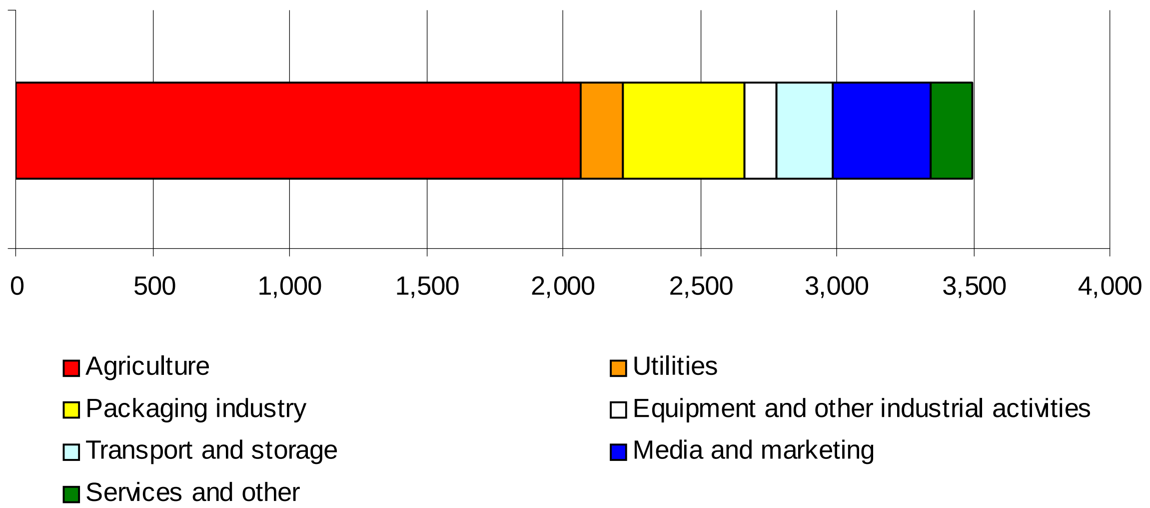
Sectors	Stimulus	Stimulus for Croatia		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	27.4	50.2	14	10,238	1,341
Utilities	7.6	100.0	8	76,247	100
Packaging industry	32.3	52.5	17	58,557	290
Equipment	11.5	39.0	4	58,557	76
Transport	14.5	89.9	13	96,300	135
Media, marketing	26.5	84.0	22	96,598	230
Services	13.0	72.5	9	96,598	98
Total	132.8		88		2,271
First-round impact as % of total impact					65
Total indirect effect of brewing sector (inclusive second-round effects)					3,494

Source: Ernst & Young calculation (2009); Eurostat (2006)

The major part of the indirect employment effect is generated in the agriculture sector. Other sectors which benefit substantially are the packaging industry and the media and marketing sector. The total first-round employment effect of the brewing sector on supplying sectors is estimated at almost 2,300 jobs. The total indirect effect is estimated at almost 3,500 jobs.

The total employment generated in supplying sectors is split up as follows:

Indirect employment



Source: Ernst & Young calculation (2009)

10.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 50% of all beer consumed in Croatia is sold by the hospitality sector (on-trade), which means almost 1.9 million hectolitres is sold on-trade.
- The average consumer price of beer in Croatian pubs and restaurants is estimated at 3.7 euros a litre (including VAT)[41], so that total consumer spending on beer in the hospitality sector is 699.3 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 573.2 million euros (using a 22% VAT tariff).
- With an average hospitality turnover of 26,412 euros (excluding VAT) per person, this results in 21,700 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Around 50% of total beer consumption (1.9 million hectolitres) in Croatia is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.53 euros per litre (including VAT)[42], total retail consumer spending on beer is estimated at 289 million euros. Total consumer spending excluding VAT is thus 237 million euros.
- With turnover per employee estimated at 149,173 euros (excluding VAT), this means 1600 people owe their jobs to retail beer sales.

41 Ernst & Young questionnaire among breweries, 2009.

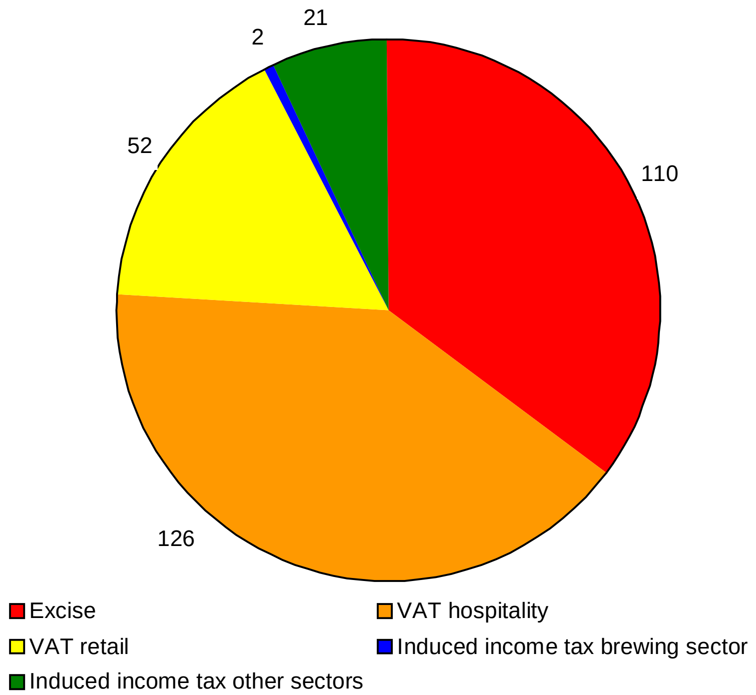
42 Ernst & Young questionnaire among breweries, 2009.

10.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 312 million euros:

- VAT revenues are estimated at 178 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total of excise revenues on beer is 110 million euros.
- Income taxes paid by employees in the brewing sector, supplying sectors and the hospitality and retail sector are estimated at approximately 23 million euros.

Government revenues due to the production and sale of beer: 312 million euros



Source: Ernst & Young calculation (2009)

11 Cyprus: Economic impact of beer

11.1 Highlights of the economic impact

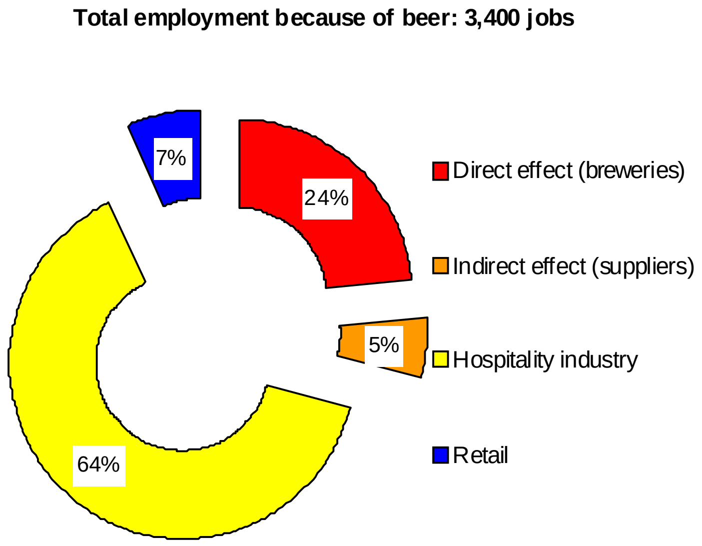
Total production (in hectolitres)	410,000
Total exports (in hectolitres)	10,000
Total imports (in hectolitres)	40,000
Total consumption (in hectolitres)	440,000
Number of brewing companies	2
Number of breweries	2

Source: Cyprus Brewers Association; Ernst & Young calculation (2009)

The most important characteristics of the Cypriot brewing sector are:

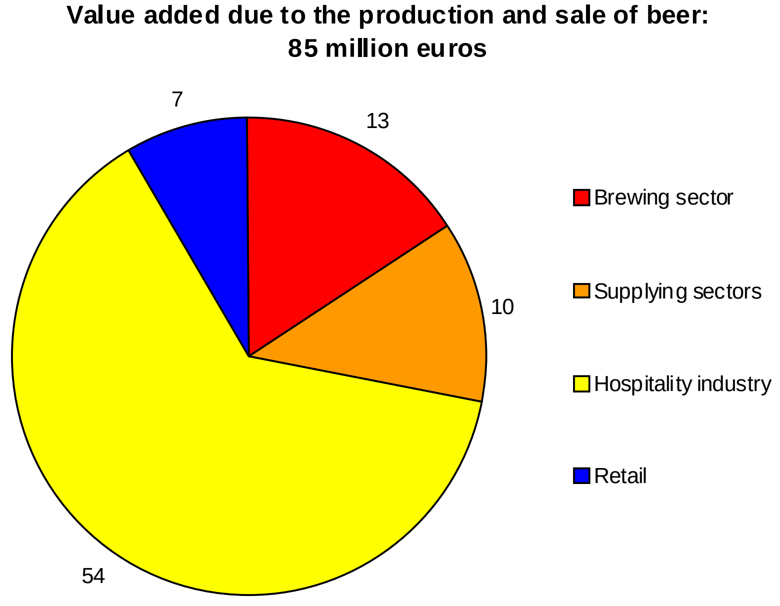
- Cyprus has two brewing companies employing 793 staff. There are no microbreweries in Cyprus.
- Tourism is the most important sector of the Cypriot economy. Tourists account for a major part of the total beer consumption.
- The total employment due to beer production and sales is 3,400 jobs. Besides the occupations at the breweries, there are 181 jobs in the supplying sectors, 2,100 in hospitality and 230 in retail.
- The Cypriot government also benefits from the brewing sector. The total revenues due to beer production and sales is approximately 46 million euros. These revenues consist of 10 million euros excise, 20 million euros VAT (in hospitality and retail) and 16 million euros income-related (income tax, social security contributions and payroll taxes) revenues paid by employers and employees in the brewing sector, the supply sectors, hospitality and retail.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Cypriot economy can also be expressed in terms of value-added. The total value-added generated by these 3,400 jobs is estimated at 85 million euros. The largest contribution comes from the hospitality sector where the value-added due to the sales of beer is 54 million euros. Tourism plays an important role in this.



Source: Ernst & Young calculation (2009)

11.2 Industry and market structure, trends and developments

With a consumption of 0.44 million hectolitres in 2008, Cyprus is one of the smaller beer markets of Europe. The majority of the beer on this market is produced by Cypriot Breweries. There are two breweries on the island. Their annual production has increased in recent years from 380,000 hectolitres in 2006 to 410,000 hectolitres in 2008.[43]

Due to the fact that Cyprus is a small country, most of the purchased goods for the brewing industry come from abroad. For example, all the hops and malt are obtained from the European mainland. Utilities (e.g. water, electricity), transport and storage are purchased on the island.

Factors that influence the impact of the brewing sector on the Cypriot economy are the following:

Brewing sector internal characteristics:

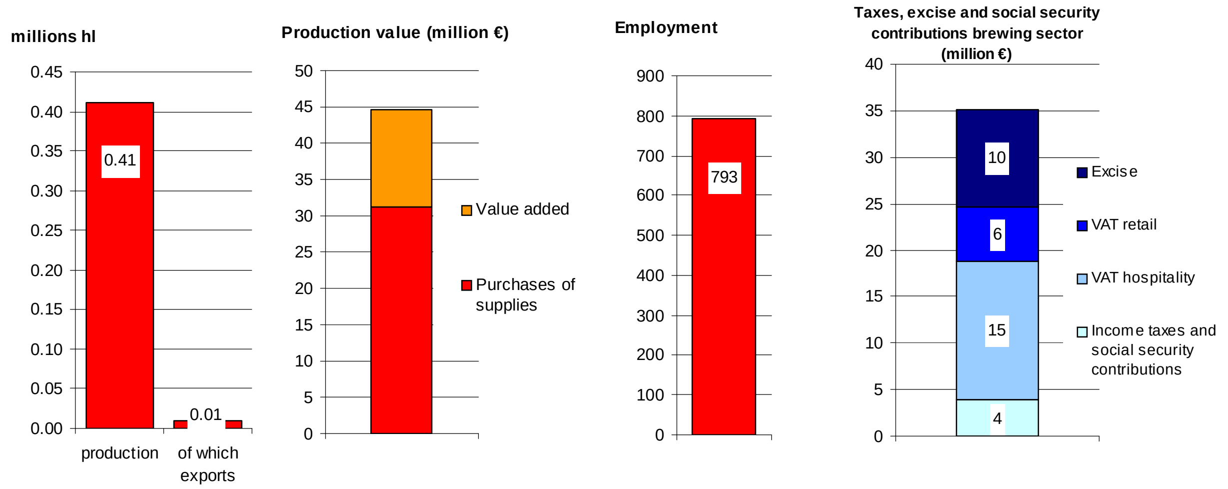
- A consolidated market with two breweries.
- Although there are imported beer brands on the market, the majority of beer sold is locally brewed.
- Cypriot Breweries export approximately 10,000 hectolitres of beer per year.

Context in which the brewing sector operates:

- Tourism generates an important quantity of consumers in the local beer market.

11.3 Direct effect of the brewing sector

The Cypriot brewing companies employed 793 people in 2006.[44] These workers together produce a value representing 45 million euros, of which approximately 31 million euros are spent on purchases of goods and services in supplying sectors, mainly abroad.[45] This means that the Cypriot breweries realise about 12 million euros value-added.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 10 million euros and total VAT income for the government of Cyprus was estimated at 20 million euros. Income-related taxes and contributions paid by employers and employees of the brewing sector are estimated at 4 million euros.

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[43] Source: Cyprus Brewers Association, 2009.

[44] Source: Eurostat.

[45] Estimate by Ernst & Young, 2009.

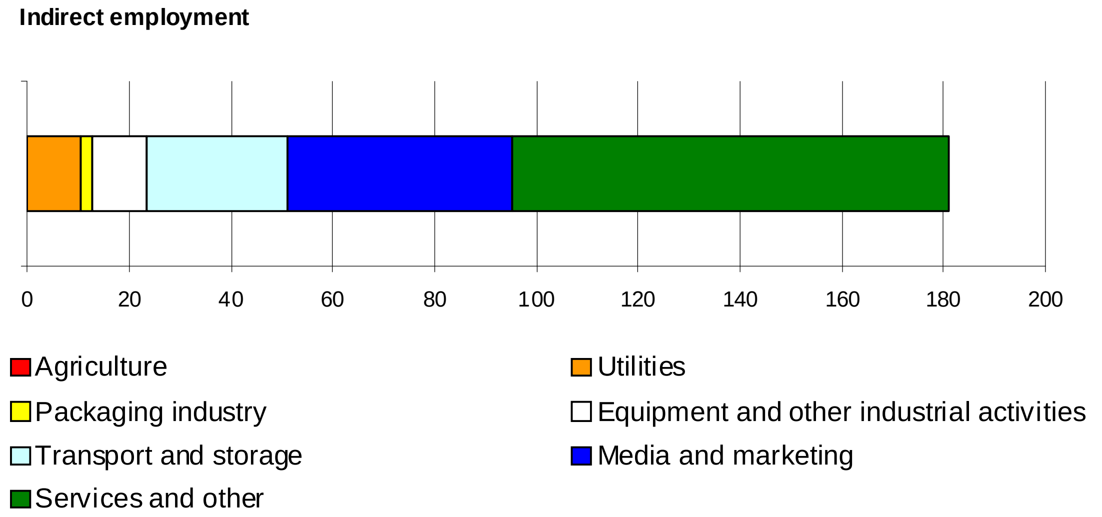
11.4 Economic impact of breweries on goods and services suppliers

Of the 31 millions euros the Cypriot breweries spent on supplies, 12 million euros are spent domestically. They result in a significant economic impact:

Sectors	Stimulus[46]	Stimulus for Cyprus		Turnover per employee[47]	Number of employees
	(mln. €)	%	(mln. €)	(in €)	
Agriculture	8	0	0	42,727	0
Utilities	2	100	2	360,800	7
Packaging industry	8	2	0	94,900	2
Equipment	4	16	1	94,900	7
Transport	1	100	1	74,600	18
Media, marketing	3	95	2	83,946	29
Services	5	88	5	83,946	56
Total	31		12		118
First-round impact as % of total impact					65
Total indirect effect of brewing sector (including second-round effects)					181

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

Indirect employment effects are illustrated below:



Source: Ernst & Young calculation (2009)

[46] (Domestic) stimulus is calculated on the basis of the questionnaire survey and Eurostat data
[47] Turnover per employee is obtained from Eurostat.

11.5 Retail and hospitality sectors

The most important economic effect of the brewing sector involves the benefits of the hospitality sector through beer.

Hospitality sector

The economic impact of beer on the hospitality sector is assessed as follows:

- Approximately 49% (215,600 hectolitres) of all beer consumed in Cyprus is sold by the hospitality sector.[48]
- The average consumer price of beer in Cypriot hospitality is approximately 5.33 euros per litre[49], so that total consumer spending on beer in the hospitality sector is 114,8 million euros.
- Net consumer spending on beer is thus estimated at 99.8 million euros (using a 15% VAT tariff).
- Total employment in the Cypriot hospitality sector due to beer sales is estimated at 2,100 jobs.

Retail

The importance of the retail sector can be similarly assessed:

- Approximately 51% of Cypriot beer consumption is sold by supermarkets and other retail companies.
- With an average consumer price of 2.00 euros per litre (including VAT), total retail consumer spending on beer is estimated at 44.9 million euros. Total consumer spending excluding VAT is thus 39.0 million euros.
- With turnover per employee estimated at 169,800 euros[50] (excluding VAT), this means 230 people owe their jobs to retail beer sales.

11.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 48 million euros:

- Since the economic impact of beer is most prominent in the hospitality sector, VAT revenues from beer sold in Cypriot pubs and restaurants contribute most, with 15 million euros. VAT revenues from the retail sector are approximately 6 million euros.
- The total excise revenue due to the brewing industry is 10 million euros.
- Income-related revenues due to beer production and sales are approximately 16 million euros. They consist of 3.9 million euros income tax, 2.8 million euros social security contributions paid by employees and 9.6 million euros social security taxes and payroll taxes paid by employers.

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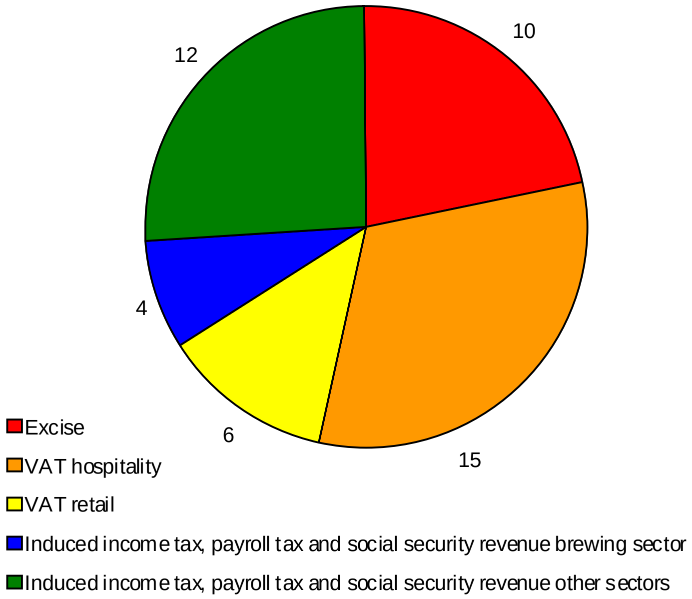
48 Source: Cyprus Brewers Association, 2009.

49 Estimate by E & Y based on multiple sources.

50 Source: Eurostat, statistics on turnover per person employed in retail sector.

Government revenues due to the production and sale of beer: 48 million euros



Source: Ernst & Young calculation (2009)

12 Czech Republic: Economic Impact of beer

12.1 Highlights of the economic impact

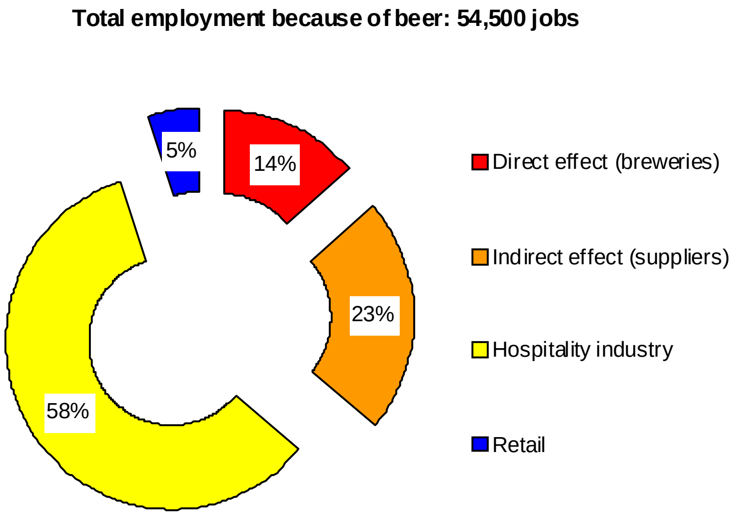
Total production (in hectolitres)	19,810,000
Total exports (in hectolitres)	3,710,000
Total imports (in hectolitres)	140,000
Total consumption (in hectolitres)	16,240,000
Number of brewing companies (including micro brewing companies)	90*
Number of breweries (including microbreweries)	128

*Source: Czech Beer and Malt Association (2009); *Eurostat (2006)*

The most important characteristics of the Czech beer market are:

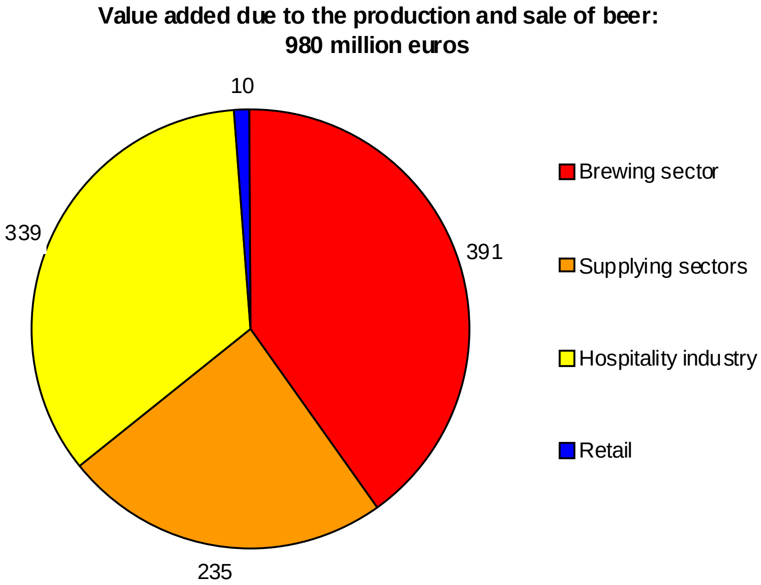
- Czech brewers produced 19.8 million hectolitres of beer in 2008. There are 48 breweries in the Czech Republic and approximately 80 microbreweries.
- The direct employment in the Czech breweries is 7,400 jobs.
- Further jobs are created in the supplying sectors due to purchases by the Czech brewers (12,300 jobs).
- In the hospitality sector approximately 32,000 jobs can be attributed to the brewing sector while in retail around 2,800 employees have jobs related to beer sales.
- The total employment effect thus consists of 54,500 jobs related to beer production and sales.
- The Czech government also benefits from beer production and sales, receiving approximately 676 million euros in revenues. These revenues consist of 133 million euros excise, 235 million euros VAT and the 54,500 beer related jobs generate 308 million euros of income-related contributions and taxes.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology)

The contribution of the brewing sector to the Czech economy can also be expressed in terms of value-added. The total contribution to the Czech economy in terms of value-added due to beer production and sales is estimated at 980 million euros. The brewing sector itself is responsible for around 40% of this value-added.



Source: Ernst & Young calculation (2009)

12.2 Industry and market structure, trends and developments

The Czech Republic can be seen as 'the home of beer', especially where lager ('pilsen', beer brewed according to the Bohemian tradition) is concerned. The first record of beer brewing in the Czech territory dates back to the year 993. Today with an annual consumption of 16.240 million hectolitres the Czech beer market is one of the largest in Europe.[51] Beer consumption per capita (158 litres per year) is actually the highest in Europe.

Czech breweries produced 19.810 million hectolitres of beer in 2008, of which 3.710 million hectolitres were exported.[52] Czech beer is exported to more than 50 countries worldwide. Approximately 41% of exports go to Germany, 14% to Slovakia and 7% to the United Kingdom. With 0.140 million hectolitres the amount of imported beer on the Czech market is limited.

The fall of communism was an important moment for the Czech brewing sector. Since then many breweries have been privatised or bought by foreign brewing companies. The current market share of the market leader is 49%, followed by a brewery with a market share of 15% and five breweries with a market share of 5% each.

	1950	1960	1970	1980	1990	2000	2008
Number of breweries (excl. microbreweries)	176	129	104	79	71	57	48
Beer production in millions of hectolitres	9.245	11.418	16.276	17.475	19.198	17.924	19.810

Source: Czech Brewers Association (2009)

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Czech beer market and the brewing sector:

- The Czech brewing industry has a very diverse landscape, with large as well as medium and small (brewing pub) breweries.
- Most major multinational brewing companies own a brewery in the Czech Republic.
- The Czech Republic is one of the largest producers of malt (526 tons in 2008) and hops (5,631 tons).[53]
- Many Czech breweries have their own malting facilities.

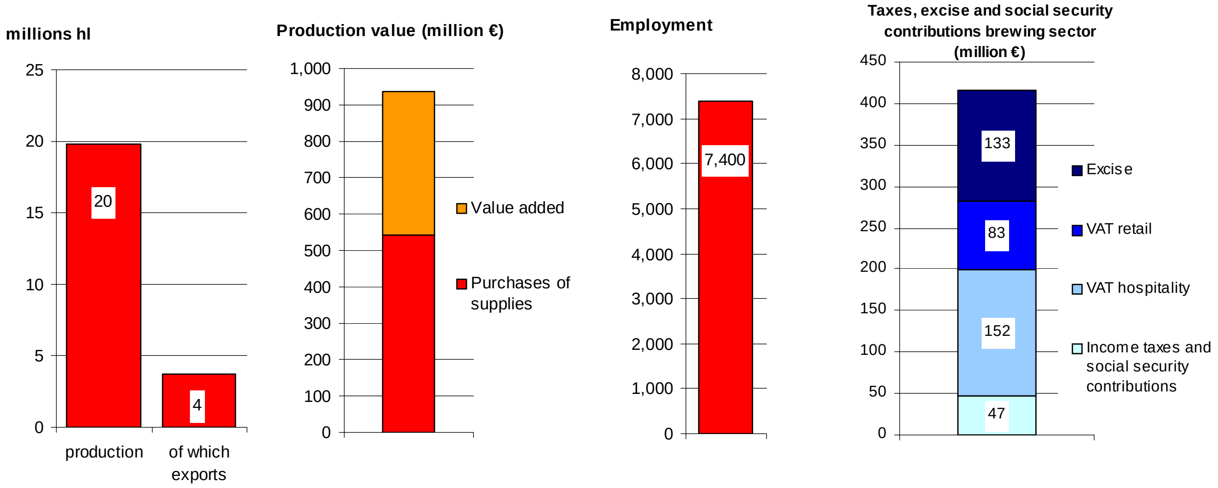
Other developments which influence the economic impact of the brewing sector are:

- Beer consumption per capita has remained stable in recent decades. In 1970 annual consumption was approximately 152 litres while in 2006 Czech citizens drank 158 litres of beer (the highest in Europe). 54
- Due to the high reputation of Czech beer, breweries have good opportunities for exporting (all large breweries and many medium ones currently export).

[51] Source: Czech Brewers Association, 2009.
[52] Source: Czech Brewers Association, 2009.
[53] Source: Euromalt, 2008.
[54] Source: Czech Brewers Association, 2009.

12.3 Direct effect of the brewing sector

The direct employment of the Czech brewing sector consists of 7,400 jobs. Czech breweries together realise a production value of approximately 934 million euros, of which 543 million is spent on supplies. The value-added of the Czech brewing sector is thus 391 million.



Source: Ernst & Young calculation (2009)

The government also benefits from the production and sale of beer. Excise and VAT revenues accounted for 133 million euros and 235 million euros respectively. Employees and employers in the brewing sector paid 47 million euros in income taxes, social security contributions and payroll taxes.

12.4 Economic impact of breweries on goods and services suppliers

The Czech breweries spend 543 million euros on purchasing goods and services, which means a substantial economic impulse in the supplying sectors. The largest proportion of supplies is purchased in agriculture, resulting in around 3,300 jobs in this sector (first round effect). The indirect employment in transport (1,400 jobs) and media and marketing (1,600 jobs) are also substantial. As this primary effect can be estimated at about 65% of the total impact, the total impact in these sectors will even be higher.

Sectors	**Stimulus[55]**	**Stimulus for the Czech Republic**		**Turnover per employee[56]**	**Number of employees**
	(mln. €)	**%**	**(mln. €)**	**(in €)**	
Agriculture	124	95	118	35,725	3,296
Utilities	46	100	46	360,400	128
Packaging industry	108	70	76	86,900	873
Equipment	29	98	28	86,900	322
Transport	92	100	92	66,100	1,388
Media, marketing	115	95	109	68,247	1,595
Services	29	95	28	68,247	410
Total	543		496		8,012
First-round impact as % of total impact					65
Total indirect effect of brewing sector (inclusive second-round impact)					12,327

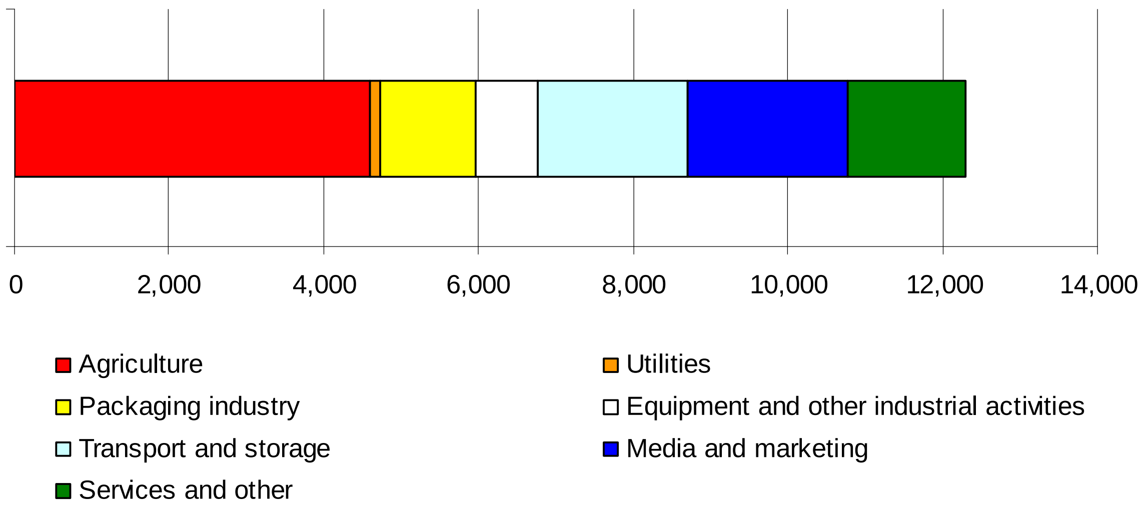
Source: EY Questionnaire among breweries (2009); Eurostat (2006)

55 (Domestic) stimulus is calculated on the basis of the questionnaire survey and Eurostat data.

56 Turnover per employee is obtained from Eurostat.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

12.5 Retail and hospitality sectors

The most important economic effect of the brewing sector involves the benefits of the hospitality sector through beer.

Hospitality sector

Employment arising from beer sales in the hospitality sector is estimated at 31,963 jobs:

- Approximately 51% of beer consumption in the Czech Republic occurs in the hospitality sector. [57]
- This means 8.0 million hectolitres of beer is consumed in Czech pubs, restaurants and other hospitality facilities.
- With a consumer price of 1.15 euros per litre (incl. 19% VAT)[58] this means consumers spent approximately 799 million euros (excl. VAT) on beer in pubs and restaurants.
- The average turnover per employee in the Czech hospitality industry is 25,000 euros a year. [59]
- The employment in Czech hospitality sector due to beer sales is 32,000 jobs.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Of the total Czech beer consumption, 49% is sold in supermarkets and other retail companies.
- With an average consumer price of 0.65 euros (incl. 19% VAT) [60] per litre, this means consumer spending on beer in retail companies is estimated at 438 million euros (excl. VAT).
- Employees in the retail sector realise an annual turnover of 156,500 euros each. [61]
- Total employment in the Czech retail sector through beer sales equals 2,800 employees.

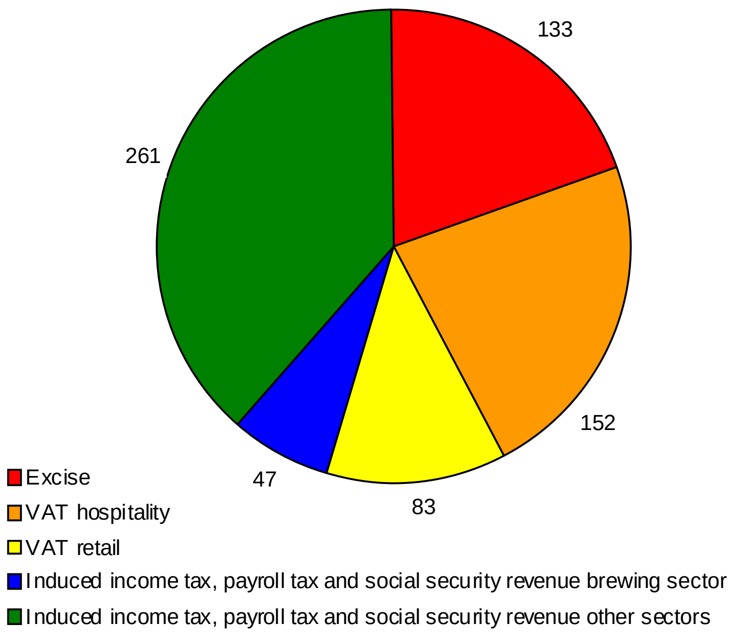
57 Source: Czech Brewers Association, 2009.
58 Estimate by E & Y based on multiple sources.
59 Source: Eurostat, 2006.
60 Estimate by E & Y based on multiple sources.
61 Source: Eurostat, 2006.

12.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 676 million euros:

- VAT revenues from sales in hospitality amount to 152 million euros, while the VAT revenue from sales in retail is 83 million euros. The total VAT revenue is thus 235 million euros.
- The total in excise revenues due to the brewing industry is 133 million euros.
- The 54,500 jobs related to beer production and sales generate 65 million euros in income tax, 63 million euros social security contributions paid by employees and 180 million euros social security taxes and payroll taxes paid by employers. The total income-related revenues due to beer production and sales is thus 308 million euros.

Government revenues due to the production and sale of beer: 676 million euros



Source: Ernst & Young calculation (2009)

13 Denmark: Economic impact of beer

13.1 Highlights of the economic impact

Total production (in hectolitres)	7,860,000
Total exports (in hectolitres)	3,530,000
Total imports (in hectolitres)	510,000
Total consumption (in hectolitres)	4,840,000
Number of brewing companies (including micro brewing companies)	120
Number of breweries (including microbreweries)	120

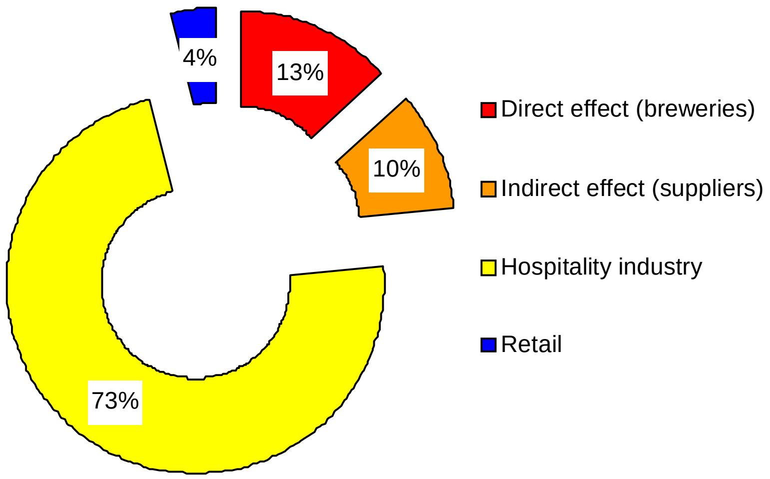
Source: Bryggeriforeningen (Danish Brewers' Association) (2008)

The main characteristics of the Danish beer market are the following:

- Denmark is a significant beer-producing country in Europe. Consequently, direct employment by Danish breweries is 3,880 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 3,000 supply industry jobs can be attributed to the brewing sector (beer sales). The media and marketing sector is benefiting most with approximately 1,100 jobs created indirectly by beer production and sales.
- The effect of beer on the Danish hospitality sector is considerable, with 21,100 jobs in the hospitality sector attributed to beer.
- In the Danish retail sector approximately 1,100 people owe their jobs to beer sales.
- The total employment impact of the Danish beer industry can be estimated at 29,100 jobs.
- The Danish government receives approximately 1.2 billion euros in taxes and excises from the beer sector. Excise revenues amount to 463 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is 367 million euros, and direct income taxes and social security are approximately 377 million euros.

The employment impact of the brewing sector is presented below:

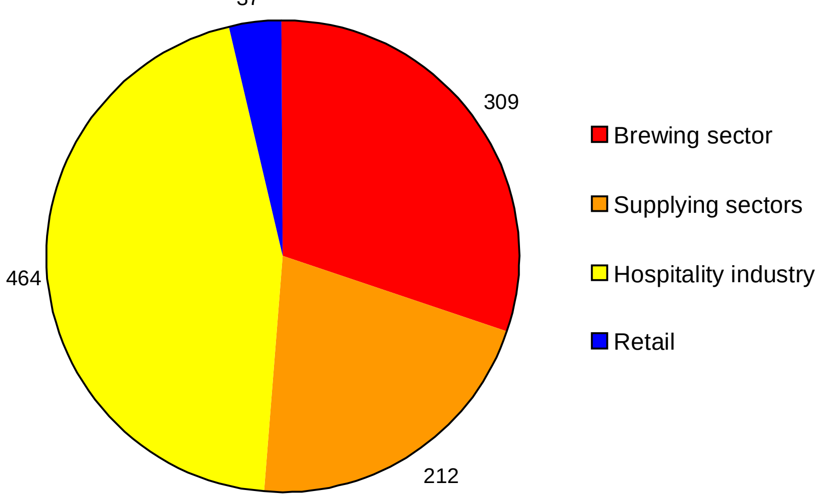
Total employment because of beer: 29,100 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology used).

The contribution of the brewing sector to the Danish economy can also be expressed in terms of value-added. The total value-added generated by these 29,100 jobs is estimated at 1.021 billion euros.

Value added due to the production and sale of beer: 1.021 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector's share in overall value-added arising from beer production and sales is 30%, which is far higher than the brewing sector's share in total employment arising from beer (13%). A significant explanation for this is the high productivity of brewing sector employees.

13.2 Industry and market structure, trends and developments

The total volume of beer bought inside Denmark is declining, following the general Western European trend. Denmark recorded a fall in beer sales in 2007 of nearly 7% in volume terms over the previous year.[62] One explanation is that domestic beer sales are under high pressure from private imports. Another reason is the shift from beer to spirits, following a substantial lowering of the spirits excise duties in 2003. In Denmark many consumers are switching from beer to wine.

Private alcoholic beverage imports and exports play an important role throughout Scandinavia due to relatively large consumer price differences, largely because of lower VAT and excise rates in Germany.[63] Estimates of the volume of private imports from Germany to Denmark vary from one-fifth to one-third of total beer consumption.

The Danish market is dominated by pale lager, with more than 95% of total sales. However, stout and other dark beers are increasing in popularity, a trend driven by the market growth of premium-priced beers. The local microbreweries are strong innovators and produce a wide variety of beer styles, including strong IPAs and stouts. The rapid expansion of the micro-brewing sector has given Denmark a very respectable number of breweries if compared to its population. Carlsberg is the number-one beer company on the Danish beer market, and is the fourth largest brewer in the world with approximately 45,000 employees on three continents. Carlsberg and the other large international brewery Royal Unibrew have a great impact on the Danish economy.

The larger Danish brewers are also particularly active in the soft drinks and mineral water markets. Some brewing companies also own their own malting plants. The number of microbreweries and pub-breweries in Denmark is growing annually.

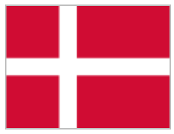
13.3 Direct effect of the brewing sector

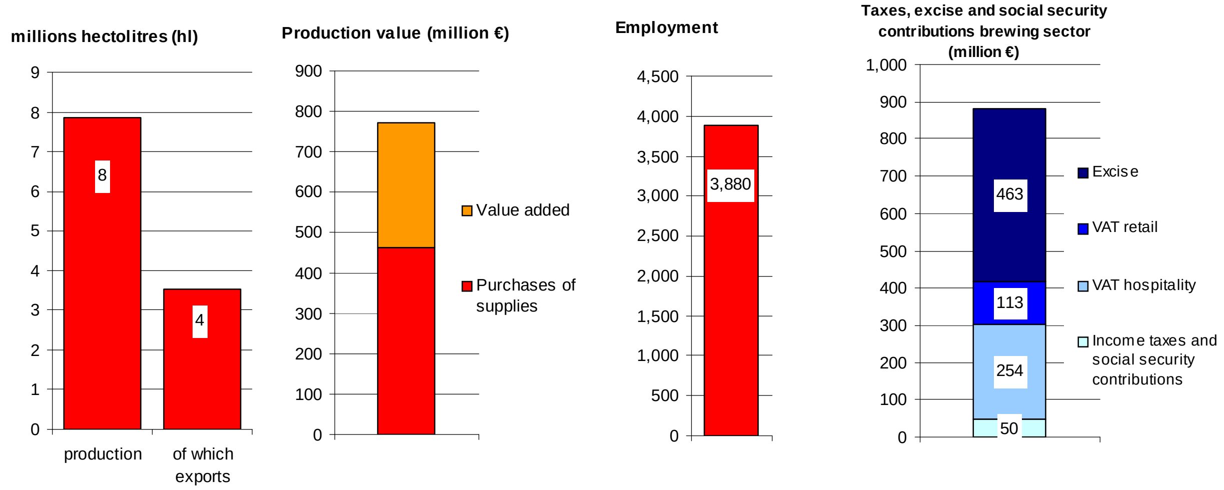
Danish breweries employ 3,880 staff. The production value of the Danish breweries can be estimated at 772 million euros. The value-added generated by the Danish breweries amounts to 309 million euros (approximately 40% of total production value). This means that supplying sectors benefit from purchased goods and services to a value of 463 million euros.

The government also benefits from beer production. Excise and VAT revenues accounted for 146 million and 367 million euros respectively. Employees and employers in the brewing sector paid 50 million euros in income taxes, social security contributions and payroll taxes.

62 Euromonitor International "Beer in Denmark", February 2009.

63 Source: Konkurrensestyrelse (2001), *Priser og avancer i grænsehandelen med øl og sodavand.*





Source: Ernst & Young calculation (2009)

13.4 Economic impact of breweries on goods and services suppliers

With 40% of the value of the output produced staying within the beer sector as value-added, the other 60% of the total turnover accrues to a number of suppliers. This stimulus of 463 million euros has a significant economic impact on sectors outside the Danish brewing sector, most substantially on the packaging industry:

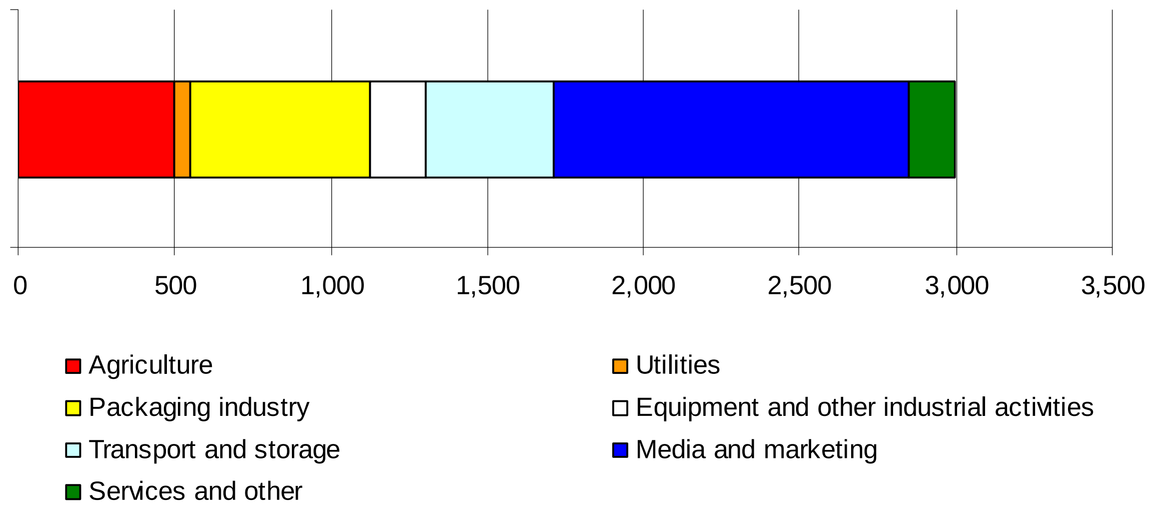
Sectors	Stimulus	Stimulus for Denmark		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	75.05	75	56.29	172,938	325
Utilities	36.14	100	36.14	1,119,200	32
Packaging industry	111.65	70	78.15	209,400	373
Equipment	61.15	40	24.46	209,400	117
Transport	70.42	100	70,42	267,200	264
Media, marketing	98.83	100	96.83	130,500	742
Services	12.05	100	12.05	130,500	92
Total	463.28		374.33		1946
First-round impact as % of total impact					65
Total indirect effect of brewing sector (including second-round effects)					2,993

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

A considerable number of the supplies for the beer sector are also purchased within the transport sector, agriculture and the media and marketing sector. Based on the combination of data from the brewing sector in Denmark and data from the previous study, it is estimated that the indirect employment effect is approximately 3,000 employees in the supplying sectors.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

13.5 Retail and hospitality sectors

Hospitality sector

The economic impact of Danish breweries on the hospitality sector is assessed as follows:

- About 27% of all beer consumed in Denmark is sold by the hospitality sector (on-trade), which means almost 1.3 million hectolitres is sold on-trade.
- The average consumer price of beer in Danish pubs and restaurants is estimated at 9.70 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 1.3 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 1 billion euros (using a 25% VAT tariff).
- With an average hospitality turnover of 48,100 euros (excluding VAT) per person, this results in 21,000 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

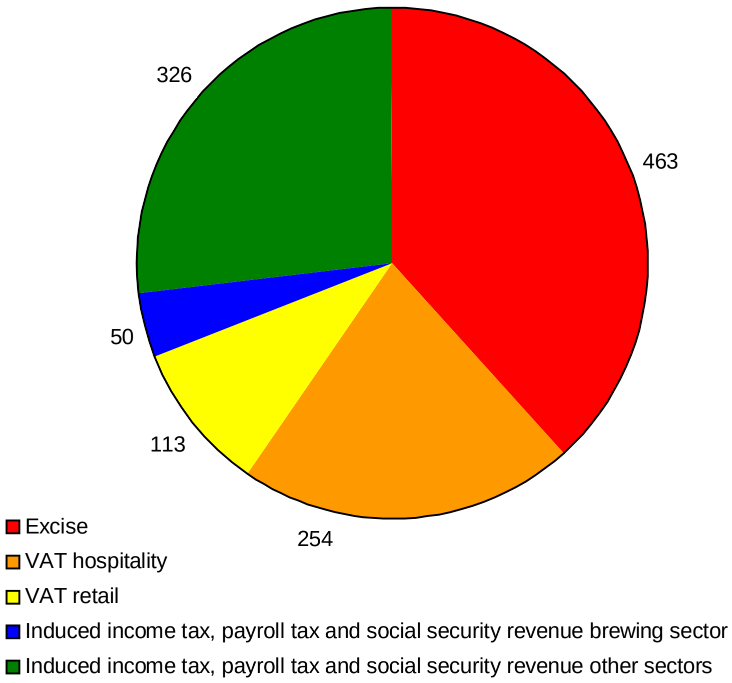
- Around 73% of total beer consumption (3.5 million hectolitres) in Denmark is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.60 euros per litre (including VAT), total retail consumer spending on beer is estimated at 565.3 million euros. Total consumer spending excluding VAT is thus 452.2 million euros.
- With turnover per employee estimated at 404,300 euros (excluding VAT), this means 1,100 people owe their jobs to retail beer sales.

13.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1.2 billion euros:

- VAT revenues are estimated at 367 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- Total excise revenues on beer are 463 million euros.
- Income-related revenues due to beer production and sales are approximately 376 million euros. They consist of 348 million euros in income tax, 19 million euros social security contributions paid by employees and 9 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 889 million euros



Source: Ernst & Young calculation (2009)

14 Estonia: Economic impact of beer

14.1 Highlights of the economic impact

Total production (in hectolitres)	1,280,000
Total exports (in hectolitres)	210,000
Total imports (in hectolitres)	120,000
Total consumption (in hectolitres)	1,190,000
Number of brewing companies (including micro brewing companies)	4
Number of breweries (including microbreweries)	4

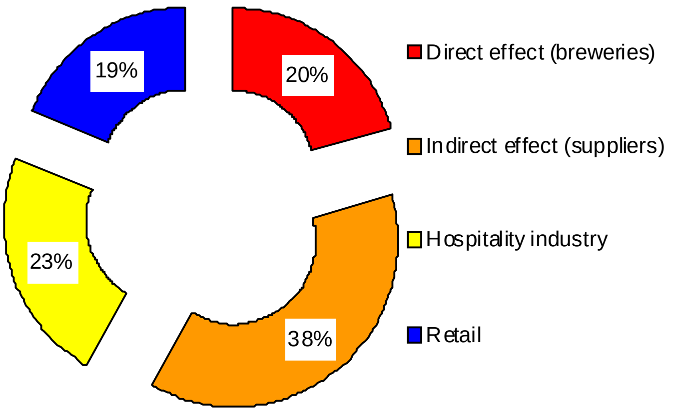
Source: Association of Estonian Brewers (2009); Ernst & Young calculation (2009)

The economic impact of the brewing sector can be expressed as follows.

- Estonian brewers brewed 1.28 million hectolitres of beer in 2008, of which 16.4% was exported.
- The direct employment in the Estonian brewing sector is 872 jobs.
- Indirect and induced employment through beer production and sales amounts to 1,600 jobs with suppliers, 1,000 jobs in the hospitality sector and 800 jobs in retail outlets.
- Government revenues are estimated at 67 million euros. They consist of 27 million euros excise, 28 million euros VAT and 12 million euros income-related contributions and taxes.

The employment impact of the brewing sector is presented below:

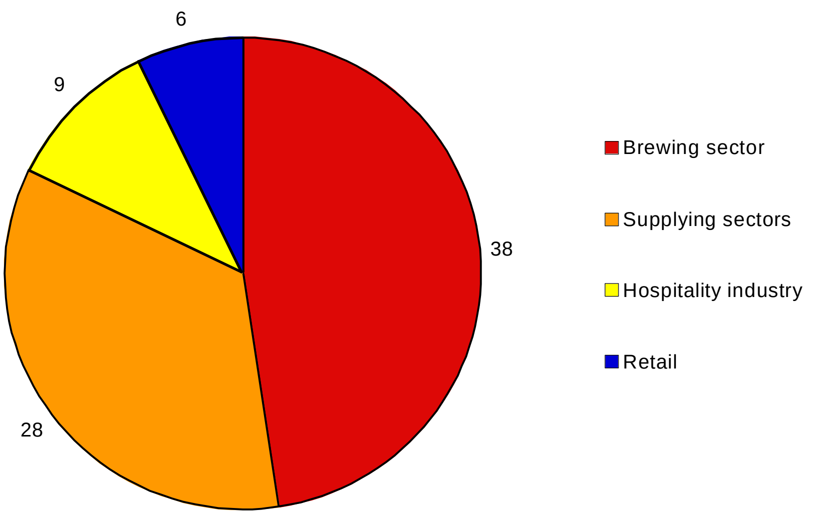
Total employment because of beer: 4,300 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Estonian economy can also be expressed in terms of value-added. Total value-added of the brewing sector in Estonia and value-added generated by firms in the supply, hospitality and retail sectors arising from the production and sales of beer amounts to around 80 million euros:

Value added due to the production and sale of beer: 80 million euros



Source: Ernst & Young calculation (2009)

The share of the brewing sector in overall value added arising from the production and sale of beer is estimated at 48%. This is far more than the share of direct employment connected to breweries as a fraction of total employment arising from the production and sales of beer (20%). An explanation for this is that productivity in terms of value-added per employee in the Estonian brewing sector is very high compared to other sectors.

14.2 Industry and market structure, trends and developments

Estonian brewers produced 1.280 million hectolitres of beer in 2008. An additional 120,000 hectolitres were imported while 210,000 hectolitres of beer were exported. The consumption of beer in 2008 was 1.19 million hectolitres in total and 95 litres per capita.

The Estonian brewing sector is highly concentrated. 96% of total domestic production is produced by the three largest brewers. The leader has a market share of 46%. Besides these three biggest players, there are four smaller (local) breweries producing the remaining 4% of domestic beer.

Brewing sector internal characteristics:

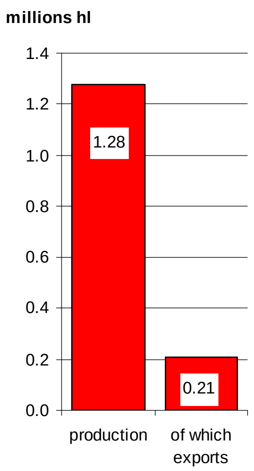
- There is a consolidated market with three large breweries.
- Estonian beer consumption has decreased from 1.34 million hectolitres in 2006 to 1.19 million hectolitres in 2008.

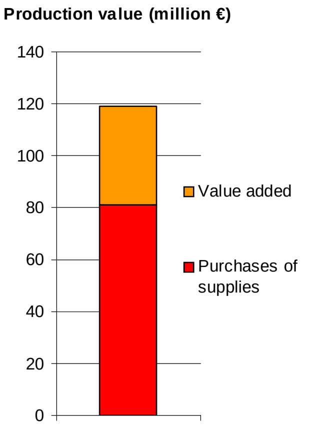
Context in which the brewing sector operates:

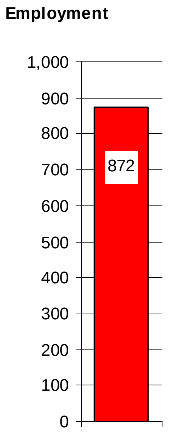
- Since Estonia's recent membership of the European Union, wages and overall price levels have increased significantly in recent years.
- A ban on smoking in Estonian bars, restaurants and nightclubs was introduced on 5 June 2007.
-

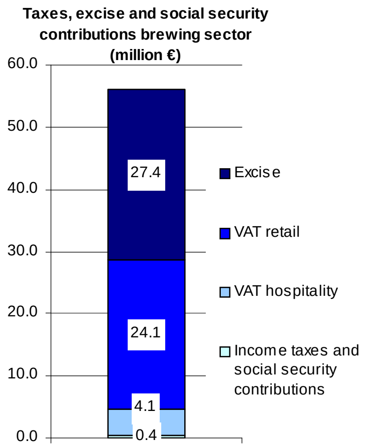
14.3 Direct effect of the brewing sector

The Estonian brewing sector employs 872 people who realise a value-added of some € 38 million euros. The total production value of Estonian breweries is 119 million euros of which 68% is spent on purchasing goods and services. The government also benefits from beer production. Excise and VAT revenues accounted for 27 million and 28 million euros respectively. Employees and employers in the brewing sector paid 4.50 million euros in income taxes, social security contributions and payroll taxes.









Source: Ernst & Young calculation (2009)

14.4 Economic impact of breweries on goods and services suppliers

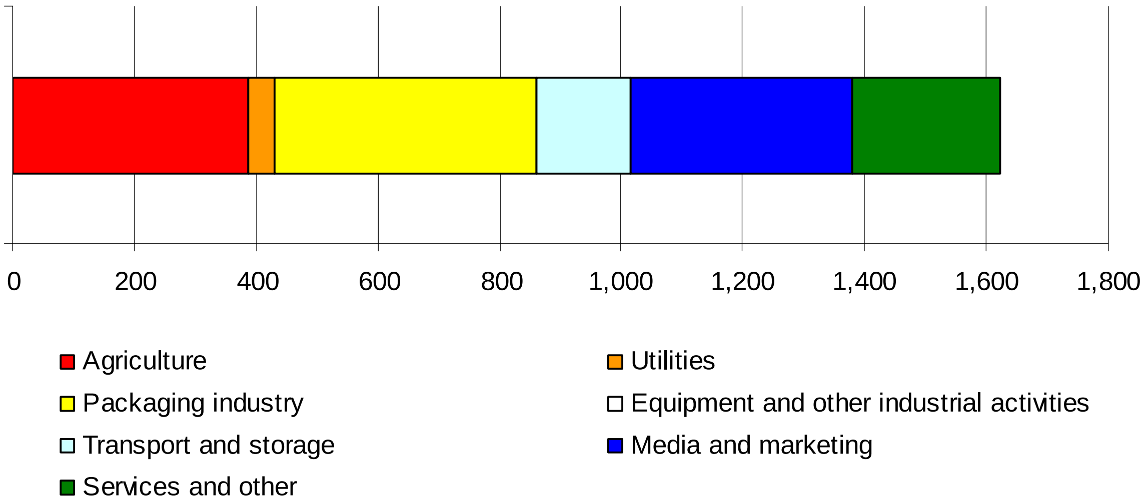
The Estonian brewing sector spends approximately 81 million euros on purchasing goods and services. Because Estonia has a small and open economy, only 63% of this expenditure is spent domestically. In particular, most agricultural materials are imported. The domestic expenditures of Estonian breweries induce approximately 1,600 jobs in various sectors. The agricultural sector, packaging industry and media and marketing profit most.

Sectors	Stimulus	Stimulus for Estonia		Turnover per employee	Number of
	(mln. €)	%	(mln. €)	(in €)	employees
Agriculture	16	30	5	18,989	252
Utilities	4	100	4	145,000	27
Packaging industry	31	50	16	56,300	279
Equipment	0	20	0	56,300	0
Transport	12	80	10	97,900	102
Media, marketing	10	95	10	41,451	236
Services	7	95	7	41,451	158
Total	81		51		1,054
First-round impact as % of total impact					65
Total indirect effect of brewing sector (including second-round effects)					1,622

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

14.5 Retail and hospitality sectors

The retail sector is the dominant outlet channel for beer in Estonia. 95% of all beer sales occurs in supermarkets and other retail outlets.

Hospitality sector

Employment arising from beer sales in the hospitality sector is estimated at 1,000 jobs:

- Around 5% of beer consumption in Estonia occurs in the hospitality sector.
- This means approximately 59,500 hectolitres are sold by Estonian pubs, restaurants and the like.
- The consumer price of beer is about 4.50 euros per litre (incl. 18% VAT), so that consumers are estimated to spend 26.7 million euros (incl. VAT) on beer in pubs and restaurants. Ex VAT the value of this consumption is 23 million euros.
- Turnover per employee in the Estonian hospitality sector is 23,400 euros a year.
- Total employment in the Estonian hospitality sector attributable to beer is thus 1,000 jobs.

Retail

The importance of the brewing sector for retail in terms of jobs can be similarly assessed:

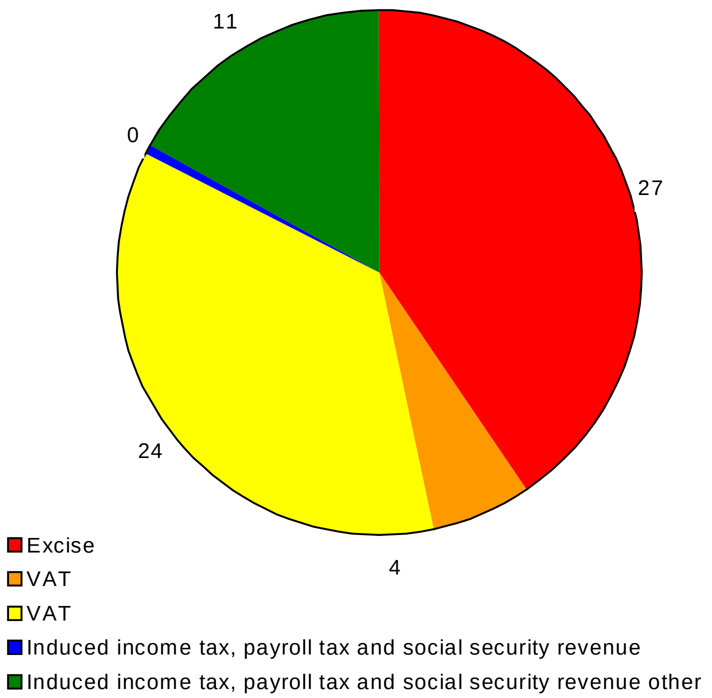
- 1.1 million hectolitres of beer are sold by supermarkets and other retail companies.
- With an average consumer price of 1.4 euros per litre (incl. 18% VAT), total consumer spending on retail beer is estimated at 158.2 million euros. Ex VAT it is 134 million.
- Because turnover per employee is estimated at 167,100 euros, this means approximately 800 people owe their jobs to the sale of retail beer.

14.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 67 million euros:

- The VAT revenues of these beer sales are 28 million euros, of which 4 million is generated in the hospitality sector and 24 million in the retail sector.
- The total excise revenues due to the brewing industry amount to 27 million euros.
- Approximately 12 million euros in income-related taxes and contributions are paid due to beer production and sales. They consist of 4 million euros income tax, 0.1 million euros social security contributions paid by employees and 8 million euros social security contributions and payroll taxes paid by employers.

Government revenues due to the production and sale of 67 million euros



Source: Ernst & Young calculation (2009)

15 Finland: Economic impact of beer

15.1 Highlights of the economic impact

Total production (in hectolitres)	4,470,000
Total exports (in hectolitres)	183,000
Total imports (in hectolitres)	471,000
Total consumption (in hectolitres)	4,673,000
Number of brewing companies (including micro brewing companies)	18
Number of breweries (including microbreweries)	20

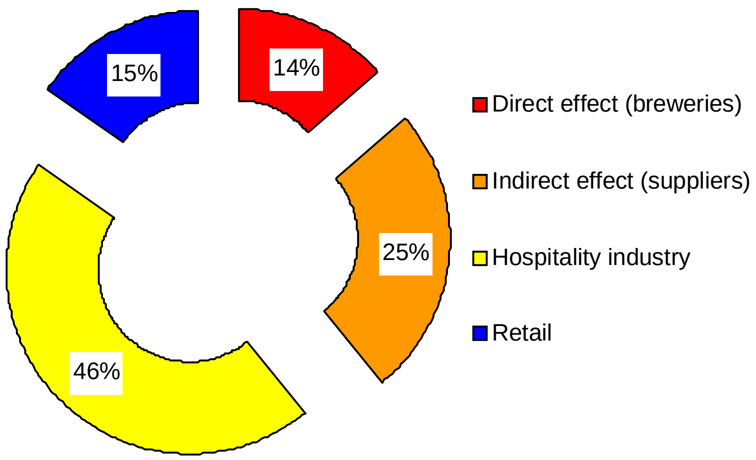
Source: Finnish Federation of the Brewing and Soft Drinks Industry: Panimoliitto (2009)

- Finnish brewers brewed 4.47 million hectolitres of beer in 2008, of which 0.18 million hectolitres were exported.[64]
- There are three large brewing companies in Finland and 15 small companies and microbreweries.
- Approximately 2,400 people are employed in the Finnish breweries.[65] The employment in supply sectors due to the production and sale of beer amounts to 4,400 jobs. 7,900 jobs in the hospitality sector and 2,700 jobs in the retail sector can be attributed to the sale of beer.
- The total employment impact due to beer production and sales in Finland is thus 17,500 jobs.
- The government also benefits from the brewing sector, receiving some 1.137 million euros in taxes and excises. Excise revenues amount to 405 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 397 million euros, while revenues from direct personal taxes paid by Finnish brewery employees, their suppliers and in hospitality and retail add up to some 336 million euros.
- With 1.18 euros on a litre of beer (5% alcohol) the excise in Finland is the highest in the European Union.

64 Production figures only include production by members of the Finnish Federation of the Brewing and Soft Drinks Industry (Panimoliito), who together have a 93% market share in Finland. Small and microbreweries are not included. The consumption figures include the total domestic sales and an estimation of the private imports of beer. The Finnish breweries also produce cider, long drinks, soft drinks and mineral water. The number of jobs is the total number of persons employed within the breweries.

The employment impact of the brewing sector is presented below:

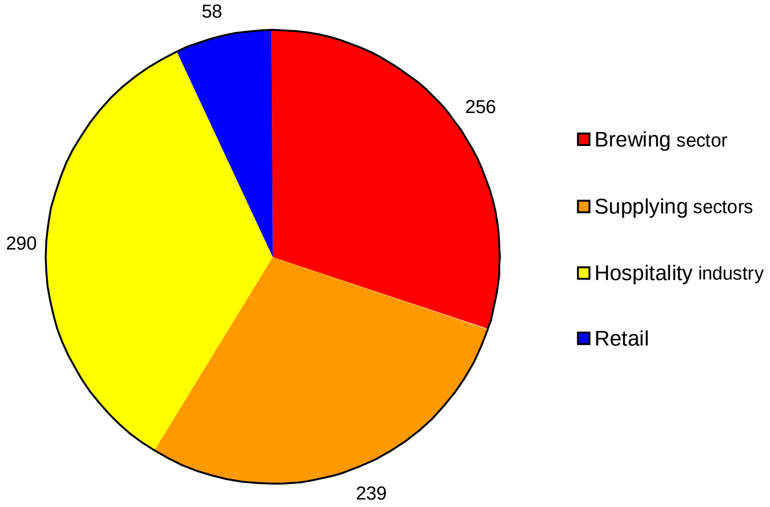
Total employment because of beer: 17,500 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Finnish economy can also be expressed in terms of value-added. Total value-added of the brewing sector in Finland and value-added generated by firms in the supply, hospitality and retail sectors arising from the production and sale of beer amounts to around 843 million euros:

Value added due to the production and sale of beer: 843 million euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 30%. This is much higher than the share of direct employment in breweries as a fraction of total employment due to beer production and sales in Finland (14%). This means that productivity in the brewing sector, expressed in value-added per person employed is relatively high in comparison with other sectors.

15.2 Industry and market structure, trends and developments

The alcoholic drinks market in Finland is highly regulated. The most important example of this is the high level of excise rates on beer. In anticipation of European Union membership of neighbouring country Estonia, the excise rate was lowered by 32% in 2004, but at the beginning of 2008 the Finnish government decided to modify taxation on fermented alcoholic beverages once again and increased it by 10%. The excise on a litre of beer (5% alcohol) is now 1.18 euros, the highest in the European Union. Because of this high taxation the selling price of beer in Finland is rather high compared with neighbouring countries, resulting in private imports from these countries. The Finnish Federation of the Brewing and Soft Drinks Industry (Panimoliito) states that private imports of beer amounted to 0.207 million hectolitres in 2008, purchased mainly in Estonia and on ships.

Although the excise rates and the selling prices of beer are rather high in Finland, consumption per capita is above the European average (approximately 87 litres per capita).[66] Total beer consumption in Finland in 2008 amounted 4.673 million hectolitres, of which 0.471 million hectolitres were imported.[67] In 2007 approximately 78.3% of the beer sales took place in regular retail outlets. Beer with more than 4.7% alcohol is sold only through state-owned ALKO outlets. Between 2001 and 2007 the share of these outlets in total beer sales decreased by almost 50%. The share of restaurants in total beer sales also decreased, from 26.5% in 2001 to 19.1% in 2007. In our calculations for 2008, 82.8% of the consumption was purchased off trade, 17.2% on trade.

	2001	2002	2003	2004	2005	2006	2007
Sales by alcohol percentage (hectolitres)							
Over 4.7%	283,350	280,180	257,190	229,500	208,410	204,150	186,380
2.9 - 4.7%	3,680,140	3,737,330	3,679,430	3,865,160	3,973,360	3,985,560	4,014,490
Less than 2.9%	121,120	118,570	100,840	84,450	72,820	66,990	62,300
Total	4,084,610	4,136,090	4,037,460	4,179,180	4,254,590	4,256,700	4,263,170
Sales by distribution channel (%)							
Retail outlets	68.5	69.2	70.2	73.8	75.3	77.1	78.3
Restaurants	26.5	25.8	25.2	22.4	20.8	20.0	19.1
Alko outlets	5.0	5.0	4.6	3.8	3.9	2.9	2.6

Source: Finnish Federation of the Brewing and Soft Drinks Industry: Panimoliitto (2009)[68]

There are three large brewing companies in Finland and approximately 15 small breweries and microbreweries. Total production in 2008 was approximately 4.470 million hectolitres of which 0.0183 million hectolitres were exported.

Factors that influence the impact of the brewing sector on the Finnish economy are the following:

Brewing sector internal characteristics:

- There are three strong players on the Finnish beer market, which have market shares of approximately 44, 32 and 16%.[69]
- The largest Finnish brewers also produce soft drinks, long drinks, cider and mineral water.

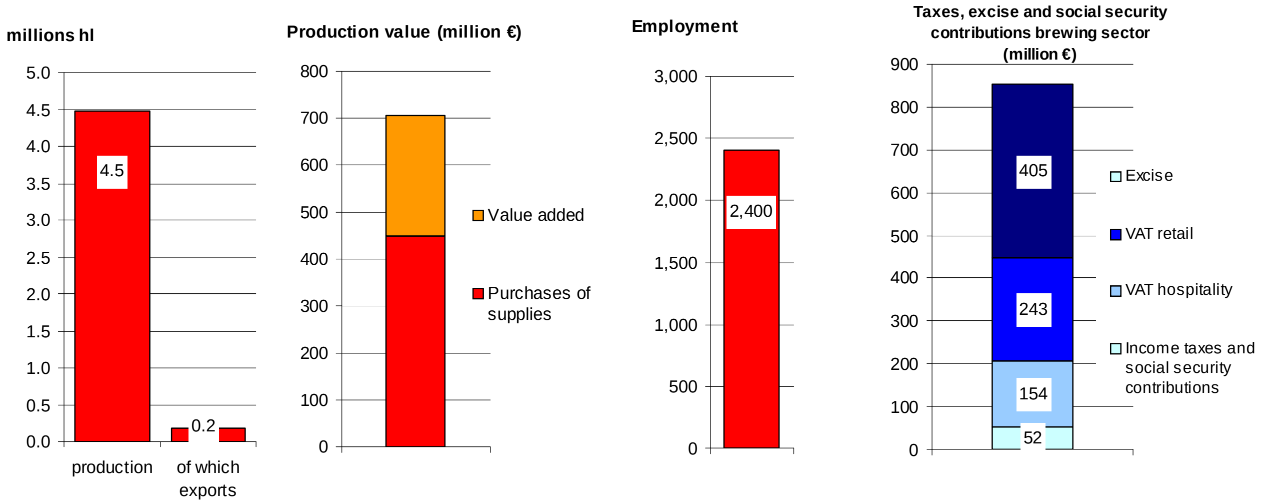
Context in which the brewing sector operates:

- Because of the high excise rates in Finland and competition by private exports from the Estonian market, the margins on beer are under pressure.
- Finnish beer consumption grew slightly in recent years.

66 Source: Canadean Ltd: Global Beer Trends, 2008.
67 Source: Finnish Federation of the Brewing and Soft Drinks Industry: Panimollitto, 2009.
68 The consumption figures include total domestic sales and an estimation of the private imports of beer, while private imports are not included in the sales figures in the table.
69 Source: Canadean Ltd: Global Beer Trends, 2008.

15.3 Direct effect of the brewing sector

Direct effects are not easily available since Finnish brewers also produce mineral water and soft drinks. Beer constitutes approximately 50% of the volume produced by the members of the Finnish Federation of the Brewing and Soft Drinks Industry (Panimoliitto). The number of employees of these members is around 2,400. According to Eurostat, the production value of the brewing sector arising from manufacturing beer was 706 million euros in 2006, of which 256 million euros were value-added.



Source: Ernst & Young calculation (2009)

15.4 Economic impact of breweries on goods and services suppliers

While 256 million euros of the output stays within the firms as value added, the other 450 million euros accrues to a number of suppliers.[70] This stimulus has a significant economic impact on sectors outside the brewing sector, most substantially on the services sector:

Sectors	Stimulus[71] (mln, €)	Stimulus for Finland %	Stimulus for Finland (mln, €)	Turnover per employee[72] (in €)	Number of employees
Agriculture	72.9	89	65	48,987	1324
Utilities	35.1	98	34	700,100	49
Packaging industry	108.45	83	90	345,600	260
Equipment	59.45	83	49	345,600	143
Transport	68.4	98	67	164,900	407
Media, marketing	94.05	98	81	128,889	628
Services	11.07	86	10	128,889	78
Total	450		397		2,889
First-round impact as % of total impact					65%
Total indirect effect of brewing sector					4,444

Source: Ernst & Young calculation (2009); Eurostat (2006)

Almost half of the indirect employment generated by the brewing sector is within the agricultural sector. Other substantial effects are seen in media and marketing, transport and the packaging industry. The total first-round employment effect of the brewing sector on supplying sectors amounts to almost 2,900 jobs. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 4,400 jobs.

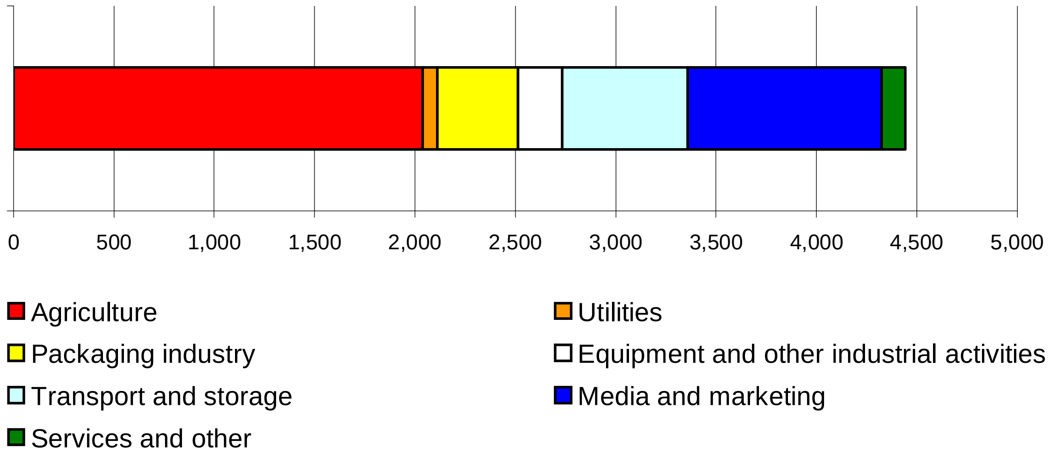
70 Source: Eurostat, 2006.

71 (Domestic) stimulus is calculated on the basis of the questionnaire survey and Eurostat data.

72 Turnover per employee is obtained from Eurostat.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

15.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 17.2% (2008 figure) of all beer consumed in Finland is sold by the hospitality sector (on-trade), which means almost 0.8 million hectolitres is sold on-trade.[73]
- The average consumer price of beer in Finnish pubs and restaurants is estimated at 10.6 euros a litre (including VAT) [74], so that total consumer spending on beer in the hospitality sector is 854 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 700 million euros (using a 22% VAT tariff).
- With an average hospitality turnover of 88,200 euros (excluding VAT) per person[75], this results in 7,900 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Around 82.8% (2008 figure) of total beer consumption (3.9 million hectolitres) in Finland is sold by supermarkets and other retail outlets.
- With an average consumer price of 3.48 euros per litre (including VAT), total retail consumer spending on beer is estimated at 1.3 billion euros. Total consumer spending excluding VAT is thus 1.1 billion euros.
- With turnover per employee estimated at 410,500 euros (excluding VAT), this means 2,700 people owe their jobs to retail beer sales.

73 Source: Finnish Federation of the Brewing and Soft Drinks Industry: Panimoliitto, 2009.

74 Source: Finnish Federation of the Brewing and Soft Drinks Industry: Panimoliitto, 2009.

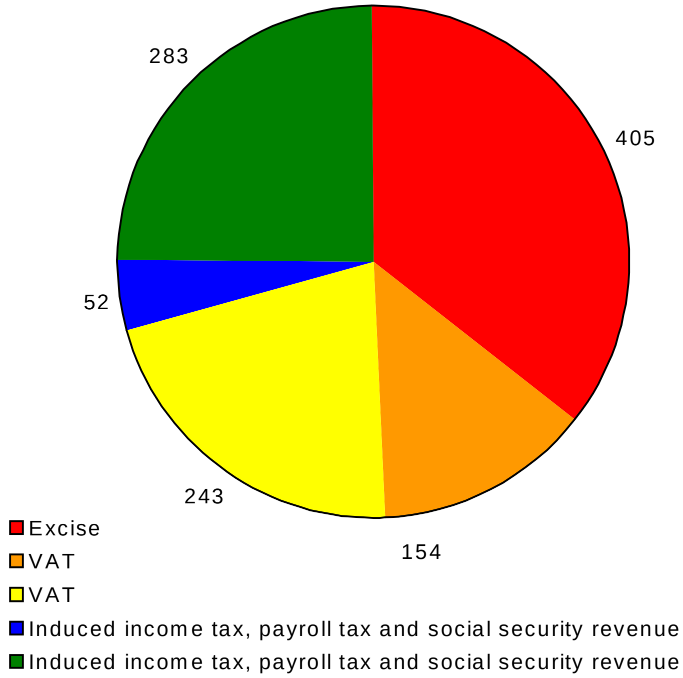
75 Source: Eurostat, 2006.

15.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1,137 million euros:

- VAT revenues are estimated at 397 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 405 million euros.
- Income-related revenues due to beer production and sales are approximately 336 million euros. They consist of 146 million euros income tax, 44 million euros social security contributions paid by employees and 145 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.137 billion euros



Source: Ernst & Young calculation (2009)

16 France: Economic impact of beer

16.1 Highlights of the economic impact

Total production (in hectolitres)	15,235,000 (*)
Total exports (in hectolitres)	2,369,000
Total imports (in hectolitres)	5,915,000
Total consumption (in hectolitres)	18,781,000
Number of brewing companies (including micro brewing companies)	130
Number of breweries (including microbreweries)	132

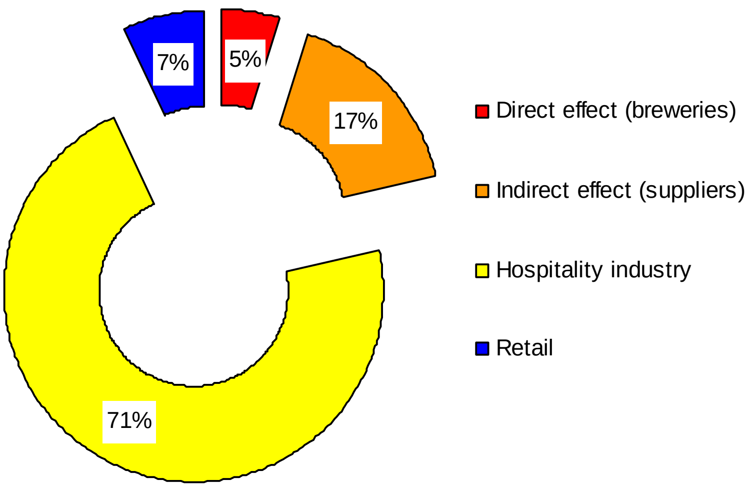
Source: Brasseurs de France (French Brewers' Association) (2008) (*): including an estimation of the production of a non-member.

The most important characteristics of the French beer market are:

- French breweries employ 3,550 staff directly.
- Because of goods and services bought in supplying sectors, additional indirect employment of around 11,931 employees is generated. In the hospitality sector 51,100 personnel owe their jobs to the brewing sector. In retail this is 4,900 staff. The French brewing sector generates total indirect employment of 71,500 jobs.
- Tax revenues for the French government from the production and sale of beer are estimated at around 2.591 billion euros (312 million euros excise, 1.070 billion euros VAT and 1.209 billion euros on direct income taxes and social security contributions paid by workers in the beer industry, the supplying industries, hospitality and retail).

The employment impact of the brewing sector is presented below:

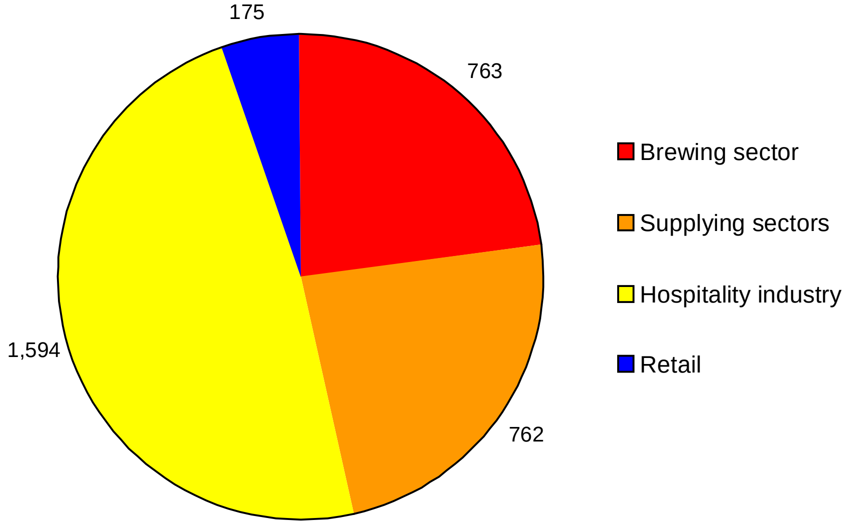
Total employment because of beer: 71,500 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology)

The contribution of the brewing sector to the French economy can also be expressed in terms of value-added. The total value-added generated by these 71,500 jobs is estimated at 3.29 billion.

Value added due to the production and sale of beer: 3.29 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 23%, which is far higher than the brewing sector share in total employment arising from beer (5%). A significant explanation for this is the high productivity of brewing sector employees.

16.2 Industry and market structure, trends and developments

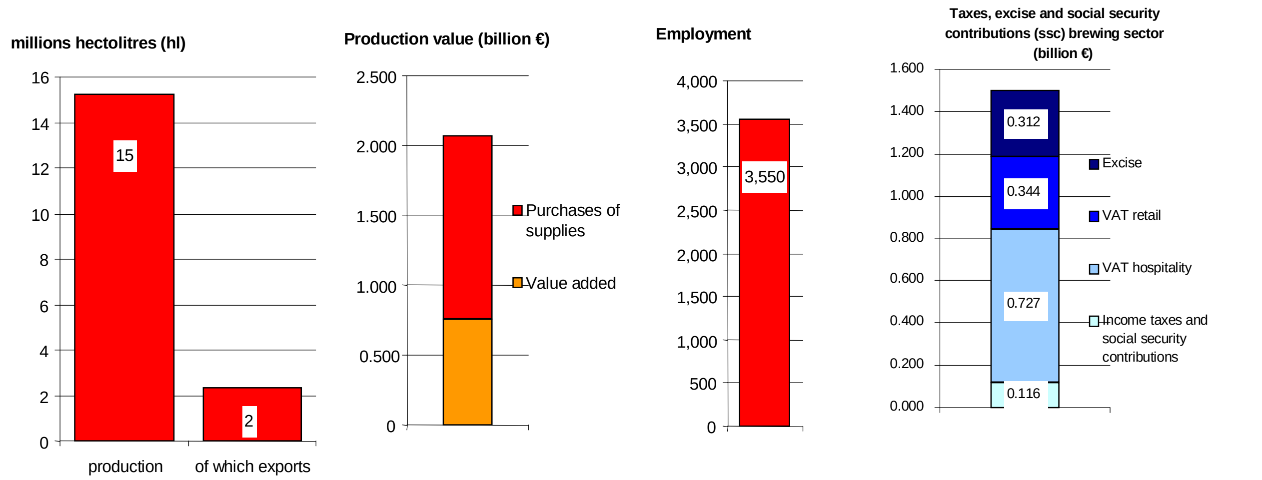
France is traditionally a wine-drinking country, featuring by far the lowest levels of spending on beer out of total alcoholic drinks expenditure. France, which is known as a major wine-producing and exporting country, consumes far more wine than beer.[76] Per capita beer consumption stood at approximately 30 litres in 2008, less than half the quantity consumed in the UK. Different habits of consumption in various parts of France complicate the situation somewhat. Beer is most frequently drunk in the north of France and in Alsace.[77] In French cities, demand is growing for speciality beers, mainly from younger consumers. The French beer market is concentrated.

Two brewing companies, both belonging to one of the major five brewing companies in Europe, together represent around three-quarters of the French beer market. France has a large group of artisanal producers of beer in small quantities. Retail is by far the largest sales channel for beer (76% of total sales volume). Most of the large brewers have sold their own distribution systems.[78]

In France, legislation on advertising alcoholic drinks has had a significant impact on the market. The Evin law, which came into effect in January 1991, prohibited the advertising of alcohol of over 1.2% ABV on television, cinema, in books aimed at children etc. Non-creative advertising of alcohol is permitted in the press and on billboards, although with the stipulation that the advertisement must carry a message warning consumers of the dangers to health of alcohol abuse. The 'loi Evin' also prohibits sponsorship of events by alcohol producers as well as advertising on the radio when children are likely to be listening.

16.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers more than 3,550 employees who together produce beer worth over 2 billion euros. About 35% of total turnover stays within these firms as value-added (763 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made. This means that supplying sectors benefit from purchased goods and services to a value of 1.3 billion euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excise revenues accounted for 312 million euros and total VAT income for the French government was estimated at 1.07 billion euros. Employees and employers in the brewing sector paid 62 million euros in income taxes, social security contributions and payroll taxes.

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[76] Euromonitor International "Beer in France", February 2009.
[77] Brasseurs de France (2008)
[78] Euromonitor International "Beer in France", February 2009

16.4 Economic impact of breweries on goods and services suppliers

With 35% of the value of the output produced staying within the firms as value-added, the other 65% of 2 billion euros in total turnover accrues to a number of suppliers. This stimulus of 1.3 billion euros has a significant economic impact on sectors outside the brewing sector, most substantially on the services sector:

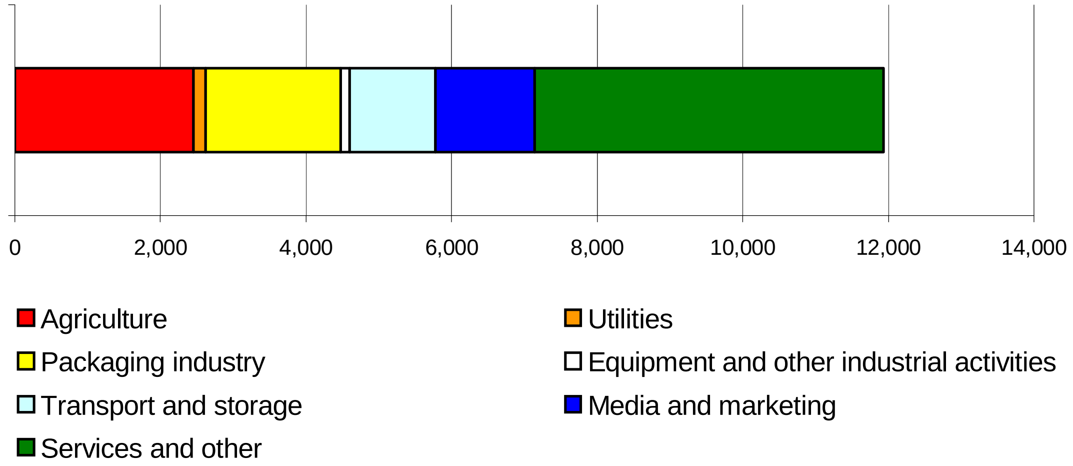
Sectors	Stimulus	Stimulus for France		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	127.35	95.0	121	75,871	1,592
Utilities	46.22	100.0	46	432,200	107
Packaging industry	391.46	80.0	313	259,700	1,206
Equipment	33.00	65.0	21	259,700	83
Transport	117.28	100.0	117	153,600	764
Media, marketing	131.82	98.0	129	145,405	888
Services	461.93	98.0	454	145,405	3,113
Total	1,309.06		1,201		7,755
First-round impact as % of total impact					65
Total indirect effect of brewing sector					11,931

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

A significant share of indirect employment generated by the French brewing sector occurs within the services industry. Other substantial effects are seen in the packaging industry, media and marketing, transport and agriculture. The total first-round employment effect of the brewing sector on supplying sectors is approximately 7,800 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 11,900 jobs.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

16.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 24% of all beer consumed in France is sold by the hospitality sector (on-trade), which means almost 4.5 million hectolitres is sold on-trade.
- The average consumer price of beer in French pubs and restaurants is estimated at 9.84 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 4.4 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 3.7 billion euros (using a 20% VAT tariff).
- With an average hospitality turnover of 72,600 euros (excluding VAT) per person, this results in 51,000 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

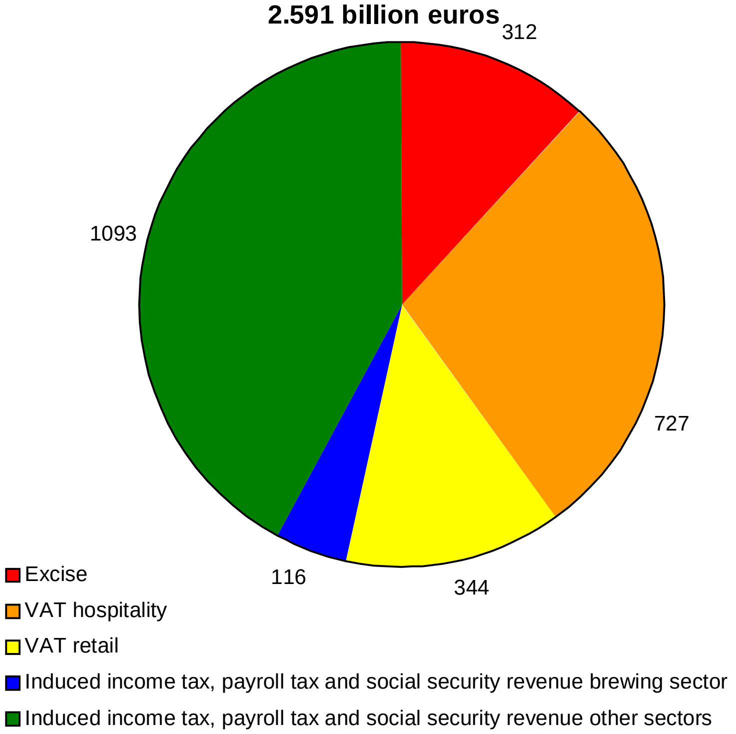
- Around 76% of total beer consumption (14.2 million hectolitres) in France is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.47 euros per litre (including VAT), total retail consumer spending on beer is estimated at 2 billion euros. Total consumer spending excluding VAT is thus 1.8 billion euros.
- With turnover per employee estimated at 357,900 euros (excluding VAT), this means 4,900 people owe their jobs to retail beer sales.

16.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 2,591 billion euros:

- VAT revenues are estimated at 1,170 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 312 million euros.
- Income-related revenues due to beer production and sales are approximately 1,209 million euros. They consist of 321 million euros in income tax, 224 million euros social security contributions paid by employees and 664 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 2.591 billion euros



Source: Ernst & Young calculation (2009)

17 Germany: Economic impact of beer

17.1 Highlights of the economic impact

Total production (in hectolitres)	103,000,000
Total exports (in hectolitres)	15,000,000
Total imports (in hectolitres)	7,000,000[79]
Total consumption (in hectolitres)	91,000,000
Number of brewing companies (including micro brewing companies)	583
Number of breweries (including microbreweries)	1,319

Source: Deutscher Brauer-Bund (2008)

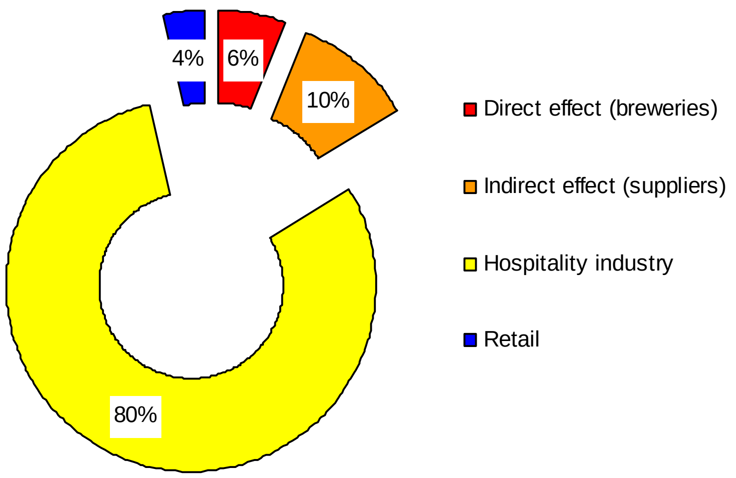
The most important characteristics of the German beer market are:

- Germany is the number-one beer producing country in Europe.
- Partly as a result, direct employment by German breweries is 30,737 jobs.
- The German brewing sector generates important indirect effects within supply sectors. It is estimated that 54,000 supply industry jobs can be attributed to the brewing sector (beer sales).
- Besides these direct and indirect effects, the hospitality sector and retailers benefit significantly from the sales of beer. Almost 417,300 jobs in the hospitality sector can be attributed to beer, while in retail approximately 19,200 jobs are created.
- The total employment impact is thus 521,200 jobs.
- The German government also benefits significantly from the brewing sector, receiving approximately 12.4 billion euros in taxes and excises. Excise revenues amount to 313 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at 4 billion euros, while revenues from direct income taxes and social security contributions paid by German brewery employees, their suppliers and in hospitality and retail add up to some 8.1 billion euros.

79 Import figure for the year 2007 instead of 2008.

The employment impact of the brewing sector is presented below:

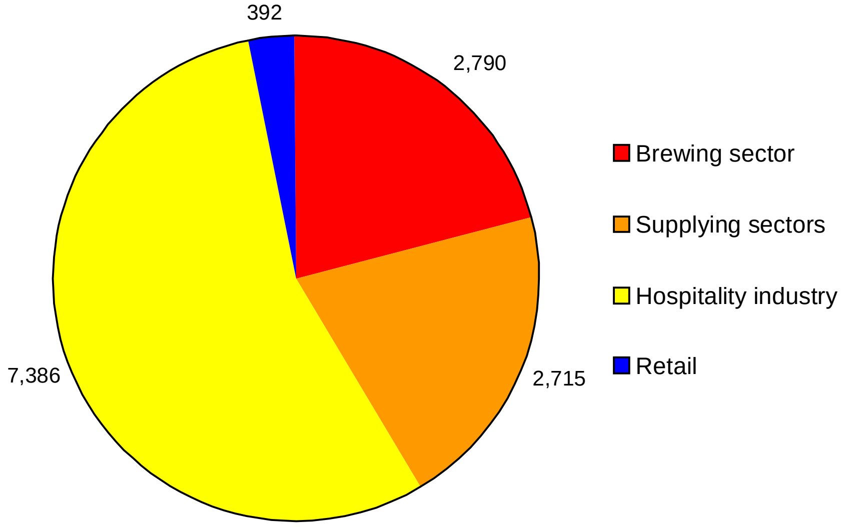
Total employment because of beer: 521,200 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the German economy can also be expressed in terms of value-added. The total value-added generated by these 521,200 jobs is estimated at 13.3 billion euros:

Value added due to the production and sale of beer: 13.283 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 21%, which is significantly higher than the brewing sector share in total employment arising from beer (6%). A significant explanation for this is the high productivity of brewing sector employees.

17.2 Industry and market structure, trends and developments

Although still the number-one beer market in Europe, the demographic influence of the ageing population has a strong impact on the beer sector in Germany.[80] Older people tend to drink less alcohol and the middle-aged segment of traditional beer drinkers is diminishing. Growth rates in beer can only come from younger and, increasingly, female consumers. These young consumer groups turn away increasingly from the traditionally tart beer, Pilsener, which accounts for over 60% of all beer volume sold in Germany.

After the increased beer consumption by more than 1% in volume terms in 2006 as a result of the Football World Cup euphoria and a particularly good summer, consumption has currently declined to approximately 9.1 billion litres.[81] The overall trend is towards lower beer consumption in Germany due to the ageing population, the health and wellness trend and different tastes of younger consumers. For the sector it is important that beer in Germany remains a significant tourist attraction with large events such as the Oktoberfest, the beer drinking festival held in Munich, Germany each year in September.

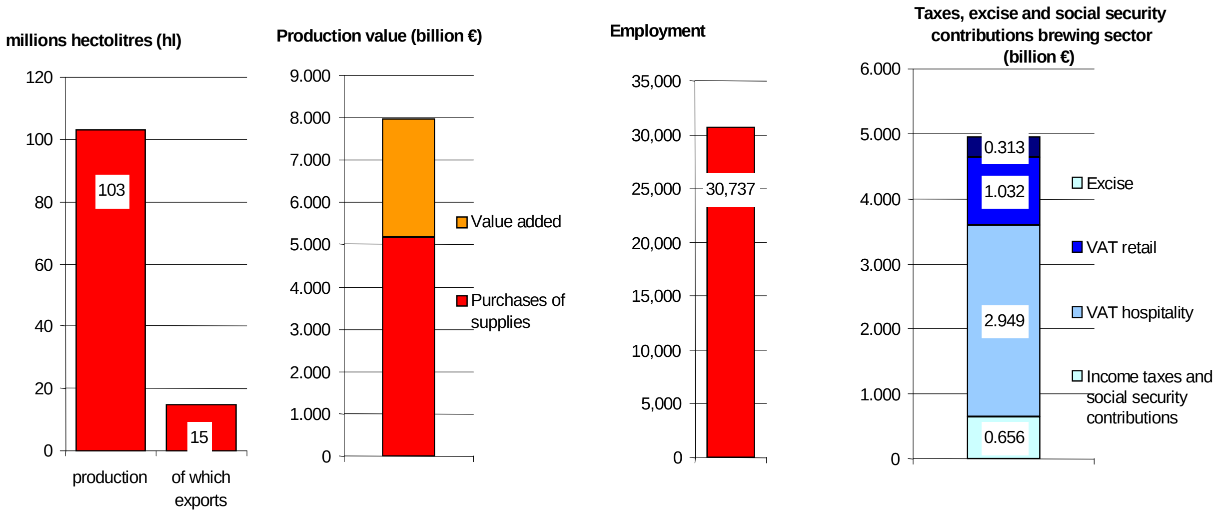
Beer is currently consumed for 71% off-trade, and 29% on trade in bars and restaurants.[82] However this ratio is significantly higher in eastern Germany, as the higher unemployment rates lead to greater beer consumption in the home rather than in bars and pubs. On-trade beer sales are declining. The main reason for this development has been the economic downturn in Germany and the country’s high unemployment rate, with consumers’ desire to save money having a strong negative impact on on-trade sales of beer.

Exports to both EU and non-EU countries increased significantly in 2006, up 6% to 11.7 million hectolitres and 9% to 3.1 million hectolitres respectively, according to the German National Office of Statistics. The main countries of export are Italy, the US and France, where the distinct taste and guaranteed quality of German beer is particularly popular. In 2008 Germany exported 15 million hectolitres of beer.

[80] Euromonitor International “Beer in Germany” , February 2008.
[81] Euromonitor International “Beer in Germany” , February 2008.
[82] Deutscher Brauer-Bund, 2008.

17.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers 30,737 employees who together produce beer worth over 7.9 billion euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises reached 313 million euros and total VAT income for the German government was estimated at 4 billion euros. Personal income taxes and social security contributions paid by employees of the brewing sector amount to 656 million euros.

The German breweries together achieved an estimated 7.9 billion euros in turnover. About 35% of total turnover stays within these firms as value-added (2.7 billion euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

17.4 Economic impact of breweries on goods and services suppliers

With 35% of the value of the output produced staying within the firms as value-added, the other 65% of 7.9 billion euros in total turnover accrues to a number of suppliers. This stimulus of approximately 5.2 billion euros has a significant economic impact on sectors outside the brewing sector:

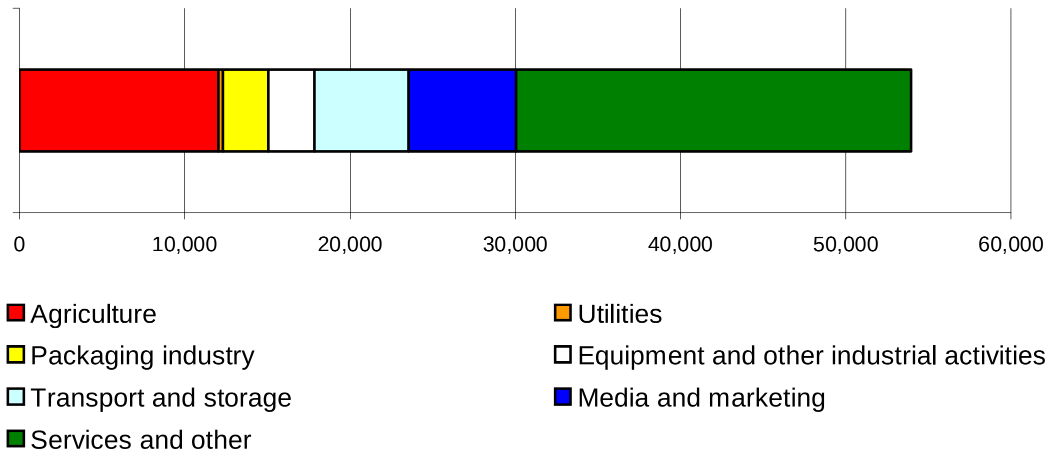
Sectors	**Stimulus**	**Stimulus for Germany**		**Turnover per employee**	**Number of employees**
	(mln, €)	**%**	**(mln, €)**	**(in €)**	
Agriculture	878.94	79.5%	699	€ 48,987	7,831
Utilities	169.24	98.7%	167	€ 968,800	172
Packaging industry	520.24	85.6%	446	€ 248,600	1,792
Equipment	526.18	85.4%	449	€ 248,600	1,807
Transport	633.90	87.4%	554	€ 149,500	3,705
Media, marketing	523.48	90%	471	€ 111,350	4,231
Services	1,963.12	89.4%	1,730	€ 111,351	15,538
Total	5,188		4,516		35,076
First-round impact as % of total impact					65
Total indirect effect of brewing sector					53,963

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006).

Almost half of all the indirect employment generated by the brewing sector is created within the services sector. Other substantial effects can be observed in agriculture, the packaging sector, the media and marketing sector and the transport sector. The total first-round employment effect of the brewing sector on supplying sectors is over 35,100 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 54,000 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

17.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 29% of all beer consumed in Germany is sold by the hospitality sector (on-trade), which means almost 26.4 million hectolitres is sold on-trade.
- The average consumer price of beer in German pubs and restaurants is estimated at 7 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 18.5 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 15.5 billion euros (using a 19% VAT tariff).
- With an average hospitality turnover of 37,200 euros (excluding VAT) per person, this results in 417,300 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

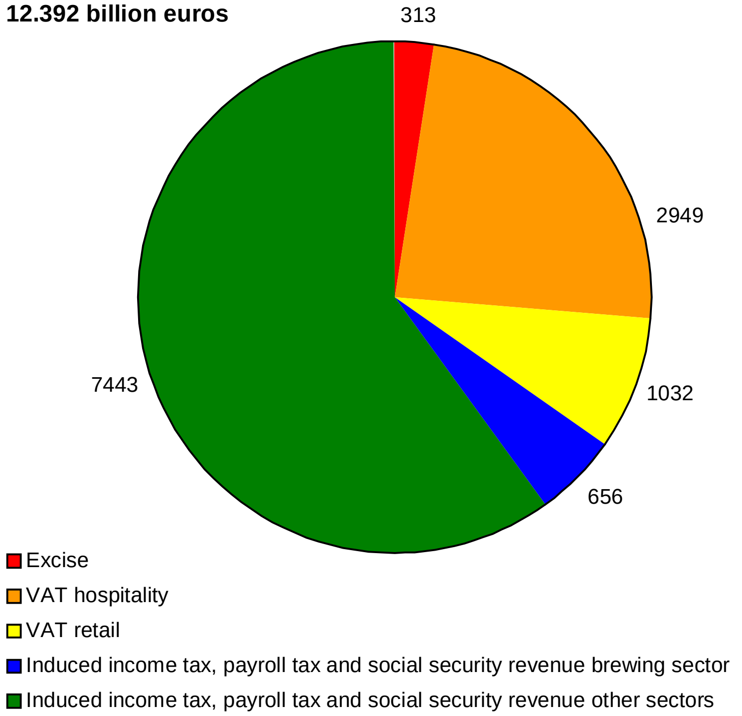
- Around 71% of total beer consumption (91 million hectolitres) in Germany is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1 euro per litre (including VAT), total retail consumer spending on beer is estimated at 6.4 billion euros. Total consumer spending excluding VAT is thus 5.4 billion euros.
- With turnover per employee estimated at 282,800 euros (excluding VAT), this means 19,200 people owe their jobs to retail beer sales.

17.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 12,392 million euros:

- VAT revenues are estimated at 3,981 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 313 million euros.
- Income-related revenues due to beer production and sales are approximately 7,443 million euros. They consist of 2,658 million euros in income tax, 2,617 million euros social security contributions paid by employees and 2,822 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 12.392 billion euros



Source: Ernst & Young calculation (2009)

18 Greece: Economic impact of beer

18.1 Highlights of the economic impact

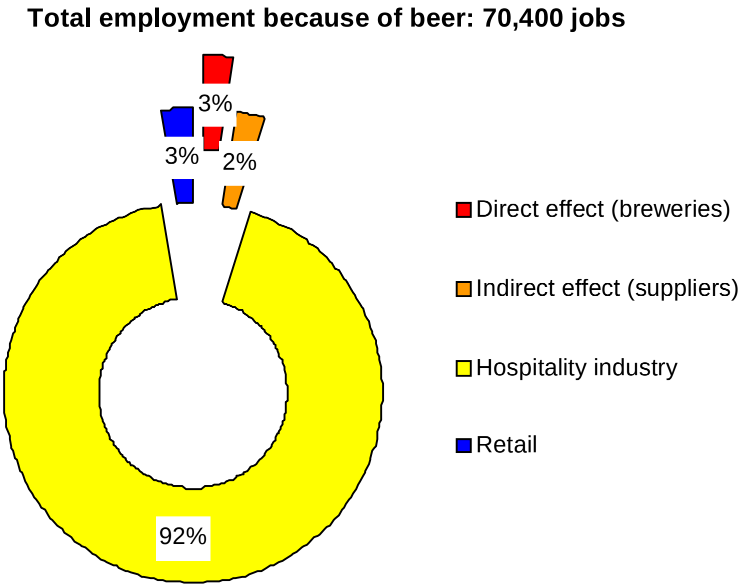
Total production (in hectolitres)	4,500,000
Total exports (in hectolitres)	400,000
Total imports (in hectolitres)	300,000
Total consumption (in hectolitres)	4,600,000
Number of brewing companies (excluding micro brewing companies)	9
Number of breweries (excluding microbreweries)	11

Source: Greek Brewers' Association (2008).

The main characteristics of the Greek beer market are:

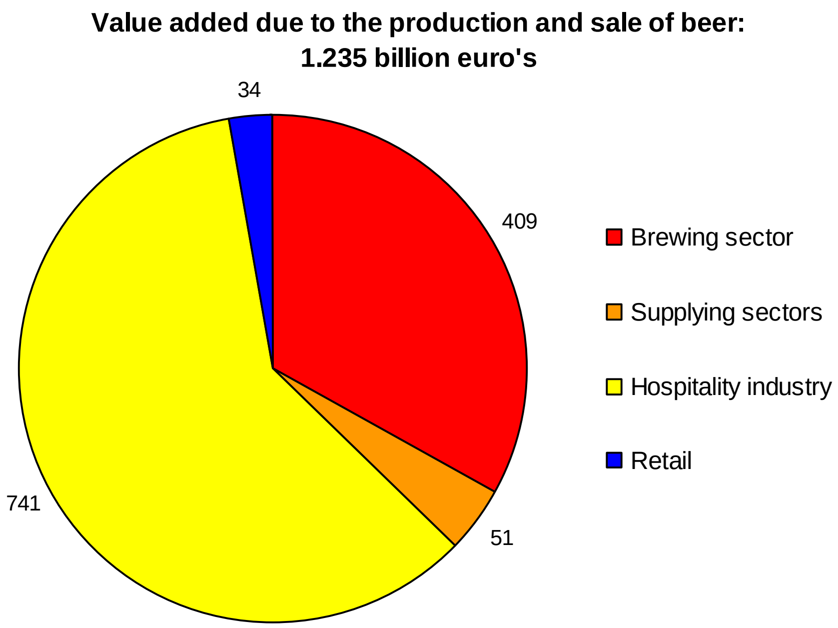
- Direct employment by Greek breweries is 1,809 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 1,700 supply industry jobs can be attributed to the brewing sector (beer sales).
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 65,000 jobs in the hospitality sector can be attributed to beer, while in retail some 1,900 people owe their jobs to beer sales.
- The total employment impact is thus 70,400 jobs.
- The government also benefits from the brewing sector, receiving some 1.04 billion euros in taxes and excises. Excise revenues amount to 60 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 444 million euros, while revenues from income taxes and social security contributions paid by Greek brewery employees, their suppliers and in hospitality and retail add up to some 536 million euros.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Greek economy can also be expressed in terms of value-added. The total value-added generated by these 70,400 jobs is estimated at 1.235 billion euros:



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 33%, which is significantly higher than the brewing sector share in total employment arising from beer (3%). A significant explanation for this is the high productivity of brewing sector employees.

18.2 Industry and market structure, trends and developments

Given its size Greece is one of Europe's smaller beer markets, with a total 2008 production of approximately 4.5 million hectolitres.

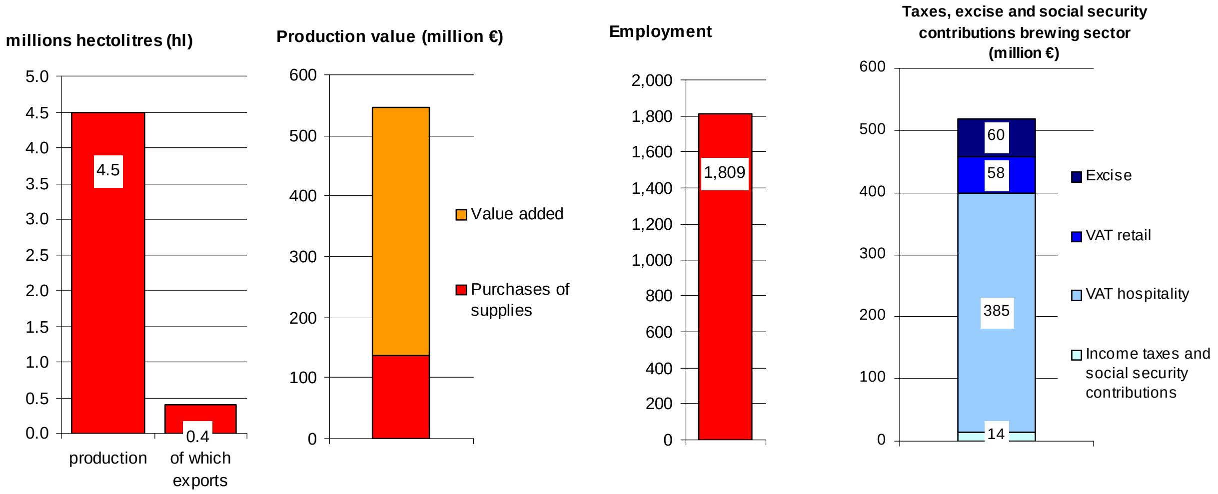
For many years one of the major European brewing companies, with its Athenian Brewery, has been the leader in Greece with a market share of 80%. Other market players are Mythos Brewery which ranks number two with an estimated market share of 10%, Hellenic Breweries of Atalanti with an estimated market share of 4% and the micro-brewery Macedonian Thrace Brewery S.A.[83]

Just three lagers (Heineken, Amstel and Mythos) make up approximately 90% of the beer sold on the Greek market. Due to the high penetration of beer in Greece and the dominance of Athenian brewery in this environment, the Athenian brewery remained the beer market leader in 2007. The recent acquisition of Mythos brewery by Carlsberg is expected to have an impact on the market, although the market leader remains unaffected as yet, securing a leading position in the rankings through its Amstel and Heineken brands.

Greece featured a high proportion of value sales through the hospitality channel, where it accounted for over 65%. This was partly due to the annual influx of tourists, who generate a considerable proportion of on-trade sales. Moreover, native Greeks tend to experiment with more expensive imported beers when they go out, given that they do not often consume such products at home, where wine is more commonly drunk. Younger consumers in Greece also increasingly socialise in cafes, bars and clubs, which further supports on-trade sales. However, a consequence of the 'brand experimentation' prevalent in Greece is that there is little brand loyalty through the hospitality channel.[84]

18.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers more than 1,809 employees who together produce beer worth 546 million euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises account for 60 million euros and total VAT income for the Greek government was estimated at 444 million euros. Direct taxes and social security contributions (ssc) paid by employees of the brewing sector are 14 million euros.

83 Source: Greek Brewers Association and Euromonitor International "Beer in Greece", March 2009.

84 Euromonitor International "Beer in Greece", March 2009.

The Greek breweries together achieved an estimated 546 million euros in turnover. About 74% of total turnover stays within these firms as value-added (409 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

18.4 Economic impact of breweries on goods and services suppliers

With 74% of the value of the output produced staying within the firms as value added, the other 26% of 546 million euros in total turnover accrues to a number of suppliers. This stimulus of 137 million euros has significant economic impact on sectors outside the brewing sector, most substantially on the packaging industry and on the media and marketing sector:

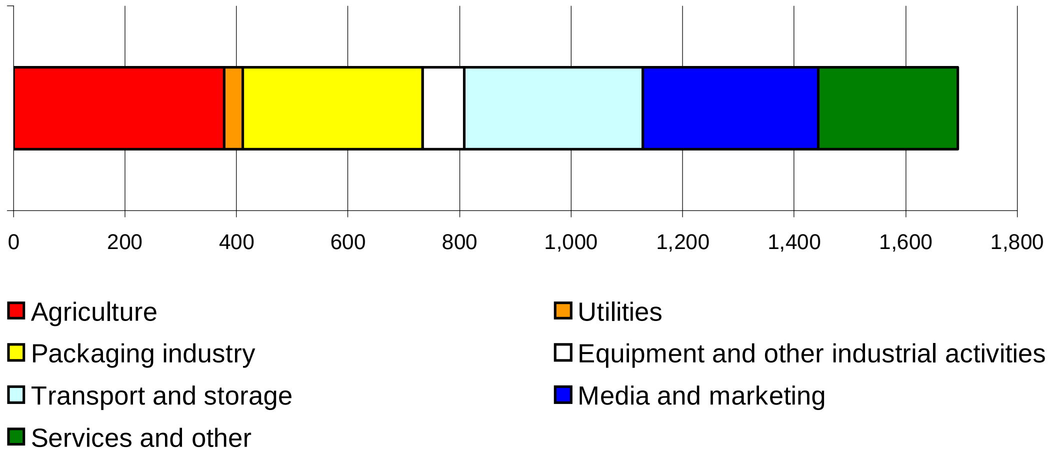
Sectors	Stimulus	Stimulus for Greece		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	13	35.0	5	18,550	246
Utilities	5	100.0	5	220,500	22
Packaging industry	45	65.0	29	138,600	209
Equipment	10	65.0	7	138,600	49
Transport	19	100.0	19	92,700	208
Media, marketing	25	95.0	24	115,922	204
Services	20	95.0	19	115,922	163
Total	137		107,02		1,101
First-round impact as % of total impact					65
Total indirect effect of brewing sector					1,694

Source: Ernst & Young calculation, (2009); Eurostat (2006)

Other substantial effects can be observed for transport and services. The total first-round employment effect of the brewing sector on supplying sectors is approximately 1,100 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 1,700 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

18.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 65% of all beer consumed in Greece is sold by the hospitality sector (on-trade), which means almost 3 million hectolitres is sold on-trade.
- The average consumer price of beer in Greek pubs and restaurants is estimated at 8.07 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 2.4 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 2 billion euros (using a 19% VAT tariff).
- With an average hospitality turnover of 31,200 euros (excluding VAT) per person, this results in 65,000 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

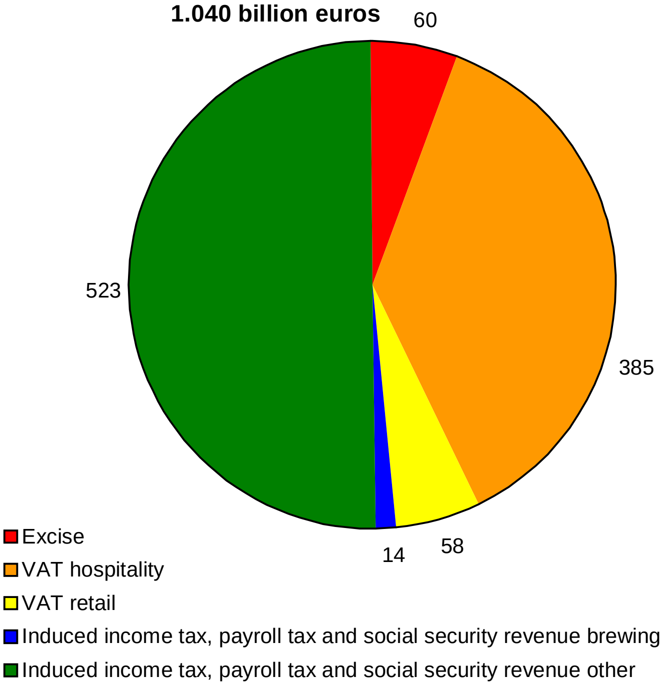
- Around 35% of total beer consumption (1.6 million hectolitres) in Greece is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 2.27 euros per litre (including VAT), total retail consumer spending on beer is estimated at 365 million euros. Total consumer spending excluding VAT is thus 307 million euros.
- With turnover per employee estimated at 161,700 euros (excluding VAT), this means 1,900 people owe their jobs to retail beer sales.

18.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1,040 million euros:

- VAT revenues are estimated at 444 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 60 million euros.
- Income-related revenues due to beer production and sales are approximately 536 million euros. They consist of 106 million euros income tax, 197 million euros social security contributions paid by employees and 232 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.040 billion euros



Source: Ernst & Young calculation (2009)

19 Hungary: Economic impact of beer

19.1 Highlights of the economic impact

Total production (in hectolitres)	7,049,000
Total exports (in hectolitres)	559,000
Total imports (in hectolitres)	463,000
Total consumption (in hectolitres)	7,100,000
Number of brewing companies (including micro brewing companies)	54
Number of breweries (including microbreweries)	55

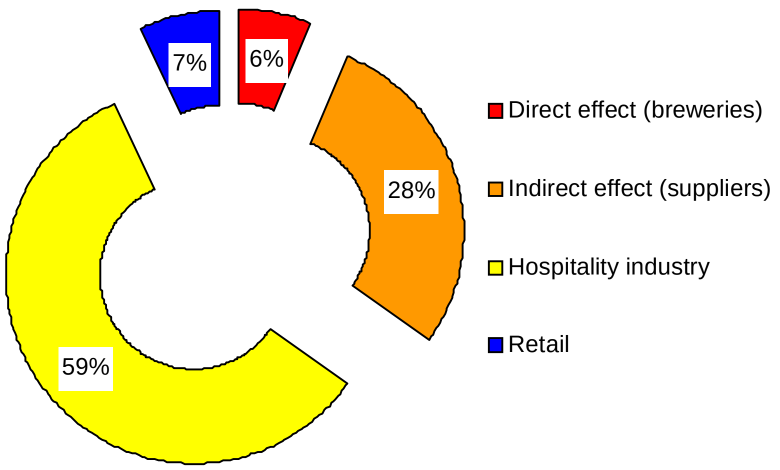
Source: National Brewers' Association in Hungary, Magyar Sörgyártók Szövetsége (2008)

The economic impact of the brewing sector can be expressed as follows:

- Total annual production of beer in Hungary in 2008 was 7.05 million hectolitres.
- The Hungarian beer market is somewhat consolidated with three major players. There are also some 50 microbreweries active in Hungary.
- Hungarian breweries provide 2,086 jobs.
- The brewing sector generates substantial indirect effects within supply sectors. It is estimated that 9,600 supply industry jobs can be attributed to the brewing sector.
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 19,800 jobs in the hospitality sector can be attributed to beer, while in retail some 2,400 people owe their jobs to beer sales.
- The total employment impact is thus 33,900 jobs.
- The government also benefits from the brewing sector, receiving some 475 million euros in taxes, social security contributions and excises. Excise revenues amount to 137 million euros; VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 149 million euros. Revenues from direct personal taxes, social security contributions and payroll taxes paid by employers and employees in the brewing sector, supplying sectors and hospitality and retail sector add up to some 184 million euros.

The employment impact of the brewing sector is presented below:

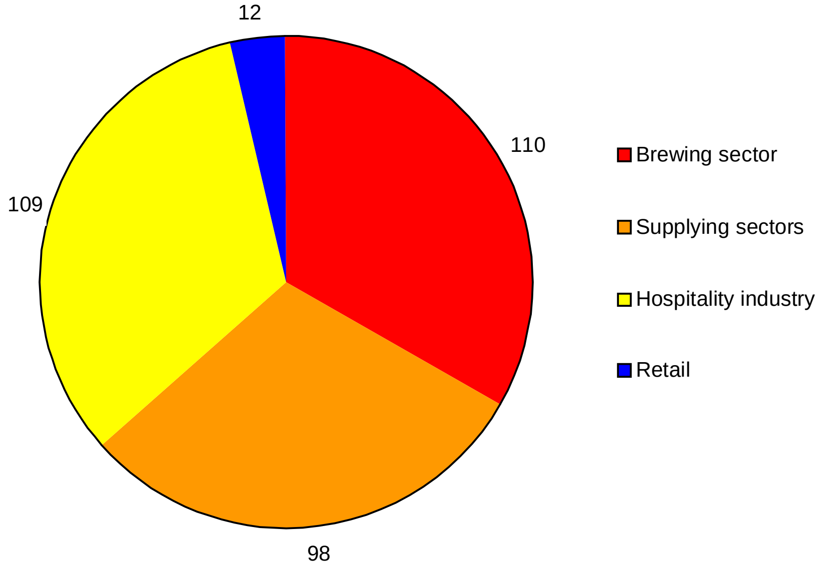
Total employment because of beer: 33,900 jobs



Source: Ernst & Young calculation, 2009 (see Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Hungarian economy can also be expressed in terms of value-added. The total value-added generated by these 33,900 jobs is estimated at 330 million euros:

Value added due to the production and sale of beer: 330 million euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 33%, which is much higher than the brewing sector share in total employment arising from beer. A significant explanation for this is the high productivity of brewing sector employees in comparison with productivity in other sectors.

19.2 Industry and market structure, trends and developments

Although Hungary might be better known as a wine-producing country, it has a significant history of commercial beer production. The first commercial brewery in Hungary was established in 1845 (by Peter Schmidt), followed shortly by other breweries, some of which are still active today. In 2008 breweries together produced 7.05 million hectolitres of beer. Beer consumption in the same year was 7.1 million hectolitres.

In the 1980s the per capita consumption was much higher. Traditionally Hungarian people do not clink their glasses when drinking beer.[85] This is usually explained by a legend about Hungarians taking a vow not to do so claiming that Austrians clinked their beer glasses when celebrating the execution of the 13 Hungarian Martyrs of Arad in 1849. Many people, mostly elderly, still follow the tradition.

There are three main players in the Hungarian beer market.[86] Together they have a market share above 80%. All three have been acquired by major multinational brewing companies. The fourth player is owned by an Austrian brewing company. Besides these four main brewing companies, there are some 50 micro breweries active in Hungary.[87]

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Hungarian economy[88]:

- Due to changes in legislation (eco-tax laws, excise increases) and the general economic impact on consumption, beer consumption has been very volatile in recent years.
- Consumption has been between 70-80 litres per capita which is well below the 1980's 100 litres per capita.
- In 2008 beer consumption reached all-time low of around 71 litres per capita. It was driven by the effects of the financial crises that reduced buying power significantly.
- The negative trend started mid-2007 and will continue or even further accelerate in 2009. The estimated market decline will be around -5%, mainly coming from the hospitality area.
- In 2009 the economic crisis in Hungary is deepening. The Hungarian brewing sector also has to deal with other negative factors, which are: +6.5% excise increase from 1 July, 5%VAT increase from 1 July and +10% excise increase from 1 January 2010. These developments will all have an adverse effect on consumption.
- On top of the volume decline, the share of cheap economic brands has been increasing. As a result consumers are turning to cheaper beers.
- The four big brewers have slightly increased their premium and mainstream share within the total market.
- Due to the eco-tax law change from 1 January 2009, imported beer enjoys a favourable position against local brewers.

Other relevant developments are:

- Hungary is visited by many tourists. During the first half of 2008 the country was visited by about 17 million tourists from all around the world.[89]
- Hungary feels the consequences of the financial crisis. Beer consumption has declined since the second half of 2007, and this trend gained speed in 2008, as total market output decreased by 7%.[90]

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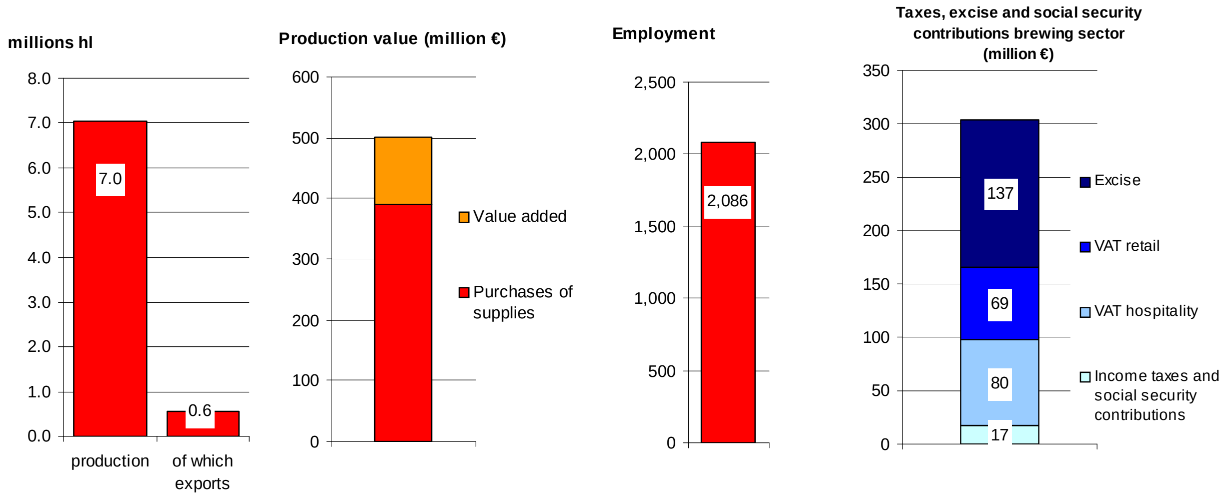
85 Beer in Hungary, Wikipedia.
86 Canadean, Global Beer Trends 2008, Country Profile Hungary.
87 National Brewers' Association of Hungary, Magyar Sörgyártók Szövetsége, 2008.
88 National Brewers' Association of Hungary, Magyar Sörgyártók Szövetsége, 2009.
89 www.hungarian-sea.com
90 National Brewers' Association of Hungary, Magyar Sörgyártók Szövetsége, Annual Report 2008.

19.3 Direct effect of the brewing sector

Hungarian breweries together produce slightly more than 7 million hectolitres of beer. Their production has a value of 500 million euros. They employ more than 2,000 people.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 137 million euros and total VAT income for the Hungarian government was estimated at 149 million euros. Personal direct taxes, social security contributions and payroll taxes paid by employees and employers in the brewing sector add up to another 17 million euros.

19.4 Economic impact of breweries on goods and services suppliers

With 22% of the value of the output produced staying within the firms as value-added, the other 78% of 500 million euros in total turnover accrues to a number of suppliers. Of this stimulus of 390 million euros, 279 million euros stays within the country. This stimulus has a significant economic impact on sectors outside the brewing sector, most substantially on the agriculture sector:

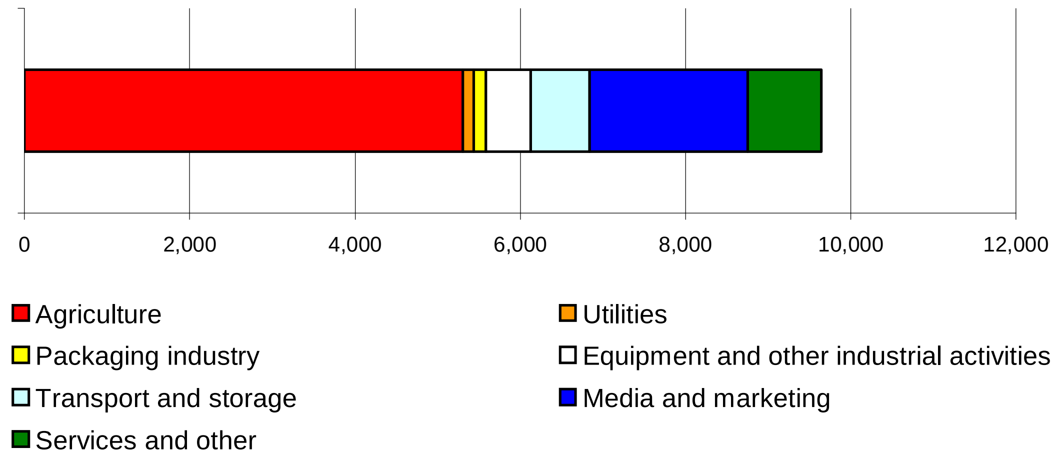
Sectors	Stimulus	Stimulus for Hungary		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	67	91	61	17,628	3.448
Utilities	19	100	19	222,300	87
Packaging industry	102	10	10	107,400	95
Equipment	49	77	38	107,400	351
Transport	32	97	31	67,500	465
Media, marketing	82	100	82	65,564	1,244
Services	38	100	38	65,564	579
Total	390		279		6,269
				First-round impact as % of total impact	65%
				Total indirect effect of brewing sector	9,644

Source: Ernst & Young calculation (2009); Eurostat (2006)

Half of all the indirect employment generated by the brewing sector is within the agriculture sector. Other substantial effects are seen in the media and marketing and services sector. The total first-round employment effect of the brewing sector on supplying sectors is estimated at almost 6,300 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact can be estimated at approximately 9,600 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

19.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 40% of all beer consumed in Hungary is sold by the hospitality sector (on-trade), which means almost 2.8 million hectolitres is sold on-trade.
- The average consumer price of beer in Hungarian pubs and restaurants is estimated at 1.69 euros a litre (including VAT)[91], so that total consumer spending on beer in the hospitality sector is 480 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 400 million euros (using a 20% VAT tariff).
- With an average hospitality turnover of 20,200 euros (excluding VAT) per person, this results in 19,800 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Around 60% of total beer consumption (4.3 million hectolitres) in Hungary is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 0,97 euros per litre (including VAT)[92], total retail consumer spending on beer is estimated at 413.2 million euros. Total consumer spending excluding VAT is thus 344 million euros.
- With turnover per employee estimated at 146,200 euros (excluding VAT), this means 2,400 people owe their jobs to retail beer sales.

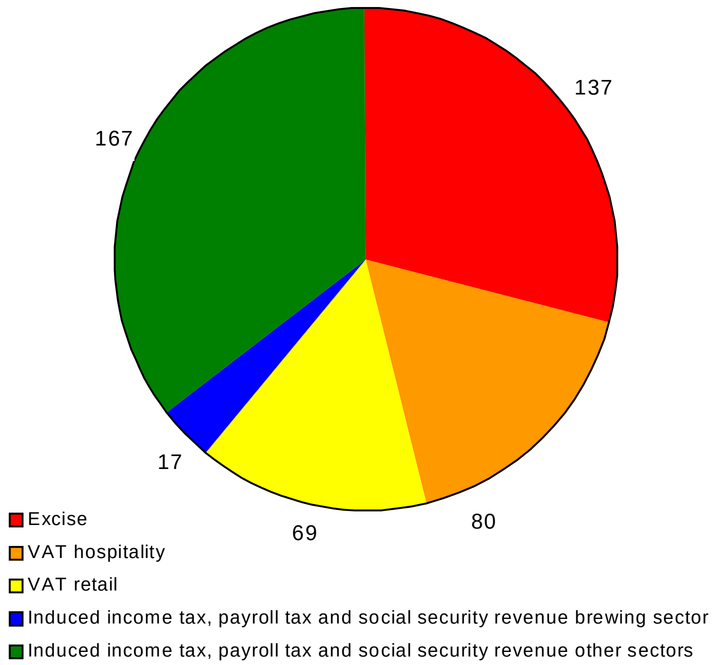
[91] National Brewers' Association of Hungary, Magyar Sörgyártók Szövetsége, 2008.
[92] National Brewers' Association of Hungary, Magyar Sörgyártók Szövetsége, 2008.

19.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 470 million euros:

- VAT revenues are estimated at 149 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 137 million euros.
- Income-related revenues due to beer production and sales are approximately 184 million euros. They consist of 57 million euros in income tax, 27 million euros social security contributions paid by employees and 99 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of 470 million euros



Source: Ernst & Young calculation (2009)

20 Ireland: Economic impact of beer

20.1 Highlights of the economic impact

Total production (in hectolitres)	8,846,000
Total exports (in hectolitres)	4,525,000*
Total imports (in hectolitres)	872,000*
Total consumption (in hectolitres)	5,193,000
Number of brewing companies (including micro brewing companies)	24
Number of breweries (including microbreweries)	26

*Source: Irish Brewers Association (2009); *****Ernst & Young calculation (2009)*

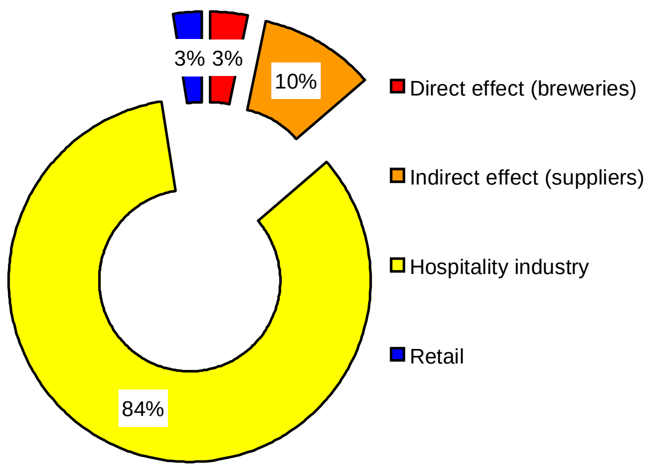
The most important characteristics of the Irish beer market are:

- There are four medium and large brewing companies in Ireland owning six breweries.[93] There are also at least 20 microbreweries.[94]
- In 2008 Irish breweries produced 8.846 million hectolitres of beer.
- Direct employment in the Irish brewing sector is 1,797 jobs.
- Employment in supplying sectors arising from beer production and sales is estimated at 5,300 jobs. The induced employment in hospitality is 44,000 jobs while 1,300 jobs in the retail sector can be attributed to beer sales.
- Total employment in Ireland due to beer production and sales is thus 52,400 jobs.
- Consumption has diminished from 5.508 million hectolitres in 2006 to 5.193 million hectolitres in 2008.
- Most beer is consumed in the hospitality industry. However the introduction of the smoking ban in March 2004 has accelerated the previously apparent trend from on-trade towards off-trade channels.
- Government revenues are estimated at 1.485 million euros. They consist of 427 million euros excise, 642 million euros VAT and 416 million euros in income-related contributions and taxes.

[93] Source: Irish Brewers Association.
[94] Source: www.irishcraftbrewer.com, consulted by Ernst & Young in May 2009.

The employment impact of the brewing sector is presented below:

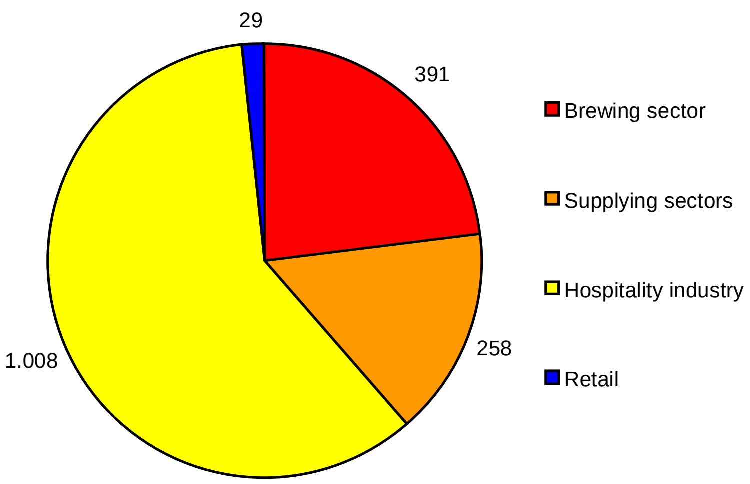
Total employment because of beer: 52,400 jobs



Source: Ernst & Young calculation, 2009 (see Annex III for an explanation of the methodology)

The contribution of the brewing sector to the Irish economy can also be expressed in terms of value-added. Total value-added of the brewing sector in Ireland and value-added generated by firms in supplying sectors and in hospitality and retail sectors arising from the production and sale of beer amounts to 1,687 million euros:

Value added due to the production and sale of beer: 1.687 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 23%, while the brewing sector share in total employment due to beer production and sales is only 3%. An explanation for this is the fact that productivity in terms of value-added per employee in the Irish brewing sector is relatively high compared to other sectors.

20.2 Industry and market structure, trends and developments

Irish breweries produced 8.846 million hectolitres of beer in 2008, which is slightly less than in 2007 (9.270 million hectolitres) and 2006 (9.377 million hectolitres).[95] Consumption declined from 5.508 million hectolitres in 2006 to 5.193 million hectolitres in 2008. The annual consumption per capita is approximately 98 litres.

Most beer is consumed in pubs and restaurants. Around 69% of total beer sales is sold on trade, while 61% of the beer consumption in 2007 consisted of draught beer.

Type of Packaging	% of sales	Beer Variant	% of sales
Bottle	15	Ale	6
Can	24	Stout	33
Draught	61	Lager	61

Source: Irish Brewers Association, 2007

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Irish beer market and the brewing sector:

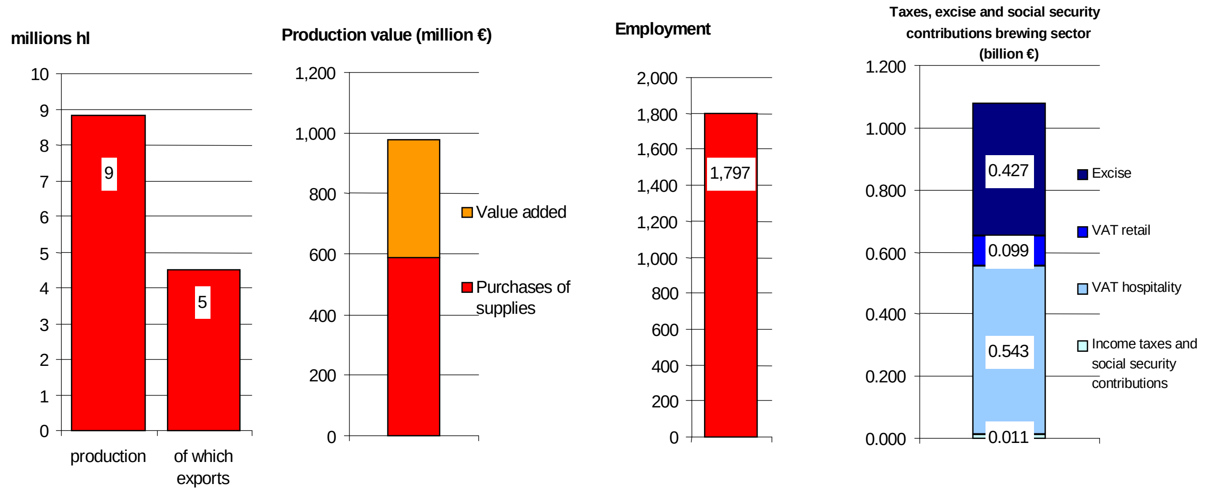
- The Irish beer market is mature and highly competitive.
- The largest Irish brewing company has a market share of 55%, while the second and third company have market shares of 21% and 8%.[96]

Other developments which influence the economic impact of the brewing sector are:

- Ireland has one of the highest excise duty rates on beer in Europe (1,987 euros per hectolitre of pure alcohol).
- Beer is the most popular alcoholic beverage, but consumption is shifting from beer to wine.
- Although most beer is still sold in hospitality venues, consumption of beer in pubs and restaurants has declined in recent years. The introduction of a smoking ban in Irish hospitality venues in 2008 might be one of the explanations for this.

20.3 Direct effect of the brewing sector

The Irish brewing sector employs 1,797 people. Irish breweries together realise a production value of approximately 978 million euros[97], of which 587 million is spent on supplies.



Source: Ernst & Young calculation (2009)

95 Source: Irish Brewers Association.
96 Global Beer Trends 2008, Canedean Ltd. 2008.
97 Source: Ernst & Young estimate, 2009

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 427 million euros and total VAT income for the Irish government was estimated at 642 million euros. Income taxes and social security contributions paid by employees of the brewing sector add up to another 11 million euros.

20.4 Economic impact of breweries on goods and services suppliers

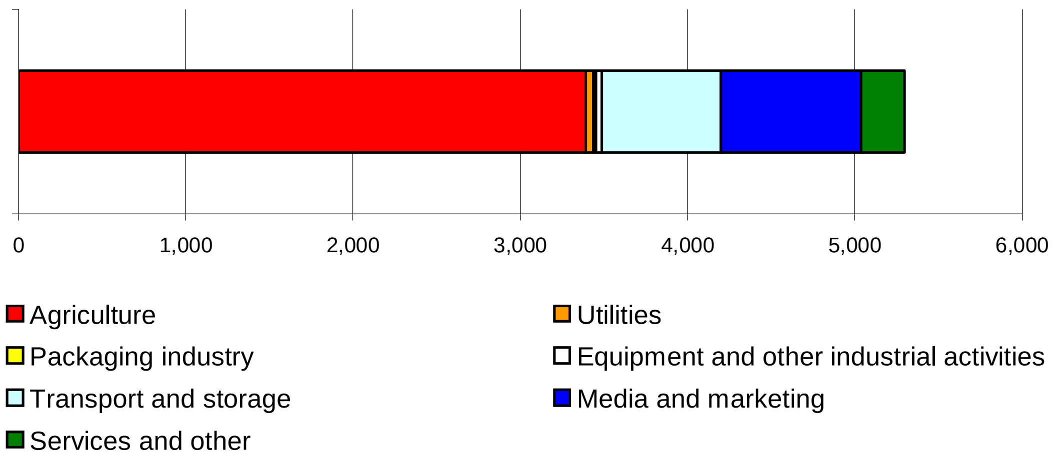
Because Irish breweries spend approximately 587 million euros on purchasing goods and services, the brewing sector has a substantial economic impact on supplying sectors.

Sectors	Stimulus[98]	Stimulus for Ireland		Turnover per employee[99]	Number of employees
	(mln. €)	%	(mln. €)	(in €)	
Agriculture	126	76.0	96	43,497	2,204
Utilities	19	100.0	19	606,700	31
Packaging industry	29	15.5	5	539,000	8
Equipment	29	40.0	12	539,000	22
Transport	126	89.0	112	241,800	464
Media, marketing	199	60.0	120	220,311	543
Services	57	65.0	37	220,311	169
Total	587		400		3,442
First-round impact as % of total impact					65
Total indirect effect of brewing sector					5,295

Source: Ernst & Young Questionnaire among breweries (2009) and Eurostat (2006).

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

98 (Domestic) stimulus is calculated on basis of the questionnaire survey and Eurostat data.
99 Turnover per employee is obtained from Eurostat.

The analysis shows that 64% of the economic impact of the Irish brewing sector on suppliers in terms of employment is concentrated in agriculture. Compared with other European countries this is rather high. There are three explanations for this:

- Approximately 21.5% of the total amount spent by brewing companies is spent on agricultural goods. This is slightly higher than in other European countries.
- The major quantities (76%) of hops and malt are purchased domestically, whereas a large part of the money spent by brewing companies in other supplying sectors is for purchases abroad.
- The average labour productivity in most sectors in Ireland grew explosively over the last years. In agriculture the turnover per employee remained relatively low. Due to this, a million euros spend by brewing companies in the Irish agricultural sector generates more jobs than a million euros spent in another sector.

20.5 Retail and hospitality sectors

Pubs are the dominant outlet channel for beer in Ireland, but in recent years beer sales in the hospitality sector have decreased. In 2007 consumption in the Irish hospitality sector decreased by 4% while at the same time the off trade sales increased by 8.5%. [100] The introduction of the smoking ban in Irish hospitality venues in 2004 might be an explanation for this trend.

Hospitality sector

Employment arising from beer sales in the hospitality sector is estimated at 44,000 jobs:

- Of the total beer consumption in Ireland approximately 69% takes place in the hospitality sector. [101]
- This means 3.6 million hectolitres are sold by Irish pubs, restaurants and the like.
- With a consumer price of beer at 8.54 euros per litre (excl. 21.5% VAT), consumers are estimated to spend 2.5 billion euros (excl. VAT) on beer in pubs and restaurants.
- Turnover per employee in the Irish hospitality sector is 57,400 euros a year.[102]
- 44,000 jobs in Irish pubs and restaurants can be attributed to beer sales.

Retail

The employment effect of the brewing sector in the retail sector can be similarly assessed:

- The share of the retail sector in total beer sales is about 31% (1.6 million hectolitres).
- With an average consumer price of 3.49 euros per litre (excluding 21.5% VAT), net consumer spending on beer in retail is estimated at 557 million euros.
- Because turnover per employee is estimated at 348,500 euros, this means 1,300 people working in the retail sector owe their jobs to the brewing sector.

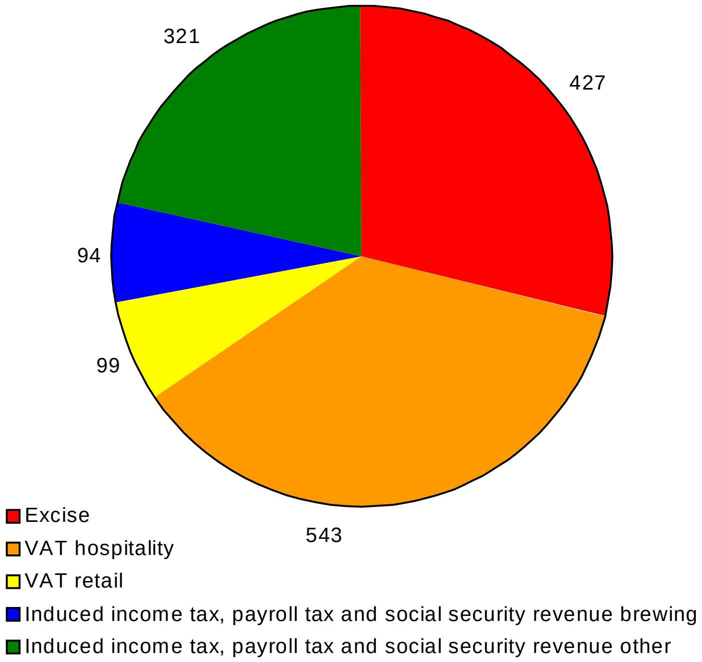
[100] Source: Irish Brewers Association.
[101] Source: Irish Brewers Association.
[102] Source: Eurostat, 2006.

20.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1,485 million euros:

- The main part of the VAT revenues is generated in the hospitality sector (543 million euros). Total VAT revenue is 642 million euros.
- The Irish excise duty rate on beer is one of the highest in Europe (1,987 euros per hectolitre of pure alcohol). The total excise revenues arising from the brewing industry amount to 427 million euros.
- Approximately 416 million euros in income-related taxes and contributions are paid due to beer production and sales. They consist of 185 million euros in income tax, 56 million euros social security contributions paid by employees and 175 million euros social security contributions and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.485 billion euros



Source: Ernst & Young calculation (2009)

21 Italy: Economic impact of beer

21.1 Highlights of the economic impact

Total production (in hectolitres)	13,273,000
Total exports (in hectolitres)	1,503,000
Total imports (in hectolitres)	5,966,000
Total consumption (in hectolitres)	17,766,000
Number of brewing companies (including micro brewing companies)	266
Number of breweries (including microbreweries)	272

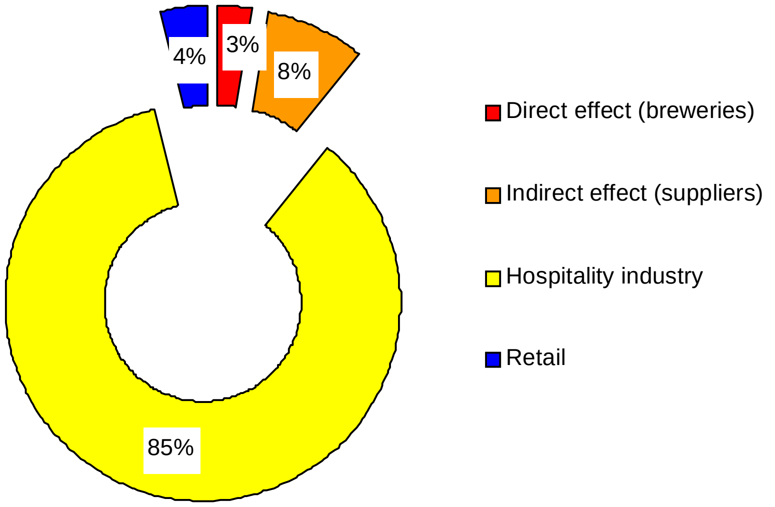
Source: National Brewers' Association of Italy, Associazione degli Industriali della Birra e del Malto (2008).

The most important characteristics of the Italian beer market are:

- The volume of the Italian beer market is around 17.8 million hectolitres. Italian brewers produced 13.3 million hectolitres. There are 14 breweries and 258 microbreweries within Italy.
- Consumption has been fairly stable in recent years. A third of the consumed beer is imported.
- Italian breweries employ 3,925 personnel directly. Employment has increased in recent years. The reason for this increase is the large growth of microbreweries in Italy.
- The estimated indirect employment generated is relatively large with 11,500 jobs in supplying sectors, 122,900 jobs in the hospitality sector and 5,500 jobs in retail. Total employment due to the production and sale of beer equals 143,800 job positions in Italy.
- Italian government tax revenues from the beer sector are approximately 466 million euros in excise, 1.622 billion euros in VAT, 578 million euros in direct income taxes and social security contributions paid by workers, 1.370 billion euros in total security revenues and payroll revenues. Total government revenues are approximately 4.037 billion euros.

The employment impact of the brewing sector is presented below:

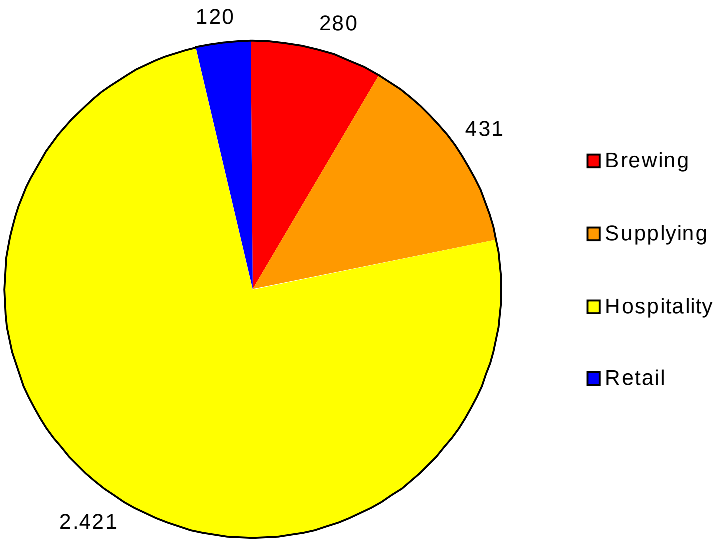
Total employment because of beer: 143,800 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology)

The contribution of the brewing sector to the Italian economy can also be expressed in terms of value-added. The total value-added generated by these 143,826 employees is estimated at 3.253 billion euros:

Value added due to the production and sale of beer: 3.253 billion euros



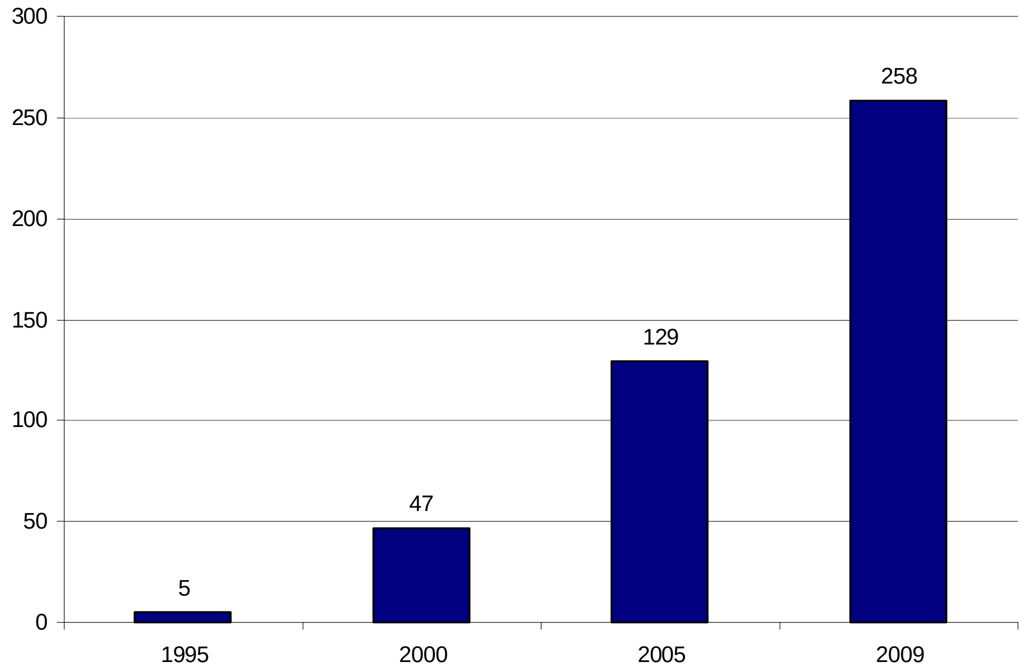
Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is almost 9%, which is much higher than the brewing sector share in total employment arising from beer. A significant explanation for this is the higher productivity of employees in the brewing sector in comparison with the productivity of employees in other sectors.

21.2 Industry and market structure, trends and developments

Italian breweries together produced 13.3 million hectolitres of beer in 2008, which is almost the same as in 2007 (production of 13.4 million hectolitres).[103] Consumption declined slightly, from 18.5 to 17.8 million hectolitres. Italian breweries exported 1.5 million hectolitres of beer in 2008 and imported 6.0 million hectolitres.

According to the Italian Brewers Association there are eight large brewing companies, which operate 14 breweries. The number of microbreweries has increased very rapidly in recent years. Because of this increase, employment in the brewing sector has also increased.



Source: National Brewers' Association of Italy, Associazione degli Industriali della Birra e del Malto (2009).

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Italian beer market and the brewing sector[104]:

- Per capita beer consumption in Italy is relatively low. In 2007 the per capita beer consumption was half the European average.
- In the period 1975 to 2007 beer consumption per capita increased strongly from 12.8 litres per capita to 30.1 litres. At the same time alcohol consumption was decreasing. But last year beer consumption decreased to 29.4 litres per capita.
- Although general beer consumption has slightly decreased, the consumption of craft beer has increased.
- The growth in national consumption was satisfied by both an increase in imports and an increase in national production.
- The 14 large breweries are located across the country, including six in Central-Southern Italy.

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103 Source: National Brewers' Association of Italy, Associazione degli Industriali della Birra e del Malto, 2008 (Questionnaire among brewers' associations).
104 Information from Associazione degli Industriali della Birra e del Malto, 2009; Associazione degli Industriali della Birra e del Malto, Annual year book 2007.

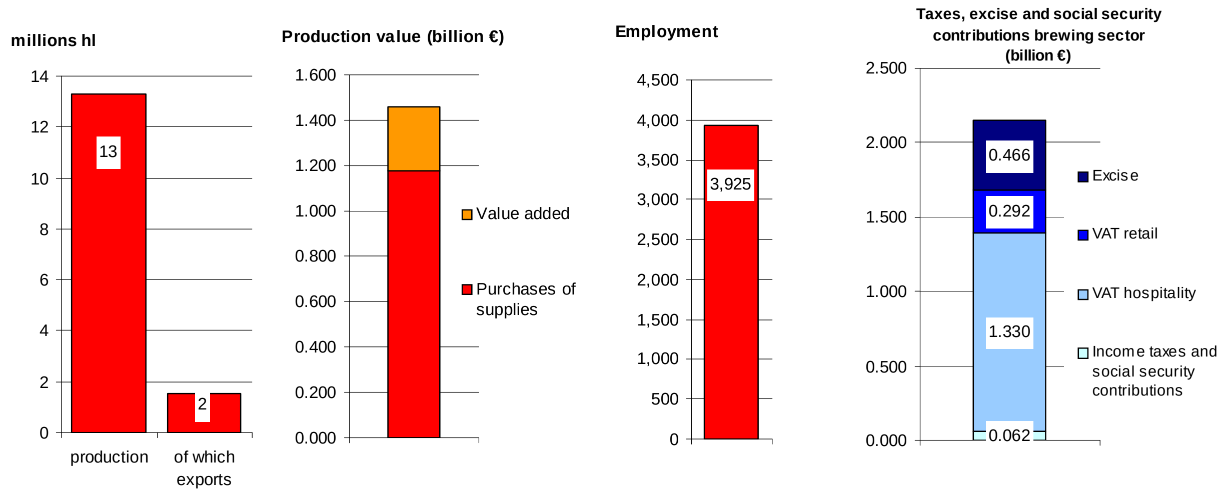
- There is a strong increase of micro brewing companies. Almost every week a new microbrewer enters the market.
- Besides these 14 large breweries, Italy has 258 microbreweries.

Other developments which influence the economic impact of the brewing sector are:

- Changes in composition of the resident population in Italy: the number of inhabitants coming from foreign countries with a strong tradition of beer consumption is growing. At the same time the number of elderly people is increasing due to the lowest birth ratio per capita.
- The impact on the agriculture sector is quite high, because a large share of the malt used is produced in Italy. Italy has two production units, both in Central-Southern Italy.
- Malt production has increased by 7.1% compared to 2006.

21.3 Direct effect of the brewing sector

Italian breweries employ approximately 3,925 people. The value of total beer production can be estimated at 1.5 billion euros and value-added generated by the Italian breweries at 280 million euros (approximately 19% of total production value). This means that supplying sectors benefit from purchased goods and services to a value of 1.2 billion euros.



Source: Ernst & Young calculation (2009)

The government also benefits from beer production. Excise and VAT revenues accounted for 466 million and 1.622 billion euros respectively. Employees and employers in the brewing sector paid 62 million euros in income taxes, social security contributions and payroll taxes.

21.4 Economic impact of breweries on goods and services suppliers

The impact of the production and sale of beer on supplying sectors is quite high because of the large share (81%) of production value that is spent on purchases of goods and services.

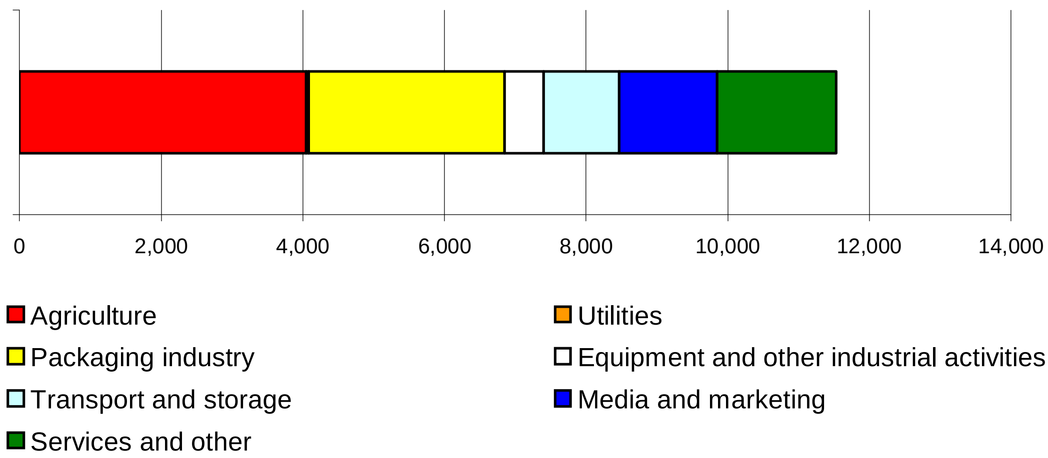
Sectors	Stimulus	Stimulus for Italy		Turnover per employee	Number of
	(mln. €)	%	(mln. €)	(in €)	employees
Agriculture	173	60	104	39,363	2,630
Utilities	32	93	30	1,240,400	24
Packaging industry	403	91	366	203,500	1,799
Equipment	95	77	73	203,500	358
Transport	113	99	113	162,800	692
Media, marketing	171	79	135	149,644	901
Services	190	86	163	149,644	1,092
Total	1,178		983	1,240,400	7,495
First-round impact as % of total impact					65
Total indirect effect of brewing sector					11.531

Source: EY Questionnaire among breweries (2009) and Eurostat (2006).

The largest proportion of supplies is purchased from the packaging industry, with further significant spending on services, media and marketing and transport. Based on the combination of data from the brewing sector in Italy itself and data from the previous study it is estimated that the indirect employment effect is approximately 11,500 employees in the supplying sectors.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

The analysis shows that agriculture, the packaging industry and the services sector benefit most from the indirect impact of Italian breweries. The impact is relatively substantial because a high percentage of goods and services purchased by the breweries is purchased in Italy itself.

21.5 Retail and hospitality sectors

Markets for the retail and catering industry in Italy are more balanced than those in other Southern European countries, as around 45.5% is sold by the hospitality sector and another 54.5% via the retail channel.[105]

Hospitality sector

Many jobs in the Italian hospitality sector can be attributed to the sale of beer:

- 46% of beer consumption in Italy occurs in the hospitality sector.
- This means 8.1 million hectolitres of beer is consumed in Italian pubs, restaurants and other hospitality facilities.
- The consumer price of beer is approximately 9.87 euros per litre of beer (incl. VAT) in the hospitality sector.[106]
- Total turnover in the Italian hospitality sector arising from beer sales is thus estimated at 6.6 billion euros (excl. VAT).
- Turnover per employee in the Italian hospitality sector is 54,100 euros a year.[107]
- Total employment in the Italian hospitality sector because of beer sales thus equals 122,900 employees.

Retail

Employment in retail arising from beer sales can be similarly assessed:

- Approximately 54% of total Italian beer consumption is of beer sold by supermarkets and other retail companies.
- With an average consumer price of 1.81 euros (incl. VAT) per litre[108,] total consumer spending on retail beer is estimated at 1.5 billion euros (excl. VAT).
- Because the annual turnover per employee is estimated at 266,800 euros, this means that 5,500 personnel owe their jobs to the sale of retail beer.

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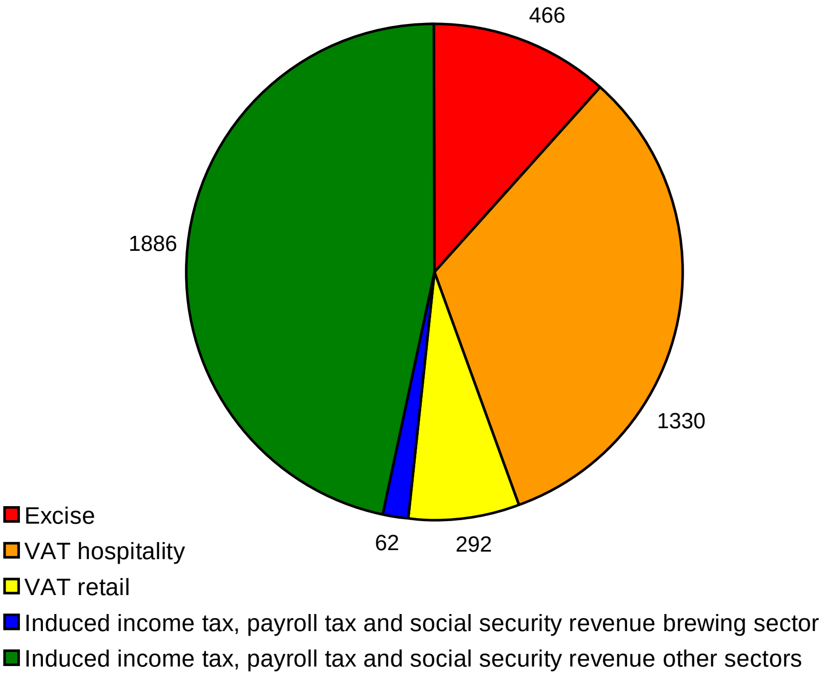
105 Source: Italian brewers' association, Associazione degli Industriali della Birra e del Malto 2008.
106 Source: Italian brewers' association, Associazione degli Industriali della Birra e del Malto 2008.
107 Source: Eurostat, statistics on turnover per persons employed in services ('hospitality sector').
108 Source: Italian brewers' association, Associazione degli Industriali della Birra e del Malto 2008.

21.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 4.036 billion euros:

- VAT revenues are estimated at 1.622 billion euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total excise revenues due to the brewing industry equal 466 million euros.
- Income-related revenues due to beer production and sales are approximately 1.948 billion euros. They consist of 578 million euros income tax, 240 million euros social security contributions paid by employees and 1.129 billion euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 4.036 billion euro's



Source: Ernst & Young calculation (2009)

22 Latvia: Economic impact of beer

22.1 Highlights of the economic impact

Total production (in hectolitres)	1,307,000
Total exports (in hectolitres)	91,000
Total imports (in hectolitres)	26,500
Total consumption (in hectolitres)	1,240,250
Number of brewing companies (excluding micro brewing companies)	17
Number of breweries (excluding microbreweries)	17

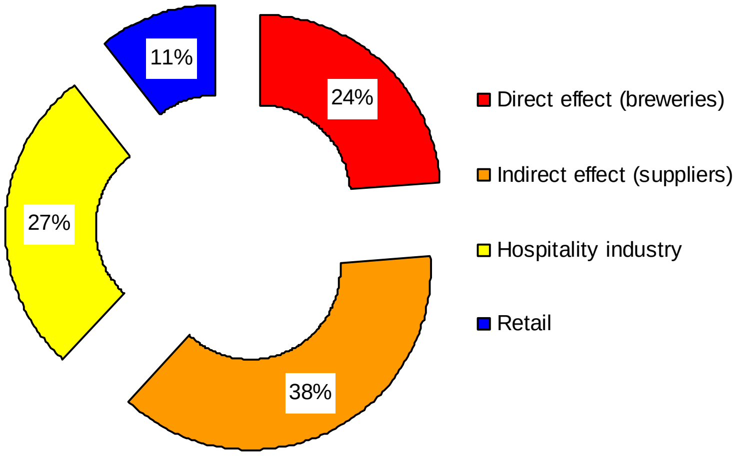
Source: Latvian Brewers' Association, (2008)

The most important characteristics of the Latvian beer market are:

- Direct employment by Latvian breweries is 1,627 jobs.
- The brewing sector in Latvia generates important indirect effects within supply sectors. It is estimated that 2,600 supply industry jobs can be attributed to the brewing sector (beer sales).
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 1,900 jobs in the Latvian hospitality sector can be attributed to beer, while in retail some 710 people owe their jobs to beer sales.
- The total employment impact is thus 6,800 jobs.
- The Latvian government benefits from the brewing sector, receiving some 55 million euros in taxes and excises. Excise revenues amount to 15 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 23 million euros, while revenues from direct personal taxes paid by Latvian brewery employees, their suppliers and in hospitality and retail add up to some 17 million euros.

The employment impact of the brewing sector is presented below:

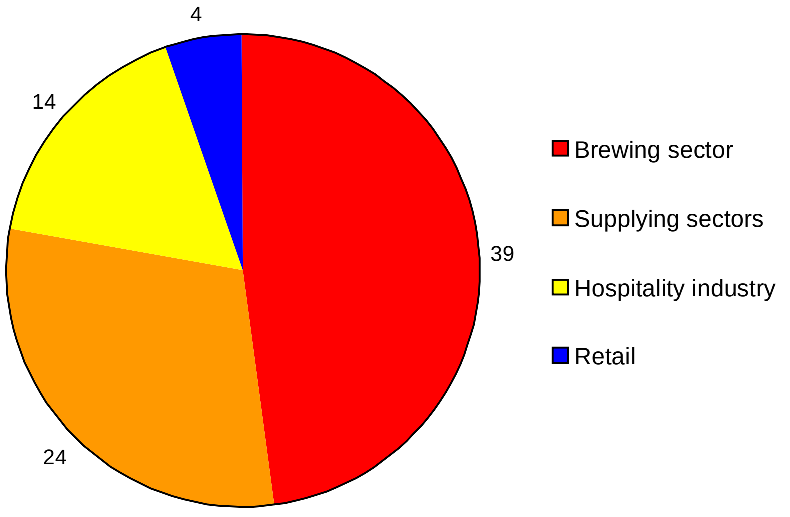
Total employment because of beer: 6,800 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology).

The contribution of the brewing sector to the Latvian economy can also be expressed in terms of value-added. The total value-added generated by these 6,800 jobs is estimated at 81 million euros:

Value added due to the production and sale of beer: 81 million euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 47%, which is significantly higher than the brewing sector share in total employment arising from beer (24%). A significant explanation for this is the high productivity of brewing sector employees.

22.2 Industry and market structure, trends and developments

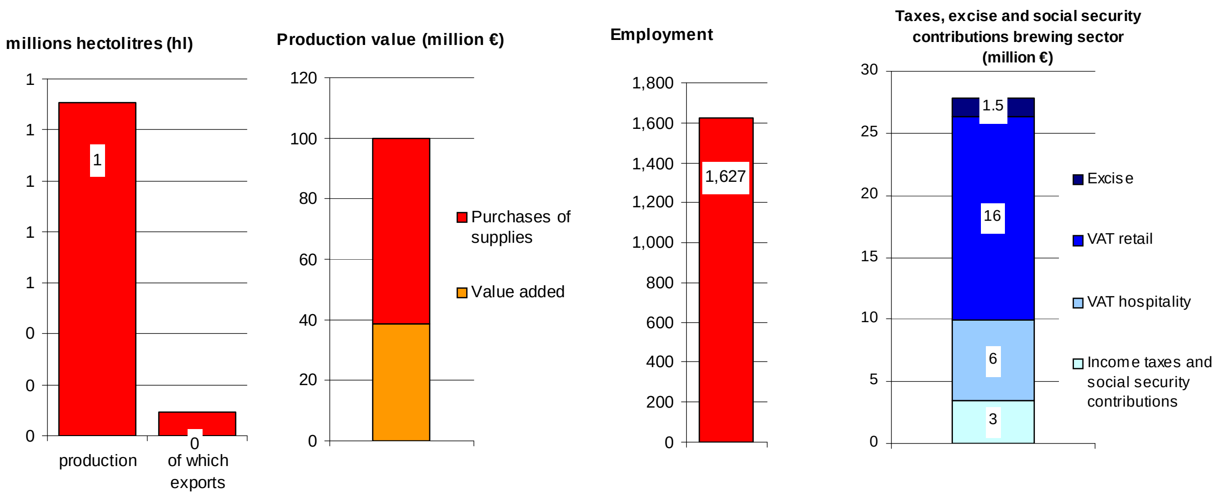
Latvia with a population of slightly over two million people has a beer production which totalled 1,307,000 hectolitres in 2008. The four largest breweries in Latvia have a combined market share of some 70%, more than half of which is for the market leader.[109]

Latvia has experienced a significant increase in prices as well as salary increases amongst the population, which made on-trade prices relatively high. As a result, the considerable numbers of tourists travelling to Latvia due to the cheapness of its alcohol and food were forced to look elsewhere. Since "party tourists" were major demand drivers in on-trade alcohol consumption, their loss, combined with a purchasing power decrease for local consumers, resulted in decreased on-trade consumption patterns in recent years.

It is expected that the Latvian government will impose stricter legislation, which may involve such steps as increasing the legal drinking age from 18 to 20 and other restrictions on alcohol consumption. Such a development may force a decrease in beer consumption in the long term.

22.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers more than 1,600 employees who together produce beer worth over 100 million euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises account for 1.45 million euros and total VAT income for the Latvian government was estimated at 22 million euros. Personal direct income taxes paid by employees of the brewing sector are 3 million euros.

The Latvian breweries together achieved an estimated 100 million euros in turnover. About 39% of total turnover stays within these firms as value-added (39 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

109 Euromonitor International "Alcoholic drinks in Latvia", January 2009.

22.4 Economic impact of breweries on goods and services suppliers

With 39% of the value of the output produced staying within the firms as value added, the other 61% of 100 million euros in total turnover accrues to a number of suppliers. This stimulus of 61 million euros has a significant economic impact on sectors outside the brewing sector:

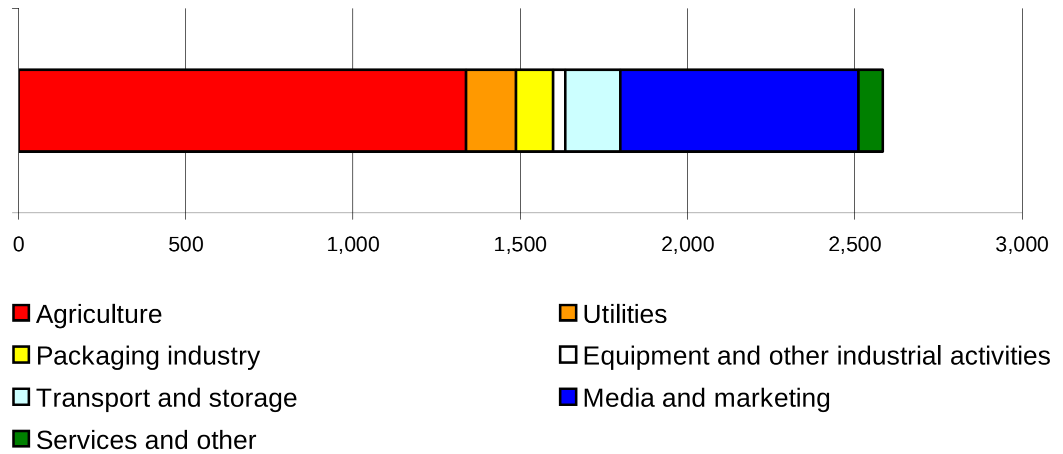
Sectors	Stimulus	Stimulus for Latvia		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	20.81	40.0	8.32	€ 9,570,37	870
Utilities	6.98	100.0	6.98	€ 72,000	97
Packaging industry	6.98	40.0	2.79	€ 38,400	73
Equipment	1.77	50.0	0.89	€ 38,400	23
Transport	5.26	100.0	5.26	€ 49,100	107
Media, marketing	17.44	100.0	17.44	€ 37,750	462
Services	1.77	100.0	1.77	€ 37,750	47
Total	61.02		43.46		1,679
First-round impact as % of total impact					65
Total indirect effect of brewing sector					2,582

Source: Ernst & Young calculation, (2009); Eurostat, (2006)

One-third of the indirect employment generated by the brewing sector is gained within the agricultural sector. Other substantial effects can be observed in media and marketing. The total first-round employment effect of the brewing sector on supplying sectors is about 1,700 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 2,600 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

22.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 10% of all beer consumed in Latvia is sold by the hospitality sector (on-trade), which means almost 0.12 million hectolitres is sold on-trade.
- The average consumer price of beer in Latvian pubs and restaurants is estimated at 3 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 37.2 euros (including VAT).
- Net consumer spending on beer is thus estimated at 30.7 billion euros (using a 21% VAT tariff).
- With an average hospitality turnover of 16,600 euros (excluding VAT) per person, this results in 1,900 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

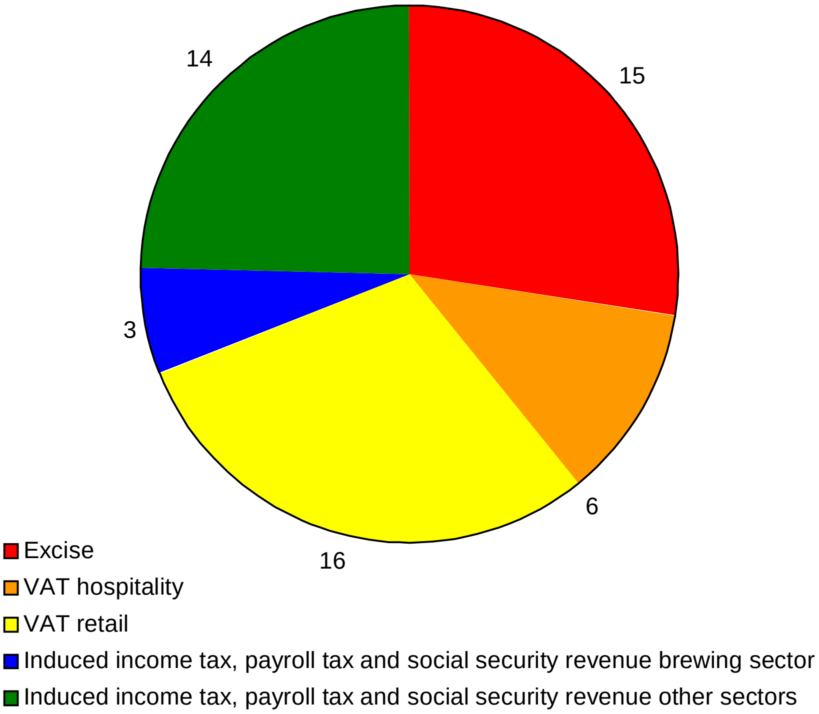
- Around 90% of total beer consumption (1.2 million hectolitres) in Latvia is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 0.85 euros per litre (including VAT), total retail consumer spending on beer is estimated at 94.9 million euros. Total consumer spending excluding VAT is thus 78 million euros.
- With turnover per employee estimated at 108,700 euros (excluding VAT), this means 721 people owe their jobs to retail beer sales.

22.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 55 million euros.

- VAT revenues are estimated at 23 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 15 million euros.
- Income-related revenues due to beer production and sales are approximately 17 million euros. They consist of 8 million euros in income tax, 7 million euros social security contributions paid by employees and 3 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 55 million euros



Source: Ernst & Young calculation (2009)

23 Lithuania: Economic impact of beer

23.1 Highlights of the economic impact

Total production (in hectolitres)	2,900,000
Total exports (in hectolitres)	140,000
Total imports (in hectolitres)	280,000
Total consumption (in hectolitres)	3,040,000
Number of brewing companies (including micro brewing companies)	54
Number of Breweries (including microbreweries)	55

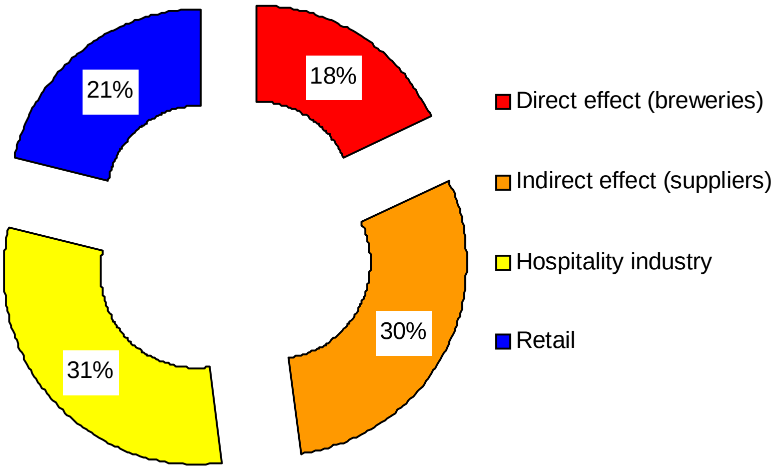
Source: National Brewers' Association in Lithuania (2008)

The economic impact of the brewing sector on the Lithuanian economy is substantial:

- In 2008 the Lithuanian breweries together produced 2.9 million hectolitres of beer.
- In total there are 55 breweries active in Lithuania. Of these breweries, more than 40 have a production of less than 1 million litres (0.01 million hectolitres) per year.
- Direct employment connected to the Lithuanian breweries is estimated at 2,800 jobs.
- Because of purchases of services and goods needed for the production and sale of beer, almost 4,700 jobs are generated in the supplying sectors.
- The impact on the hospitality and retail sectors is also significant. More than 8,100 jobs are generated in these sectors because of the sale of beer.
- Of these 8,100 jobs the majority (4,800) are generated in the hospitality sector.
- The government benefits substantially from the production and sale of beer. We estimated the total government revenue at approximately 163 million euros. Included in this government revenue are: VAT, excise, income taxes, social security contributions of employees and employers and payroll taxes.

The employment impact of the brewing sector is presented below:

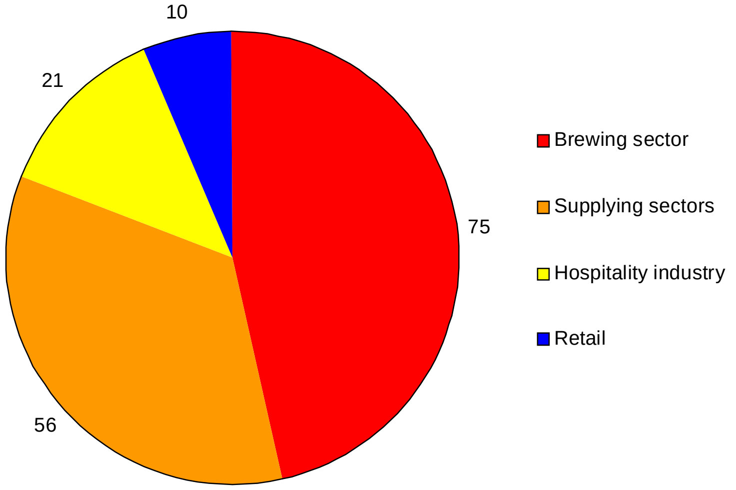
Total employment because of beer: 15,600 jobs



Source: Ernst & Young calculation (2009) (see Annex III for an explanation on methodology).

The contribution of the brewing sector to the Lithuanian economy can also be expressed in terms of value-added. The total value-added generated by these 15,600 jobs is estimated at 162 million euros:

Value added due to the production and sale of beer: 162 million euros



Source: Ernst & Young calculation (2009)

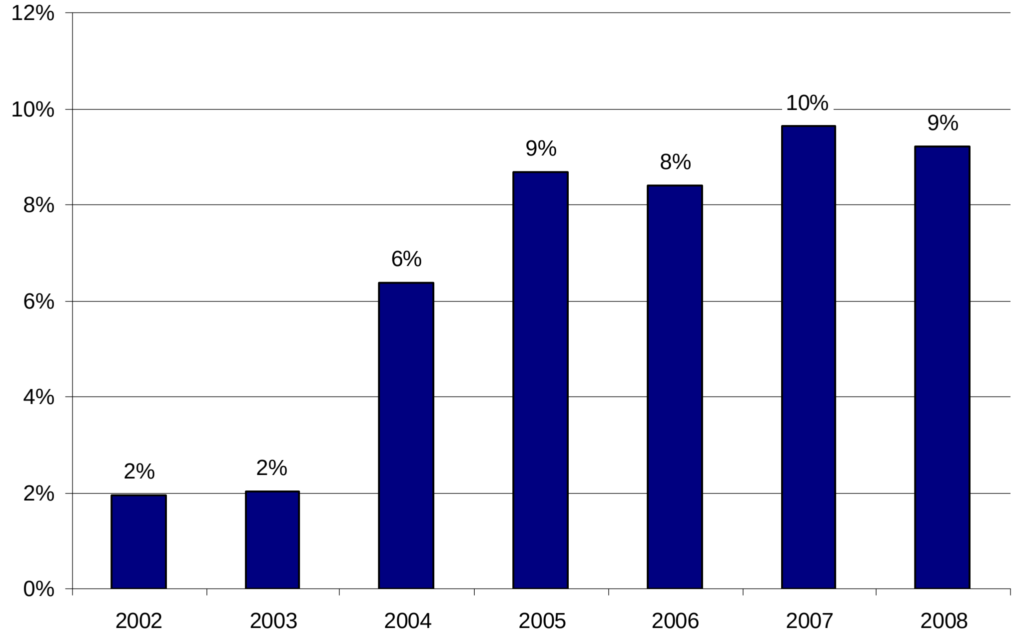
The brewing sector share in overall value-added arising from the production and sale of beer is 46%, which is much higher than the brewing sector share in total employment arising from beer. A significant explanation for this is the high productivity of brewing sector employees.

23.2 Industry and market structure, trends and developments

In Lithuania 2.9 million hectolitres of beer is produced by 55 breweries.[110] The major part of this production is produced by six breweries which all produce more than 0.1 million hectolitres of beer per year. Of the other 49 breweries, 5 to 10 have a production of 1 to 10 million litres per year. More than 40 breweries have a production less than one million litres per year.

Beer has always been a popular product in Lithuania. There has been an old tradition in Lithuania to bring home brewed beer to family and nearest neighbours at every season. The first brewery was established in 1784[111] and became a leading brewery in Lithuania. The two leading breweries merged in 2001 and their market share was estimated at 49% in 2007. One of the main players in the global beer market acquired all the shares of the leading brewery in 2008.[112]

Although domestically brewed beer is still most popular in Lithuania, imported beers are gaining in popularity. This increasing popularity is illustrated by the graph below (imports as a percentage of total consumption).



Source: Canadean, Global Beer Trends (2008) Country Profile – Lithuania and National Brewers' Association of Lithuania, Lietuvos Aludarių Gildija (2008).

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Lithuanian beer market and the brewing sector[113]:

- Both production and consumption are fairly stable.
- Imported beers are gaining in popularity.
- Beer has always been a popular drink in Lithuania. In 2008, 3.1 million hectolitres of beer was consumed in Lithuania. The per capita beer consumption was 89 litres per year.
- The majority, 90%, of beer sales occur in the retail sector.
- Lithuanian brewers produced 2.9 million hectolitres in 2008. Of this 5% is exported.

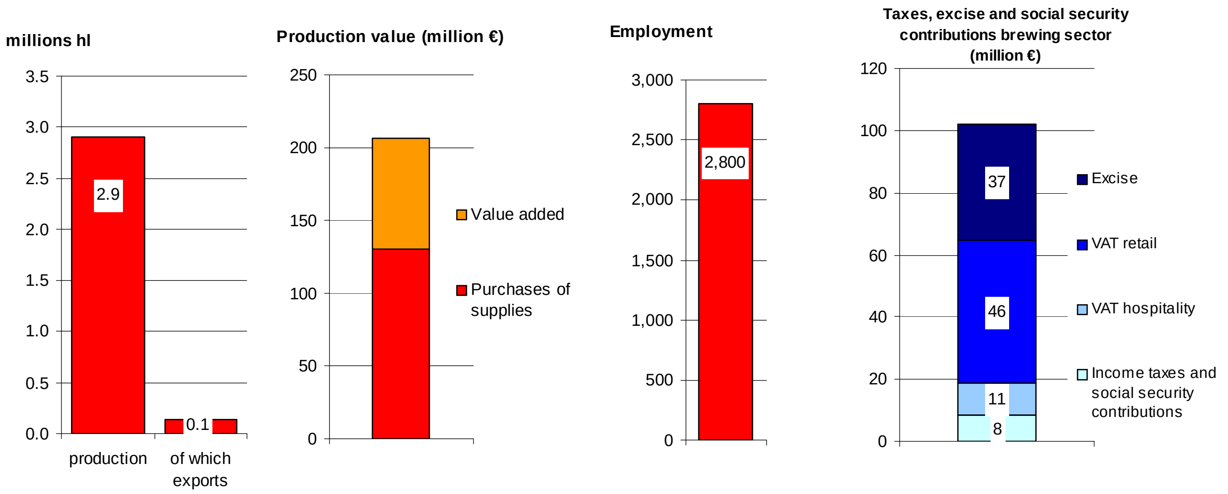
110 National Brewers' Association of Lithuania, Lietuvos Aludarių Gildija, 2008
111 Source: Švyturys brewery. http://www.svyturys.lt/en/main/info/about/history.
112 Carlsberg, www.carlsberg.com
113 Canadean, Global Beer Trends 2008, Country Profile – Lithuania; National Brewers' Association of Lithuania, Lietuvos Aludarių Gildija, 2008; www.svyturys.lt

Other developments which influence the economic impact of the brewing sector are[114]:

- In 2004 Lithuania entered the EU.
- In 2008, Lithuania joined the Schengen area opening up greater possibilities for free movement for its people.
- Lithuania is the largest tourism market in the Baltic states. In 2007 Lithuania received 2.23 million foreign tourists. In comparison with 2006 this was an increase of 3.8%.
- On 1 January 2007 a total ban on public smoking came into effect. This meant that smoking was no longer allowed in public hospitality establishments such as cafés, bars, clubs and restaurants.

23.3 Direct effect of the brewing sector

Lithuanian breweries produced 2.9 million hectolitres of beer in 2008. This production had a value of 206 million euros. Of this production value, 131 million euros was spent on purchases of goods and services needed for the production and sale of beer. Lithuanian breweries provide 2,800 jobs.



Source: Ernst & Young calculation (2009)

The government also benefits from beer production. Excise and VAT revenues accounted for 37 million and 57 million euros respectively. Employees and employers in the brewing sector paid 8 million euros on income taxes, social security contributions and payroll taxes.

23.4 Economic impact of breweries on goods and services suppliers

Lithuanian breweries spent 131 million euros on purchases of goods and services needed for production. Most of these purchases were domestic. The impulse to the supplying sectors is estimated at 111 million euros. The services sector, media and marketing sector and agriculture sector benefit most from the impulse to the supplying sectors. The transport sector also benefits from the impulse to the supplying sectors.

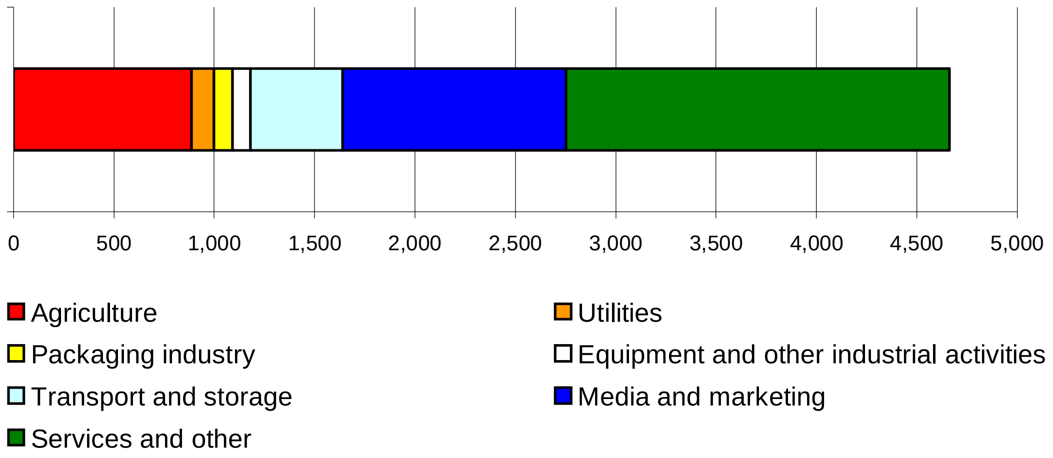
[114] Lithuanian Development Agency, Tourism in Lithuania, 2008; website of the European Commission ec.europa.eu; Euromonitor, Tobacco in Lithuania, 2008.

Sectors	Stimulus	Stimulus for Lithuania		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	27	50.0	13	23,082	576
Utilities	6	100.0	6	78,000	74
Packaging industry	6	50.0	3	48,400	59
Equipment	6	50.0	3	48,400	59
Transport	14	100.0	14	48,200	298
Media, marketing	27	100.0	27	36,726	724
Services	46	100.0	46	36,726	1,241
Total	130		111		3,031
First-round impact as % of total impact					65
Total indirect effect of brewing sector					4,663

Source: Ernst & Young calculation, (2009); Eurostat, (2006)

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

23.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 10% of all beer consumed in Lithuania is sold by the hospitality sector (on-trade), which means almost 0.3 million hectolitres is sold on-trade.
- The average consumer price of beer in Lithuanian pubs and restaurants is estimated at 2.30 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 70 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 59 million euros (using an 18% VAT tariff).
- With an average hospitality turnover of 12,300 euros (excluding VAT) per person, this results in 4,800 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

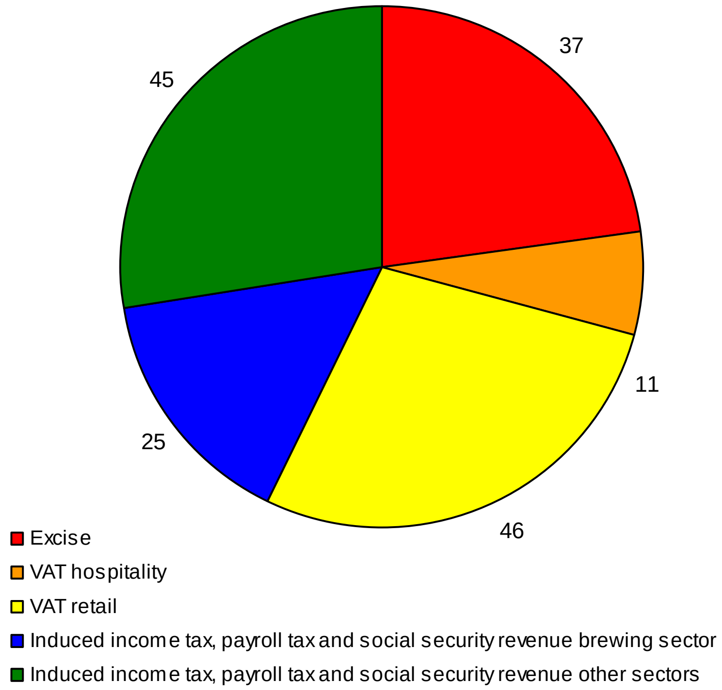
- Around 90% of total beer consumption (2.7 million hectolitres) in Lithuania is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.1 euros per litre (including VAT), total retail consumer spending on beer is estimated at 301 million euros. Total consumer spending excluding VAT is thus 255 million euros.
- With turnover per employee estimated at 76,600 euros (excluding VAT), this means 3,300 people owe their jobs to retail beer sales.

23.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 163 million euros:

- VAT revenues are estimated at 57 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 37 million euros.
- Income-related revenues due to beer production and sales are approximately 70 million euros. They consist of 21 million euros in income tax, 3 million euros social security contributions paid by employees and 46 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 163 million euros



Source: Ernst & Young calculation (2009)

24 Luxembourg: Economic impact of beer

24.1 Highlights of the economic impact

Total production (in hectolitres)	312,000
Total exports (in hectolitres)	67,000
Total imports (in hectolitres)	185,000
Total consumption[115] (in hectolitres)	429,000
Number of brewing companies (excluding micro brewing companies)	3
Number of Breweries (excluding microbreweries)	3

Source: Fédération des Brasseurs Luxembourgeois (2008)

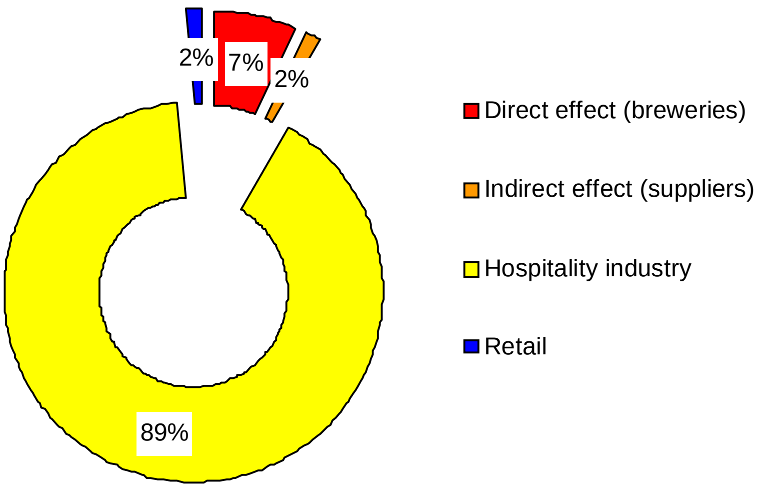
The most important characteristics of the Luxembourg beer market are:

- Direct employment by Luxembourg's breweries is 171 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 39 supply industry jobs can be attributed to the brewing sector (beer sales), with the services sectors benefiting most.
- Alongside these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Around 2,200 jobs in the hospitality sector can be attributed to beer, while in retail some 37 people owe their jobs to beer sales.
- The total employment impact of the Luxembourg beer industry is thus 2,500 jobs.
- The government also benefits from the brewing sector, receiving approximately 72 million euros in taxes and excises. Excise revenues amount to 4 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 26 million euros, while revenues from direct personal taxes paid by Luxembourg's brewery employees, their suppliers and in hospitality and retail add up to some 42 million euros.

115 Due to its small size and its situation between France, Germany and Belgium the Luxembourg beer market can be considered as part of the regional market. The consumption figure includes beer sales to inhabitants of Luxembourg as well as cross-border commerce.

The employment impact of the brewing sector is presented below:

Total employment because of beer: 2,500 jobs



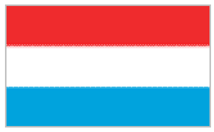
Source: Ernst & Young calculation (2009) (See Annex III for an explanation of the methodology).

The contribution of the brewing sector to the Luxembourg economy can also be expressed in terms of value-added. The total value-added generated by these 2,500 jobs is estimated at 97 million euros:

Value added due to the production and sale of beer: 97 million euros

Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 21%, which is substantially higher than the brewing sector share in total employment arising from beer (7%).



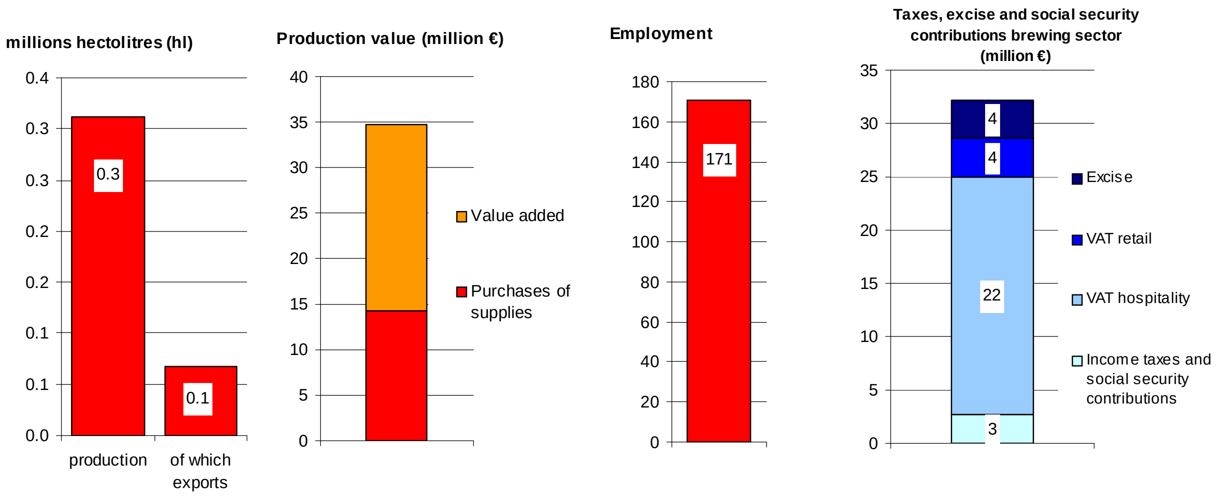
24.2 Industry and market structure, trends and developments

Although Luxembourg is one of Western Europe's smaller countries, beer sales are relatively high. 429,000 hectolitres of beer were sold within the Luxembourg borders in 2008, while the total population is approximately 490,000.[116] However, not all this beer is consumed by Luxembourg's citizens. Due to its size and the way it is situated between Germany, Belgium and France, cross-border commerce is very important for the Luxembourg economy. One cannot consider this economy as standing alone, but as part of the regional market. Prominent examples of this are that 56% of the active population (workforce) lives abroad and 45% of the inhabitants are foreign.

There are three relatively large brewing companies in Luxembourg. The market leader produces 155,000 hectolitres per year, while the second brewing company, owned by one of Europe's major brewing concerns, produces 141,000 hectolitres. The third company has an annual production of 16,000 hectolitres. Besides these three brewing companies there are a few microbreweries. Foreign beers also play a substantial market role. All major brands are present and in 2009 approximately 185,000 hectolitres of imported beer were sold in Luxembourg.

24.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers more than 171 employees who together produce beer worth 34.7 million euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises accounted for 3.6 million euros and total VAT income for the Luxembourg government was estimated at 26 million euros. Income-related contributions and taxes paid by employees of the brewing sector are almost 3 million euros.

The Luxembourg breweries together achieved an estimated 34.7 million euros in turnover. Approximately 59% of total turnover stays within these firms as value-added (20.4 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

116 Source: Eurostat, total population at January 1st 2009.

24.4 Economic impact of breweries on goods and services suppliers

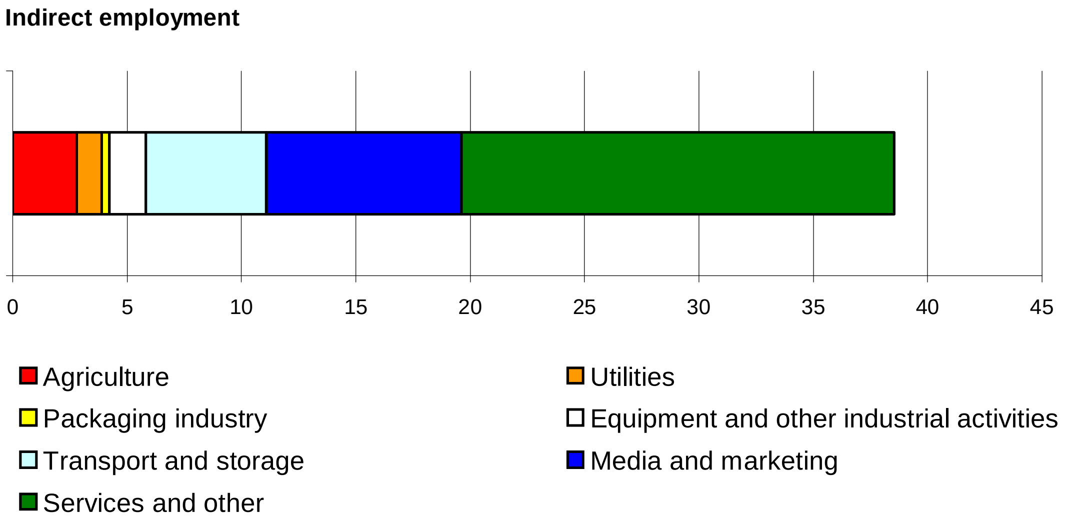
With 59% of the value of the output produced staying within the firms as value-added, the other 41% of 34.7 million euros in total turnover accrues to a number of suppliers. This stimulus of 14.3 million euros has significant economic impact on sectors outside the brewing sector:

Sectors	Stimulus	Stimulus for Luxembourg		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	1.78	5.8	0	€ 9,570,37	2
Utilities	1.42	92.8	1	€ 1,780,900	1
Packaging industry	1.80	5.8	0	€ 680,800	0
Equipment	1.90	41.3	1	€ 680,800	1
Transport	1.16	85.6	1	€ 263,300	3
Media, marketing	1.83	62.9	1	€ 211,774	6
Services	4.42	55.8	1	€ 211,774	12
Total	14.30		3		25
First-round impact as % of total impact					65
Total indirect effect of brewing sector					39

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

A substantial part of the indirect employment generated by the brewing sector is generated within the services sector. The total first-round employment effect of the brewing sector on supplying sectors is an estimated 25 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be approximately 39 jobs.

Indirect employment effects are illustrated below:



Source: Ernst & Young calculation (2009)

24.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 60% of all beer consumed in Luxembourg is sold by the hospitality sector (on-trade), which means almost 0.26 million hectolitres is sold on-trade.
- The average consumer price of beer in Luxembourg pubs and restaurants is estimated at 6.66 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 171.4 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 149 million euros (using a 15% VAT tariff).
- With an average hospitality turnover of 66,300 euros (excluding VAT) per person, this results in 2,248 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

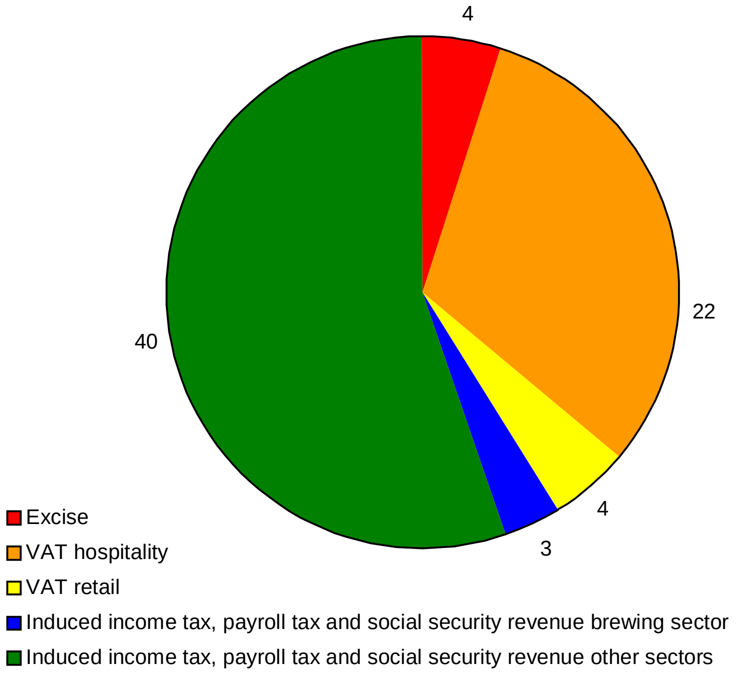
- Around 40% of total beer consumption (0.17 million hectolitres) in Luxembourg is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.60 euros per litre (including VAT), total retail consumer spending on beer is estimated at 27.5 million euros. Total consumer spending excluding VAT is thus 25.9 million euros.
- With turnover per employee estimated at 637,800 euros (excluding VAT), this means 37 people owe their jobs to retail beer sales.

24.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 72 million euros:

- VAT revenues are estimated at 26 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 4 million euros.
- Income-related revenues due to beer production and sales are approximately 42 million euros. They consist of 15 million euros in income tax, 14 million euros social security contributions paid by employees and 14 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 72 million euros



Source: Ernst & Young calculation (2009)

25 Malta: Economic impact of beer

25.1 Highlights of the economic impact

Total production (in hectolitres)	110,000
Total exports (in hectolitres)	1,000
Total imports (in hectolitres)	74,000
Total consumption (in hectolitres)	181,000
Number of brewing companies	1
Number of breweries	1

Source: Canadean, Global Beer Trends (2008), Country Profile Malta (2008).[117]

The economic impact of the brewing sector can be expressed as follows[118]:

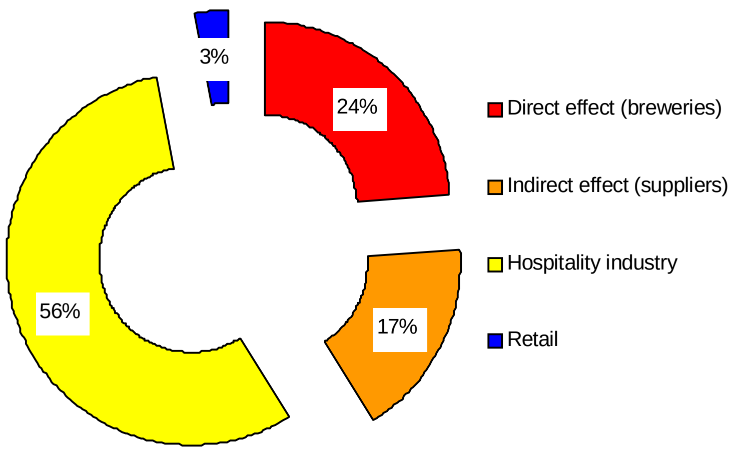
- Total annual production of beer in Malta in 2008 was 110,000 hectolitres.
- There is only one brewing company active in Malta. This company is more than a brewing company alone. Among their other activities are franchising Burger King and Pizza Hut restaurants, importing and distributing wines, spirits and beer and bottling and distributing water.
- The company provides approximately 519 beer-related jobs.
- The brewing sector generates indirect effects within supply sectors. It is estimated that around 380 supply industry jobs can be attributed to the brewing sector.
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 1,200 jobs in the hospitality sector can be attributed to beer, while in retail some 69 people owe their jobs to beer sales.
- The total employment impact is estimated at 2,200 jobs.
- The government also benefits from the brewing sector, receiving some 18 million euros in taxes and excises. Excise revenues amount to 1.2 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 8 million euros. Revenues from direct personal taxes, social security contributions and payroll taxes paid by employers and employees in the brewing sector, their suppliers and in the hospitality and retail sector add up to some 8.7 million euros.

[117] The National Brewers' Association of Malta was not able to provide more recent figures. The figures on production, consumption, imports and exports are 2007 figures. We have found no indications that there are also microbreweries active in Malta.

[118] As neither the Maltese brewing association nor the brewery have cooperated with the research, some assumptions had to be made for Malta to carry out the calculations. One of these assumptions is that the share of domestic purchases of the Maltese brewery is similar to the share of domestic purchases of the Cypriot breweries.

The employment impact of the brewing sector is presented below:

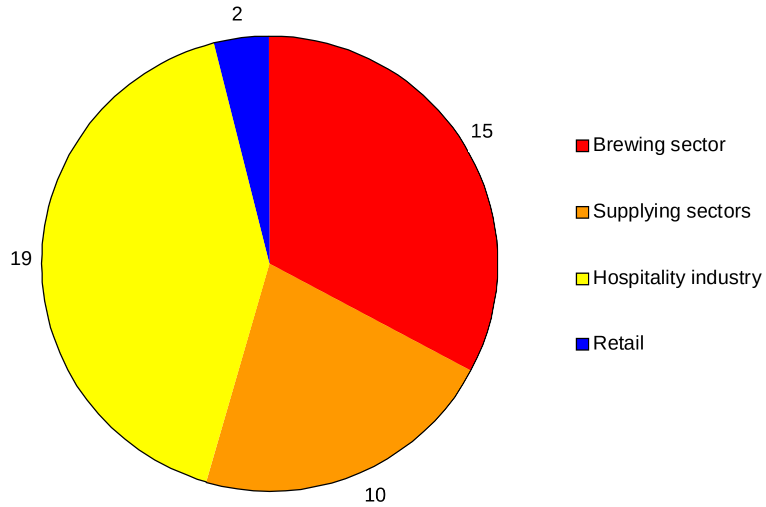
Total employment because of beer: 2,200 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

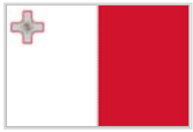
The contribution of the brewing sector to the Maltese economy can also be expressed in terms of value-added. The total value-added generated by these 2,200 jobs is estimated at 46 million euros:

Value added due to the production and sale of beer: 46 million euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 33%, which is much higher than the brewing sector share in total employment arising from beer. A significant explanation for this is the high productivity of brewing sector employees.



25.2 Industry and market structure, trends and developments

Since Malta is a very small country, its beer market is the smallest in Europe. Malta has some 400,000 citizens and the total beer consumption in 2006 was 181,000 hectolitres. The most important sector of the Maltese economy is tourism. One could thus expect that a large share of the total consumption is bought by tourists.

There is only one brewery in Malta. Besides brewing beer this company is active in several other markets. Some of their other activities are franchising Burger King and Pizza Hut restaurants, importing and distributing wines, spirits and beer and bottling and distributing water. The market share of this company on the Maltese beer market is around 60%. The other 40% of total beer consumption in Malta consists of imported beer. Since Malta is a small country, around two-thirds of the supplies for the Maltese brewery are purchased abroad.

Factors that influence the impact of the brewing sector on the Maltese economy are the following:

Brewing sector internal characteristics:

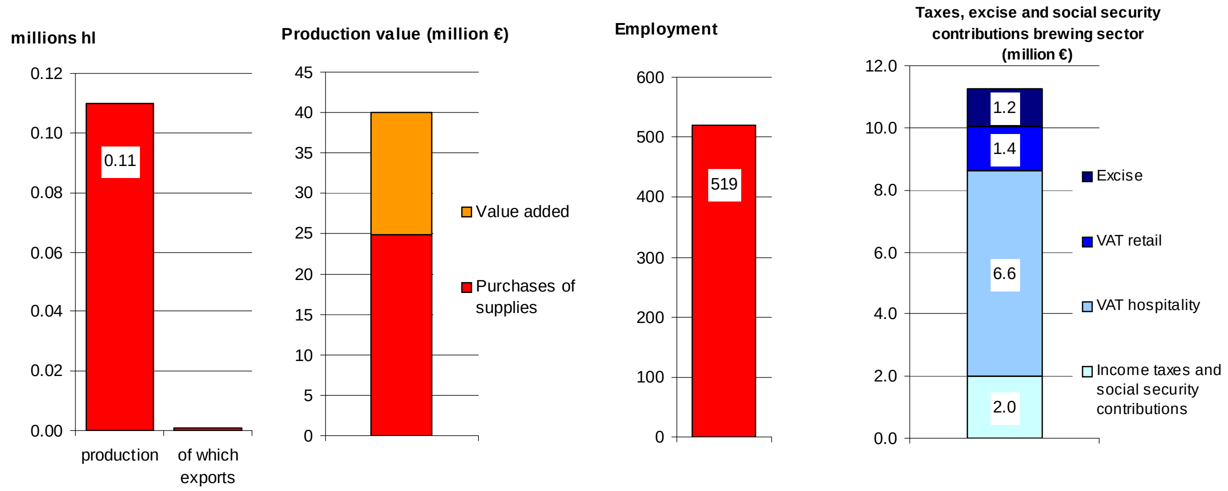
- The only Maltese brewer owns two beer brands and produced a total volume of 110,000 hectolitres in 2006.
- A small share of the production is exported to Italy where the Maltese brands are sold in the hospitality sector as speciality/ niche beers.
- The annual imports of beer are approximately 74,000 hectolitres.

Context in which the brewing sector operates:

- Since tourism is the most important sector of the Maltese economy, one could expect that tourists account for a large part of total Maltese beer consumption.

25.3 Direct effect of the brewing sector

The Maltese brewery produced 110,000 litres of beer in 2006.[119] This production has a value of approximately 40 million euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Total government revenue from excises and VAT are estimated at 1.2 and 8.0 million euros respectively. Personal direct taxes, social security contributions and payroll taxes paid by employees and employers in the brewing sector add up to another 2 million euros.

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119 No recent figures are available.

25.4 Economic impact of breweries on goods and services suppliers

With 38% of the value of the output produced staying within the firm as value added, the other 62% of 40 million euros in total turnover accrues to a number of suppliers. Of this stimulus of 25 million euros almost 10 million euros stays within the country. This stimulus has a significant economic impact on sectors outside the brewing sector, most substantially on the media and marketing sector:

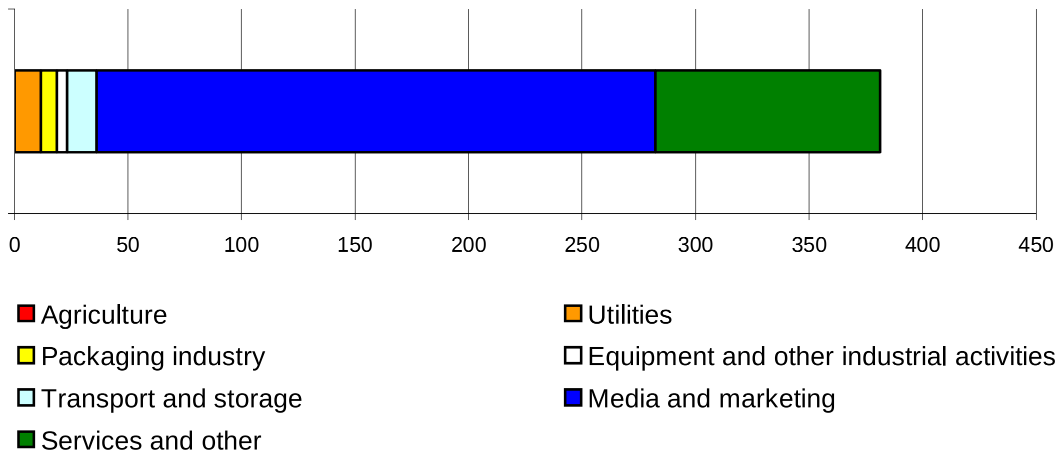
Sectors	Stimulus	Stimulus for Malta		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	4.74	0.0	0	29,858	0
Utilities	1.00	100.0	1.00	132,100	8
Packaging industry	7.49	5.0	0.37	82,500	5
Equipment	2.50	10.0	0.25	82,500	3
Transport	0.75	100.0	0.75	88,300	9
Media, marketing	5.49	95.0	5.22	32,600	160
Services	2.99	70.0	2.10	32,600	64
Total	24.95		9.68		248
First-round impact as % of total impact					65
Total indirect effect of brewing sector					381

Source: Ernst & Young calculation (2009); Eurostat (2006)

Almost two-thirds of the indirect employment effect is within the media and marketing sector. The services sector also benefits substantially from the production and sale of beer. The total first-round employment effect of the brewing sector on supplying sectors is estimated at almost 250 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact can be estimated at 380 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

25.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 60% of all beer consumed in Malta is sold by the hospitality sector (on-trade), which means almost 108,6 thousand hectolitres is sold on-trade.
- The average consumer price of beer in Maltese pubs and restaurants is estimated at 4 euros a litre (including VAT)[120], so that total consumer spending on beer in the hospitality sector is 43.4 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 36.8 billion euros (using an 18% VAT tariff).
- With an average hospitality turnover of 30,300 euros (excluding VAT)[121] per person, this results in 1,200 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- Around 40% of total beer consumption (72.4 thousand hectolitres) in Malta is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.26 euros per litre (including VAT)[122], total retail consumer spending on beer is estimated at 9.13 million euros. Total consumer spending excluding VAT is thus 7.7 million euros.
- With turnover per employee estimated at 111,400 euros (excluding VAT)[123], this means 69 people owe their jobs to retail beer sales.

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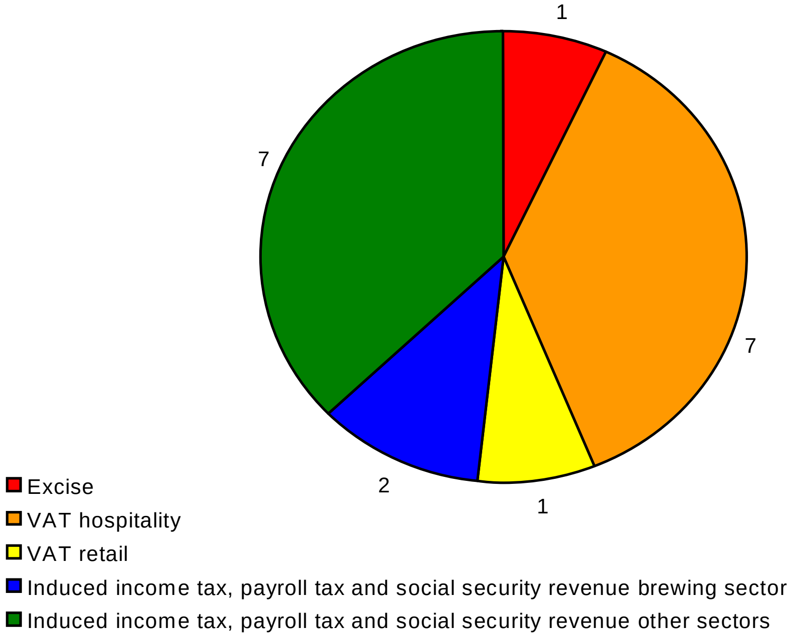
120 The Maltese Islands' Online Community Center, http://malta.cc/cost-of-living/food-restaurant-beer-drink-prices/, April 2009.
121 Eurostat, 2002. No recent figures are available..
122 Estimation of Ernst & Young, 2009.
123 Eurostat, 2002. No recent figures are available.

25.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 18 million euros:

- VAT revenues are estimated at 8 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 1.2 million euros.
- Income-related revenues due to beer production and sales are approximately 8.7 million euros. They consist of 3.5 million euros in income tax, 2.6 million euros social security contributions paid by employees and 2.6 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 18 million euros



Source: Ernst & Young calculation (2009)

26 The Netherlands: Economic impact of beer

26.1 Highlights of the economic impact

Total production (in hectolitres)	27,180,868
Total exports (in hectolitres)	16,672,803
Total imports (in hectolitres)	2,402,033
Total consumption (in hectolitres)	12,910,101
Number of brewing companies (including micro brewing companies)	68
Number of breweries (including microbreweries)	72

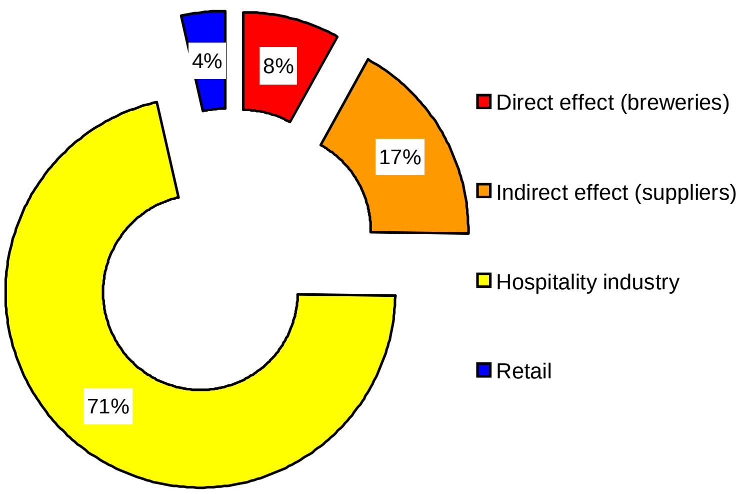
Source: National Brewers' Association of the Netherlands, Centraal Brouwerij Kantoor (2009)

The economic impact of the brewing sector can be expressed as follows:

- There are eight large companies in the Netherlands which own 12 breweries. There are also 60 microbreweries.
- The Netherlands exports the greatest quantity of beer of all European countries (approximately 61% of a total 27.2 million hectolitres of beer production is exported).
- The consumption of beer in the Netherlands was 12.9 million hectolitres in 2008 (78.5 litres per capita).
- Direct employment by Dutch breweries is 6,750 jobs and it is estimated that the brewing sector generates 14,700 jobs in supply sectors.
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 59,800 jobs in the hospitality sector can be attributed to beer, while in retail approximately 3,100 people owe their jobs to beer sales.
- This means that the total employment impact due to beer production and sales is 84,300 jobs.
- The government also benefits from the brewing sector, receiving approximately 2.0 billion euros in taxes, excises and income-related revenues. Excise revenues amount to 318 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 707 million euros, while income-related contributions and taxes from jobs in the brewing sector, supply sectors and in hospitality and retail add up to some 1.0 billion euros.

The employment impact of the brewing sector is presented below:

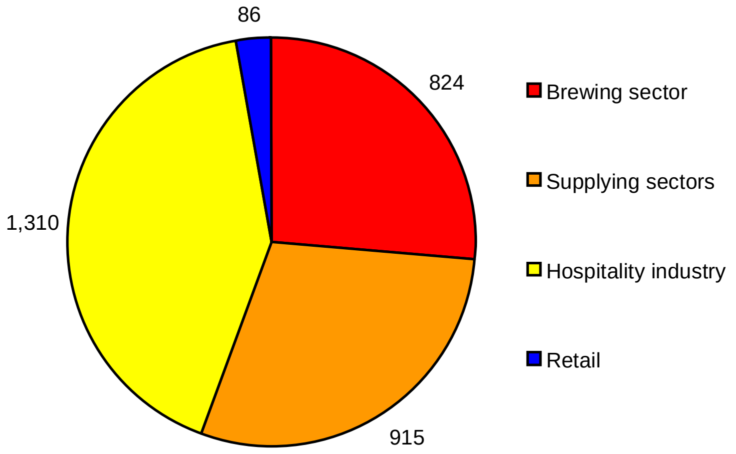
Total employment because of beer: 84,300 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Dutch economy can also be expressed in terms of value-added. The total value-added generated by these 84,300 jobs is estimated at 3.135 billion euros:

Value added due to the production and sale of beer: 3.135 billion euro's



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from beer production and sales is 26%, which is far higher than the brewing sector share in total employment arising from beer, which is 8%. An explanation for this is the high productivity of the employees in the Dutch brewing sector.

26.2 Industry and market structure, trends and developments

The Netherlands is Europe's largest beer-exporting country, and ranks fifth in production (behind Germany, the United Kingdom, Spain and Poland). In the rest of the world, only Mexico exports more hectolitres of beer. 16.7 million hectolitres of the total beer production in the Netherlands in 2008 (27.2 million hectolitres) is exported to other countries.

The majority of these exports (8.7 million hectolitres in 2007) go to North America. 4.7 million hectolitres of the exported beer remained within the European Union. The United Kingdom (1.0 million hectolitres) and Spain (0.9 million hectolitres) are the European countries which import most Dutch beer. Another substantial share of the exported Dutch beer is consumed in Africa (1.1 million hectolitres) and Asia 1.4 (million hectolitres).

	Exports in hectolitres in 2007
European Union	4,719,849
United Kingdom	957,488
Spain	900,157
France	591,552
Italy	502,635
Belgium/Luxembourg	573,418
Ireland	510,206
Rest of Europe	380,787
Africa	1,092,347
North America	8,720,067
South America	483,969
Asia	1,362,230
Oceania	156,556

Source: National Brewers' Association of the Netherlands, Centraal Brouwerij Kantoor (2008)

One of the world's largest brewing companies is Dutch. The largest brewery in the Netherlands, belonging to this brewing company, produces 18 million hectolitres a year (in three production plants) of which 71% is exported. Besides this market leader there are three other brewing companies with a market share above 10%. Although the large Dutch beer manufacturers operate internationally, some medium and smaller breweries possess a strong regional consumer base. An example is an independent brewery in the south of the Netherlands, with a company policy of buying ingredients within the home region. Such breweries have a relatively large economic impact on their home areas.

Factors that influence the impact of the brewing sector on the Dutch economy are the following.

Brewing sector internal characteristics:

- Typical market structure where the four biggest players together have a market share of 90%. [124]
- These larger breweries have a strong international orientation and are among the most efficient in Europe.
- The low-price segment is growing at the expense of the premium segment
- Outsourcing non-core activities (such as transport)

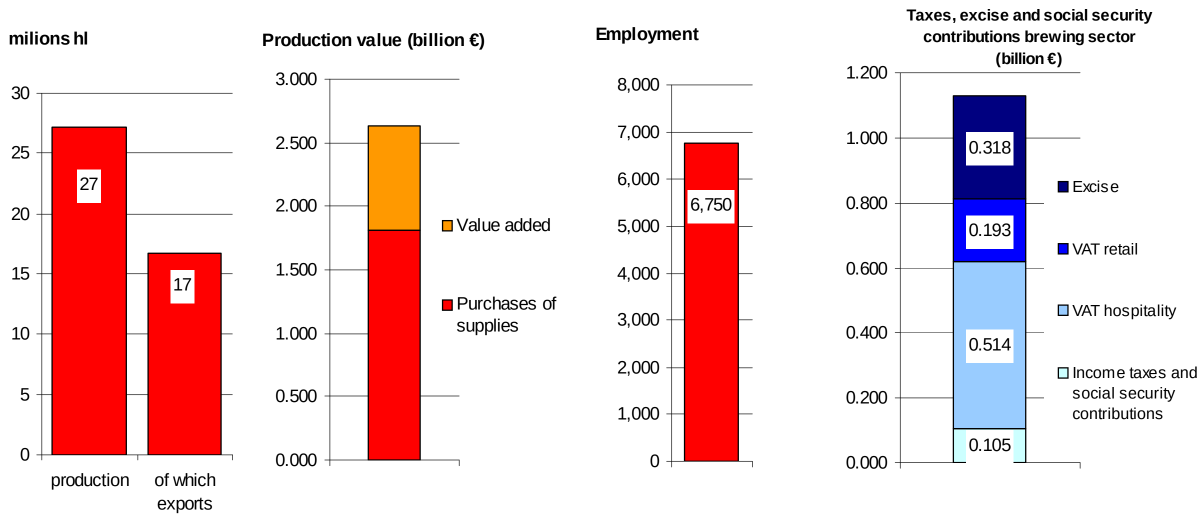
124 Source: Global Beer Trends 2008, Canedean Ltd. 2008.

Context in which the brewing sector operates:

- The Dutch beer market is stagnating (total beer consumption in 2008 was 12.9 million hectolitres, which is almost equal to the consumption in 2007 (12.7 million hectolitres) and 2006 (13.0 million hectolitres). [125]
- Netherlands is a relatively small and open country, thus imports a substantial proportion of supplies.
- Strong pressure on supermarket beer pricing, because supermarkets are subject to tough competition.
- In 2008 a smoking ban was introduced in Dutch pubs and restaurants.

26.3 Direct effect of the brewing sector

Approximately 6,750 people are employed in Dutch breweries. Together they generate a production value of approximately 2.6 billion euros, of which approximately 31% (824 million euros) is value-added. The rest (1.8 billion euros) is spent on purchasing goods and services in supply sectors.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Total government revenue from excises and VAT are estimated at 318 and 707 million euros respectively. Personal direct taxes, social security contributions and payroll taxes paid by employees and employers in the brewing sector add up to another 105 million euros.

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125 Source: National Brewers' Association of the Netherlands, Centraal Brouwerij Kantoor, 2008.

26.4 Economic impact of breweries on goods and services suppliers

Because only 31% of the production value of Dutch breweries stays within the firms as value-added, the other 69% (1.8 billion euros) accrues to a number of suppliers. This stimulus has a significant economic impact on sectors outside the brewing sector, most substantially on the services sector:

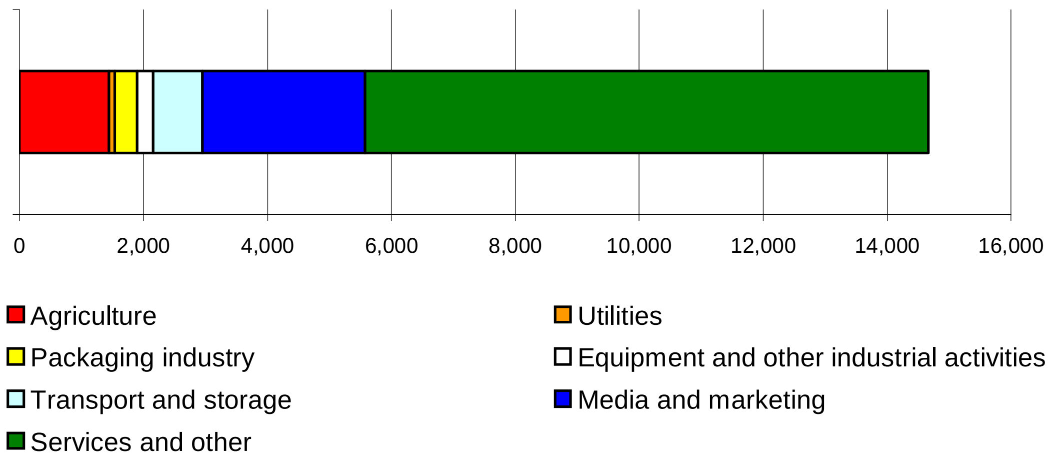
Sectors	Stimulus[126]	Stimulus for the Netherlands		Turnover per employee[127]	Number of employees
	(mln. €)	%	(mln. €)	(in €)	
Agriculture	252	45.0	114	122,137	936
Utilities	102	97.0	100	1,542,100	65
Packaging industry	151	56.0	85	365,400	232
Equipment	138	44.0	61	365,400	167
Transport	149	65.0	98	188,500	520
Media, marketing	228	76.0	173	101,679	1,703
Services	787	76.0	601	101,679	5,912
Total	1810		1233		9,535
First-round impact as % of total impact					65
Total indirect effect of brewing sector					14,669

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

Over 60% of all the indirect employment generated by the brewing sector consists of jobs within the services sector. But media and marketing, transport and agriculture also benefit substantially from the brewing sector. The total first-round employment effect of the brewing sector on supplying sectors is over 9,500 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact is approximately 14,700 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

126 (Domestic) stimulus is calculated on basis of the questionnaire survey and Eurostat data.
127 Turnover per employee is obtained from Eurostat.

26.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- Approximately 28.5% (3,7 million hectolitres) of the total beer consumption in the Netherlands is sold by the hospitality sector (on-trade).
- This means that with an average on trade consumer price of 8.75 per litre, (incl. 19% VAT), total consumer expenditure on beer in pubs and restaurants is 2.7 billion euros (excl. VAT).
- Average turnover per person employed in the Dutch hospitality sector amounts to 45,200 euros per year.
- It can be calculated that 59,800 jobs in the Dutch hospitality sector can be attributed to beer sales.

Retail

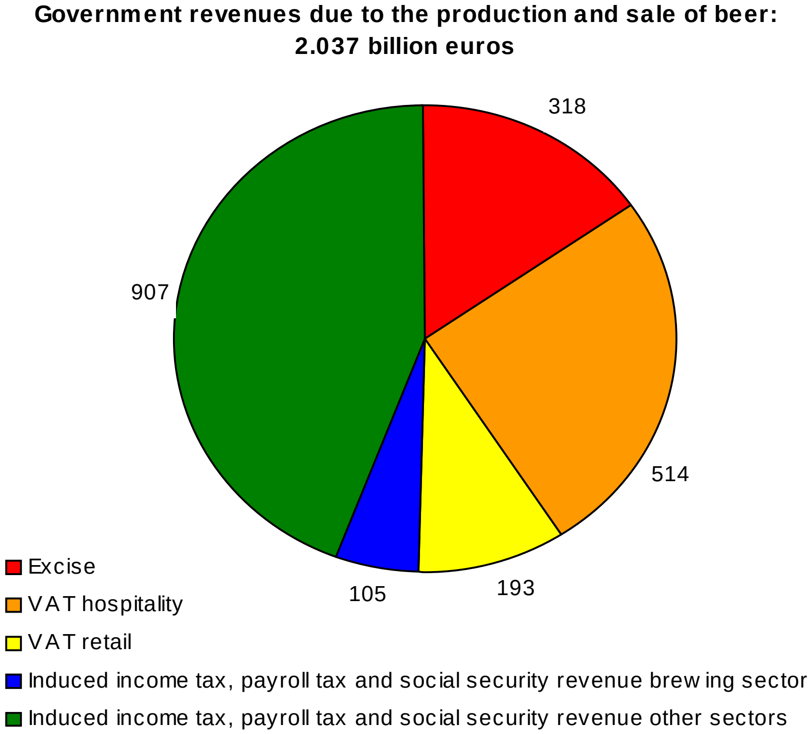
The importance of the brewing sector for retail can be similarly estimated:

- About 71.5% of total beer consumption in the Netherlands is beer sold by supermarkets and other retail companies.
- With an average consumer price of 1.31 euros per litre (incl. 19% VAT), total consumer spending on retail beer is estimated at 1.0 billion euros (excl VAT).
- Because the annual turnover per employee in the retail sector is estimated at 329,300 euros, this means 3,100 people owe their jobs to retail beer sales.

26.6 Government revenues

The Dutch government also profits from the brewing sector, by receiving approximately 2.037 billion euros of revenues due to beer production and sales.

- The excise revue of beer was 318 million euros in 2008.
- The VAT revenue from beer sold in the hospitality sector was 514 million euros, while the revenue from beer sold off trade was 193 million euros.
- In total the Dutch government received approximately 1.0 billion euros in income-related revenues due to beer production and sales. This amount consists of 318 euros in income tax, 406 million euros social security contributions paid by employees and 288 million euros social security contributions and payroll taxes paid by employers.



Source: Ernst & Young calculation (2009)

27 Norway: Economic impact of beer

27.1 Highlights of the economic impact

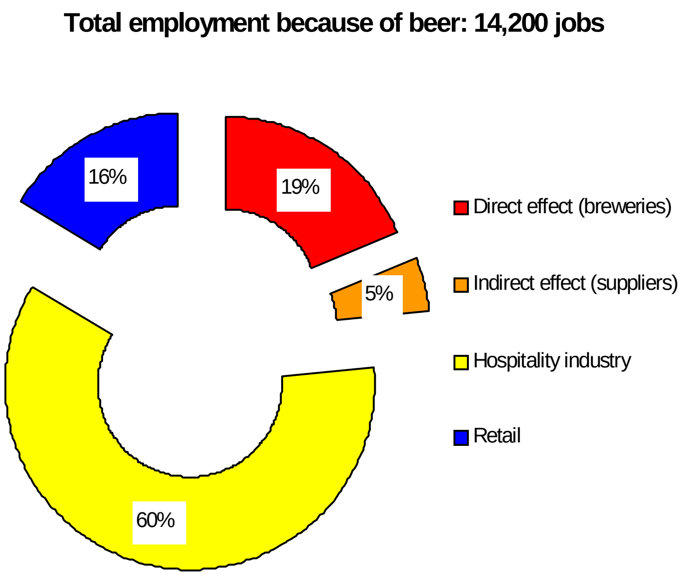
Total production (in hectolitres)	2,570,000
Total exports (in hectolitres)	0
Total imports (in hectolitres)	100,000
Total consumption (in hectolitres)	2,670,000
Number of brewing companies (including micro brewing companies)	18
Number of breweries (including microbreweries)	23

Source: National Brewers' Association in Norway, bryggeri- og drikkevareforeningen (2008)

The economic impact of the brewing sector in Norway can be expressed as follows:

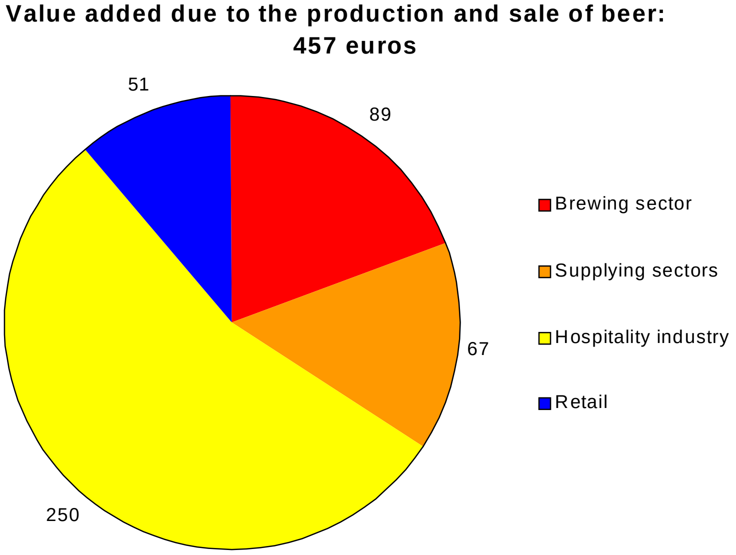
- In 2008 Norwegian breweries produced around 2.6 million hectolitres of beer. Of these breweries, 12 have a production of less than 20,000 hectolitres.
- These brewing companies provide jobs to 2,687 people.
- In comparison with other countries the Norwegian brewing sector generates relatively minor indirect effects in the supplying sector. Approximately 680 people in the supplying sectors owe their jobs to the production and sale of beer.
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 8,500 jobs in the hospitality sector can be attributed to beer, while in retail some 2,300 people owe their jobs to beer sales.
- The total employment impact along these lines is 14,200 jobs.
- The government also benefits from the brewing sector, receiving some 1.234 billion euros in taxes, social contributions and excises. Revenues from excise and VAT are estimated at 514 million and 338 million euros respectively. Revenues from direct employment taxes, payroll taxes and social security in the brewing sector, supplying sectors and the hospitality and retail sectors add up to some 382 million euros.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Norwegian economy can also be expressed in terms of value-added. The total value-added generated by these 14,200 jobs is estimated at 457 million euros:



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 19%, which is higher than the brewing sector share in total employment arising from beer. A significant explanation for this is the high productivity of brewing sector employees.

27.2 Industry and market structure, trends and developments

Norwegian breweries produced 2.6 million hectolitres of beer in 2008. Norwegians consumed 2.7 million hectolitres of beer. Of this consumption 100,000 hectolitres of beer is imported. Almost no beer is exported. The main part (80%) of the consumed beer is bought in the retail sector.

There are currently six brewing companies in Norway across 10 breweries. Not included in these numbers are the microbreweries and brewing pubs.

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Norwegian beer market and the brewing sector:

- Due to the highest excise rates in Europe, beer is quite costly in Norway in comparison with other countries.
- These high prices of beer lead to cross-border shopping. It is estimated that purchases from Sweden and Denmark account for 14% of Norwegian beer consumption.[128]
- The Norwegian market is dominated by one brewery which is part of one of the major international brewing companies.
- Norwegians are very proud of their country, which makes it difficult to compete with local products. Imported beer is available, but only on a limited scale and mostly in bottles and hardly ever on tap.[129]
- However, consumer market research showed that Norwegians want to try more new types of beer. But domestic standard lager is still the most popular type of beer.[130]
- Standard lager accounted for 55% of all volume sales in 2007, ahead of premium lager with 28%, while economy lager only accounted for 11%.
- 'Lite' beer (low-carb beer) has been a success in the Norwegian market, with consumers quickly understanding its concept.

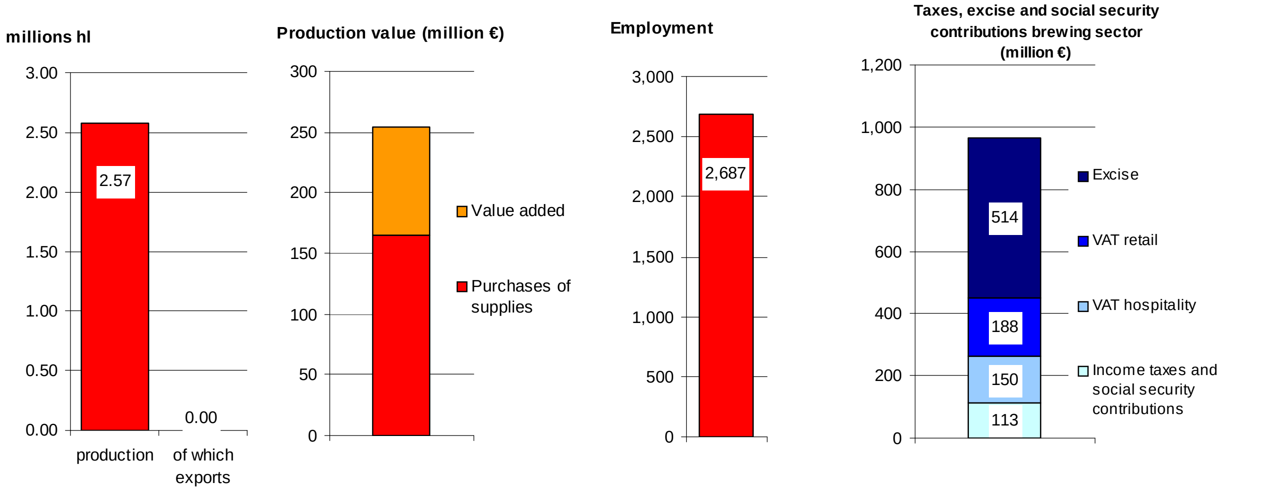
Other developments which influence the economic impact of the brewing sector are[131]:

- Since 2004, smoking has been banned in public buildings and in private buildings that are open to the public (like restaurants, bars, cafes)
- Norway has restricted the sale of strong beer, which is defined as beer with an alcohol content above 4.75%. The beer is only allowed to be sold via Vinmonopolet in the off-trade.
- Besides a high excise rate, Norway also has a relatively high VAT rate (25%).

[128] Oxford Economics, The consequences of the proposed increase in the minimum excise duty rates for beer, 2006.
[129] Hosley, N.S., Beer Market in Norway, http://www.customessaymeister.com/customessays/Business/1630.htm.
[130] Euromonitor, Beer in Norway, 2008.
[131] Sources: The Norwegian Brewers' Association; Wikipedia; Euromonitor, Beer in Norway, 2008.

27.3 Direct effect of the brewing sector

The brewing sector employs approximately 2,700 people who together produce beer with a production value of 254 million euros. Excise revenues are significant due to the high excise rate, amounting to 514 million euros.



Source: Ernst & Young calculation (2009)

Other important government revenues are the VAT revenues collected in the hospitality and retail sector. In total they amount to 337 million euros. Another substantial direct effect of the brewing sector concerns taxes paid by employees and employers in the brewing sector. Personal direct taxes and social security contributions paid by employees and payroll taxes and social security contributions in the brewing sector add up to another 113 million euros.

27.4 Economic impact of breweries on goods and services suppliers

With 35% of the value of the output produced staying within the firms as value-added, the other 65% of 253 million euros in total turnover accrues to a number of suppliers. This stimulus of 165 million euros is responsible for 680 jobs in the supplying sectors. In comparison with other countries, this indirect employment effect is relatively low. The main explanation for this is the relatively high turnover per employee in the supplying sectors.

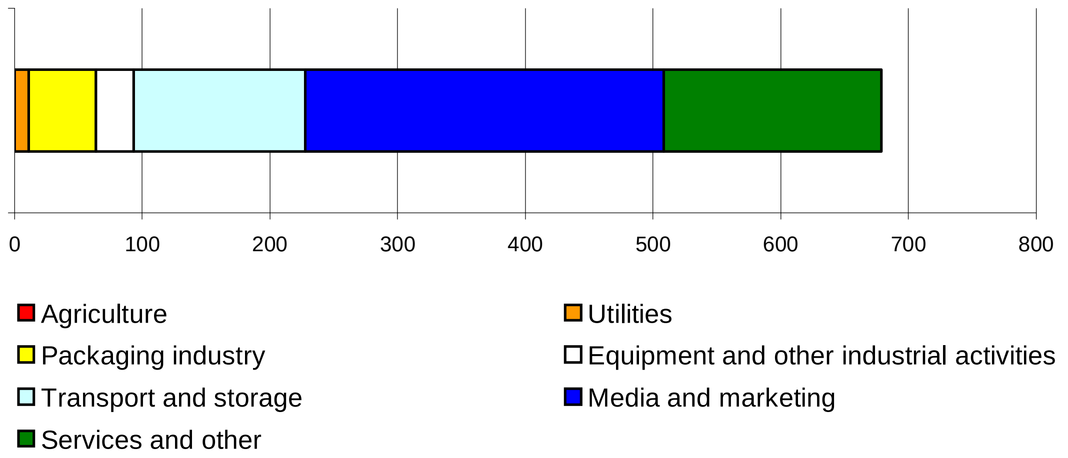
Sectors	Stimulus	Stimulus for Norway		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	33	0.0	0	69,915	0
Utilities	7	100.0	7	898,100	7
Packaging industry	27	40.0	11	320,200	34
Equipment	12	50.0	6	320,200	19
Transport	25	100.0	25	286,200	88
Media, marketing	38	100.0	38	207,023	182
Services	23	100.0	23	207,023	111
Total	165		109		441
First-round impact as % of total impact					65
Total indirect effect of brewing sector					679

Source: Ernst & Young calculation (2009); Eurostat (2006)

The media and marketing sector and other services benefit most from the production and sale of beer in terms of generated employment. The total first-round employment effect of the brewing sector on supplying sectors is approximately 440 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact is estimated at 680 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

27.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 20% of all beer consumed in Norway is sold by the hospitality sector (on-trade), which means that some 500,000 hectolitres is sold on-trade.
- The average consumer price of beer in Norwegian pubs and restaurants is estimated at 14 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 748 million euros (including VAT).
- Net consumer spending on beer is thus estimated at 598 million euros (using a 25% VAT tariff).
- With an average hospitality turnover of 70,000 euros (excluding VAT) per person, this results in approximately 8,500 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

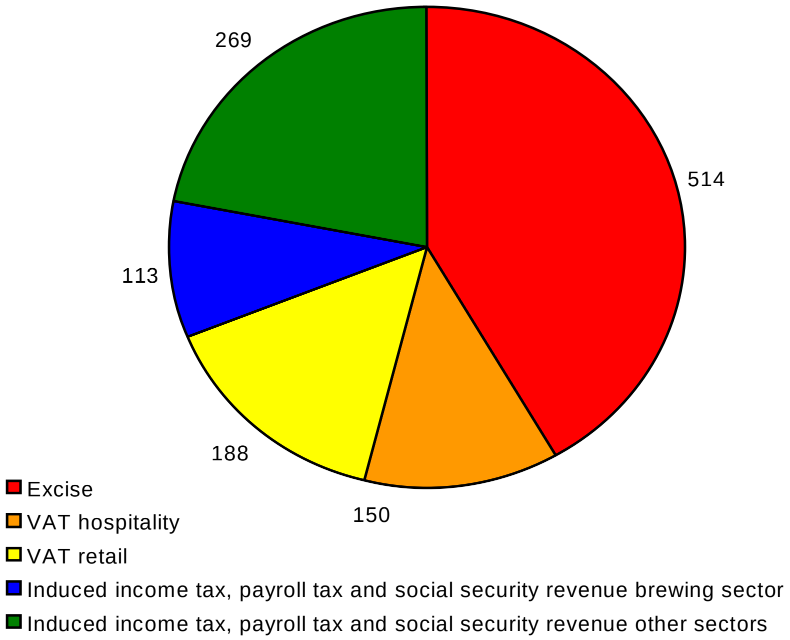
- Around 80% of total beer consumption (2.1 million hectolitres) in Norway is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 4.40 euros per litre (including VAT), total retail consumer spending on beer is estimated at 940 million euros. Total consumer spending excluding VAT is thus 752 million euros.
- With an average turnover per employee of 329,800 euros (excluding VAT), this means 2,300 people owe their jobs to retail beer sales.

27.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1.234 billion euros:

- VAT revenues are estimated at 337 million euros. The main part of these VAT revenues is generated in the retail sector.
- The total in excise revenues on beer is 514 million euros.
- Income-related revenues due to beer production and sales are approximately 382 million euros. They consist of 153 million euros in income tax, 68 million euros social security contributions paid by employees and 162 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 1.234 billion euros



Source: Ernst & Young calculation (2009)

28 Poland: Economic impact of beer

28.1 Highlights of the economic impact

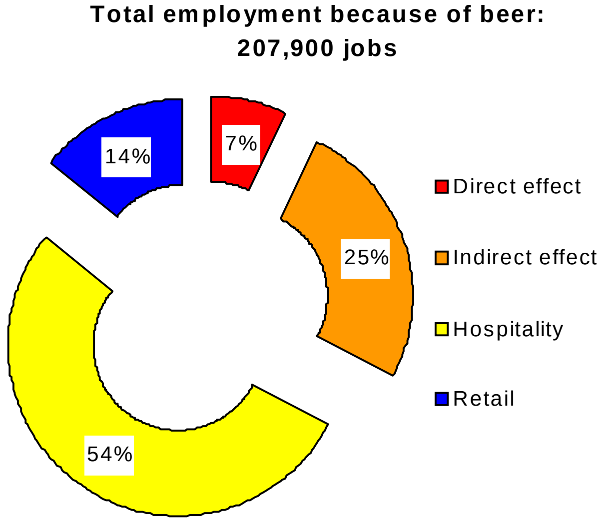
Total production (in hectolitres)	36,934,000
Total exports (in hectolitres)	1,510,000
Total imports (in hectolitres)	250,000
Total consumption (in hectolitres)	36,884,000
Number of brewing companies (including micro brewing companies)	43
Number of breweries (including microbreweries)	70

Source: National Brewers' Association in Poland, Browary Polski (2008)

The economic impact of the brewing sector can be expressed as follows:

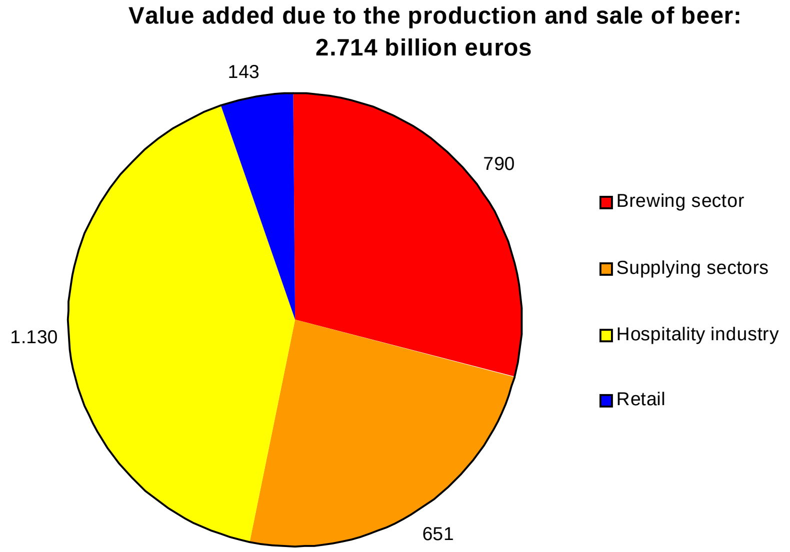
- Direct employment connected to the Polish breweries is estimated at 15,000 jobs.
- There are two brewers' associations in Poland: The Union of the Brewing Industry Employers in Poland (with four big companies) and the Association of Polish Regional Breweries (with around 35 breweries). There are also four independent brewing companies.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 52,900 supply industry jobs can be attributed to the purchases of the brewing sector, with the agricultural sector benefiting most.
- The impact on the hospitality sector is also considerable, with around 110,800 people (full-time jobs) earning a living in this sector because of beer sales. In the retail sector 29,200 full-time jobs depend on beer sales.
- The total employment impact due to beer production and sales in Poland is thus 207,900 jobs.
- The government also benefits from the brewing sector, receiving some 3.097 billion euros in taxes and excises. Excise revenues amount to 787 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 1.161 billion euros, while revenues from direct personal taxes paid by Polish brewery employees, their suppliers and in hospitality and retail add up to approximately 1.148 billion euros.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Polish economy can also be expressed in terms of value-added. Total value-added of the brewing sector in Poland and value-added generated by firms in the supply, hospitality and retail sectors due to the production and sale of beer amounts to around 2.7 billion euros:



Source: Ernst & Young calculation (2009)

The share of the brewing sector in overall value-added arising from the production and sale of beer is estimated at 29%. This is more than the share of direct employment connected to breweries as a fraction of total employment arising from the production and sale of beer (7%). An important explanation is that productivity in terms of value-added per employee in the Polish brewing sector is relatively high compared to other sectors.

28.2 Industry and market structure, trends and developments

Over the past two decades, the Polish beer market has shown a rapid growth in both production and consumption. An important explanation for this is a shift in consumer preference from vodka towards beer, which has continued over the past three years. Annual Polish brewers' production increased from 33.2 million hectolitres in 2006 to 36.9 million hectolitres in 2008, while annual consumption grew from 33.1 to 36.9 million hectolitres.[132]

The Polish beer market is the third in Europe, with only Germany and the United Kingdom consuming more beer. Approximately 75% of beer sales in Poland take place in supermarkets and other retail outlets. The average annual consumption per capita was 93 litres in 2007.[133] This is above the European average, but still below consumption in neighbouring countries which have a longer tradition in brewing and consuming beer (Germany and the Czech Republic). A growth continuation is thus possible. On the other hand, the Polish government increased the excise on beer by 13.6%, which could also influence consumption figures.

Although there are approximately 70 breweries in Poland[134], the market is highly consolidated. The three largest players together had a market share of 86% in 2007.[135] These three breweries are all owned by foreign brewing companies. Small producers are often strongly orientated towards their own local or regional market. The volume of imported beer on the Polish beer market is limited (only 250,000 hectolitres were imported in 2008).[136] Exports of Polish beer grew substantially in recent years, from 1.0 million hectolitres in 2006 to 1.5 million hectolitres in 2008.

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Polish economy:

Brewing sector internal characteristics:

- The production of Polish beer has grown substantially in recent years.
- A large number of Polish breweries are owned by foreign brewing companies.
- These international brewing companies made large investments in modernising the Polish breweries, resulting in high productivity (approximately 2,462 hectolitres per employee).

Context in which the brewing sector operates:

- Since Poland became a member of the European Union, Polish incomes have increased, stimulating spending behaviour.
- Despite rising wages, Polish labour costs are still relatively low compared to other European countries.

28.3 Direct effect of the brewing sector

The production value of the Polish brewing sector is estimated at 2.3 billion euros. The industry employs approximately 15,000 workers. Only Germany employs more people in breweries. The sector generates 790 million euros of added-value. The direct revenues (excise, VAT, and income-related revenues from employees of the brewing companies) which the Polish government receives amount to approximately 2.0 billion euros. Excise and VAT revenues accounted for 787 million and 1.161 billion euros respectively. Employees and employers in the brewing sector paid 54 million euros in income taxes, social security contributions and payroll taxes.

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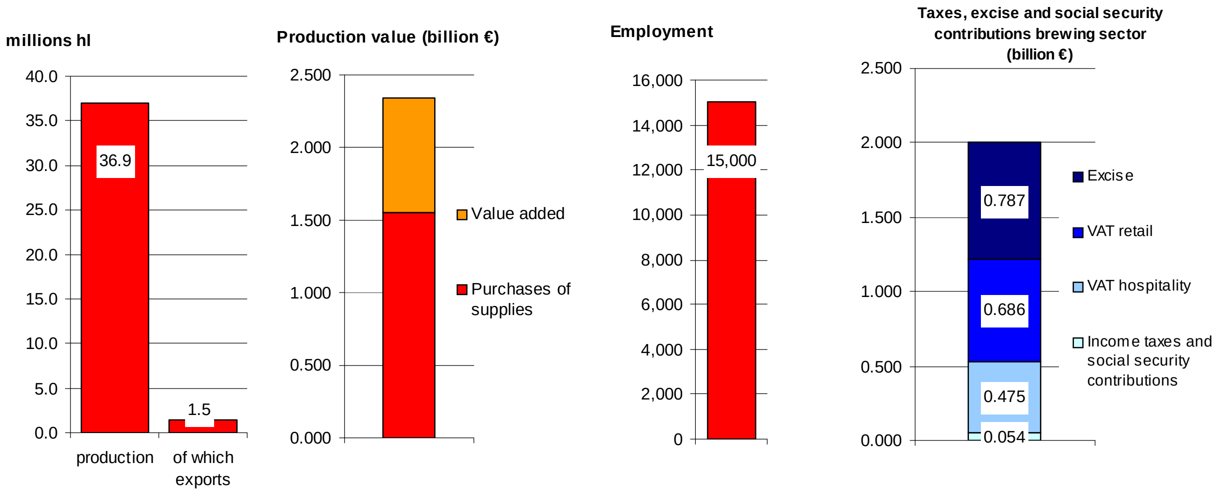
132 Source: National Brewers' Association in Poland, Browary Polski, 2008.
133 Source: Canadean Ltd: Global Beer Trends, 2008.
134 Source: National Brewers' Association in Poland, Browary Polski, 2008.
135 Source: Canadean Ltd: Global Beer Trends, 2008.
136 Source: National Brewers' Association in Poland, Browary Polski, 2008.



Source: Ernst & Young calculation (2009)

28.4 Economic impact of breweries on goods and services suppliers

Polish brewers spent a total of 1.552 billion euros on purchased goods and services. Since Poland is a large country, the majority of the required products and services are produced within the country's borders. On average, 81% of each euro spent on goods and services is spent domestically. The indirect effect of the brewing sector on other sectors in the country is thus considerable.

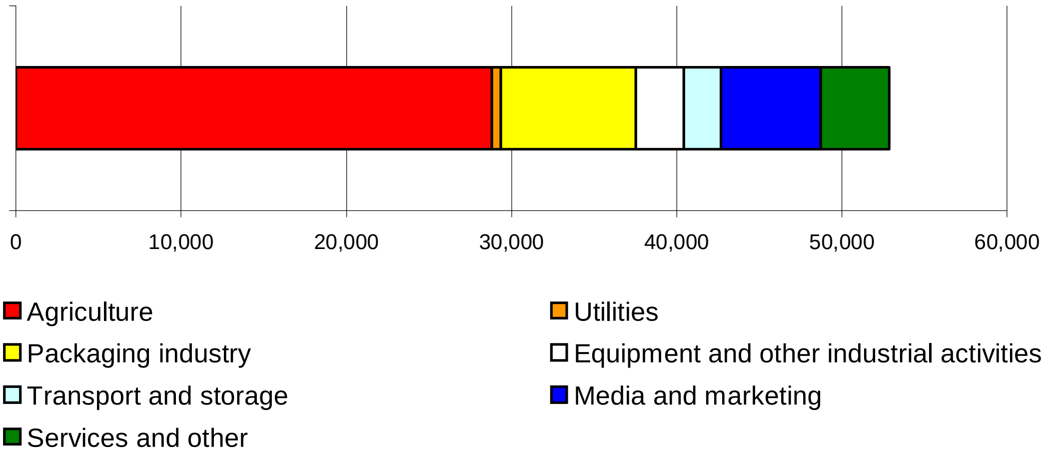
Sectors	Stimulus	Stimulus for Poland		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	309	57.8	178	9,522	18,726
Utilities	58	99.9	58	161,200	358
Packaging industry	486	83.0	404	75,900	5,318
Equipment	191	74.8	142	75,900	1,877
Transport	81	97.0	78	53,200	1,471
Media, marketing	245	95.5	234	59,563	3,926
Services	184	87.2	160	59,563	2,689
Total	1,552		1,254		34,366
First-round impact as % of total impact					65
Total indirect effect of brewing sector					52,871

Source: Ernst & Young calculation (2009); Eurostat (2006)

More than half of all the indirect employment due to the brewing sector is generated within the agricultural sector. Other important effects are seen in media and marketing, services and the packaging industry. The total first-round employment effect of the brewing sector on supplying sectors is over 34,400 employees. Because this primary effect can be estimated at about 65% of the total impact, the total impact will be about 52,900 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

28.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 25% of all beer consumed in Poland is sold by the hospitality sector (on-trade), which means almost 9.2 million hectolitres is sold on-trade.
- The average consumer price of beer in Polish pubs and restaurants is estimated at 2.86 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 2.6 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 2.2 billion euros (using a 22% VAT tariff).
- With an average hospitality turnover of 19,500 euros (excluding VAT) per person, this results in 110,800 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

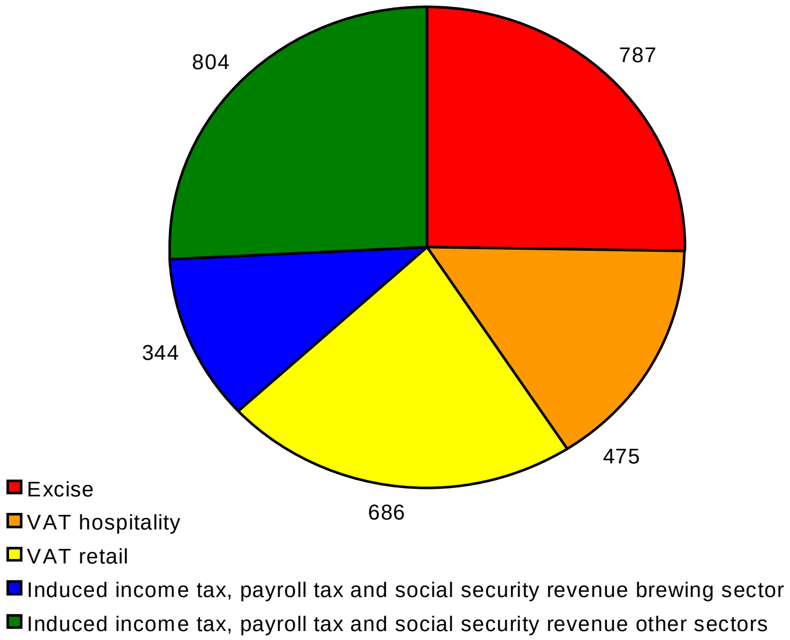
- Around 75% of total beer consumption (27.6 million hectolitres) in Poland is beer sold by convenience shops, supermarkets and other retail outlets.
- With an average consumer price of 1.37 euros per litre (including VAT), total retail consumer spending on beer is estimated at 3.8 million euros. Total consumer spending excluding VAT is thus 3.1 million euros.
- With turnover per employee estimated at 106,800 euros (excluding VAT), this means 29,200 people owe their jobs to retail beer sales.

28.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 3.097 billion euros:

- VAT revenues are estimated at 1.161 billion euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 787 million euros.
- Income-related revenues due to beer production and sales are approximately 1.148 billion euros. They consist of 168 million euros in income tax, 336 million euros social security contributions paid by employees and 645 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 3.097 billion euros



Source: Ernst & Young calculation (2009)

29 Portugal: Economic impact of beer

29.1 Highlights of the economic impact

Total production (in hectolitres)	8,210,000
Total exports (in hectolitres)	2,010,000
Total imports (in hectolitres)	36,000
Total consumption (in hectolitres)	6,200,000
Number of brewing companies (excluding micro brewing companies)	6
Number of breweries (excluding microbreweries)	7

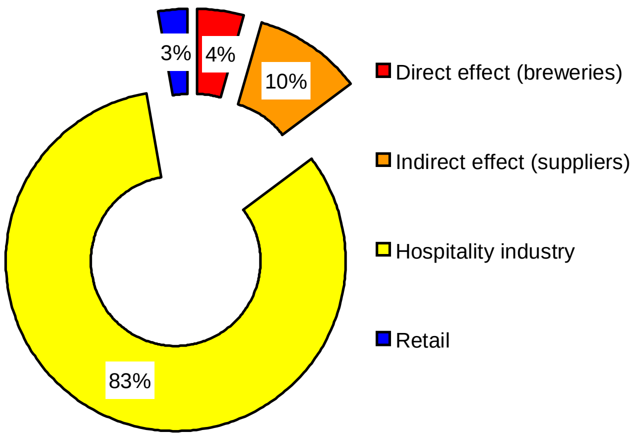
Source: National Brewers' Association in Portugal, Associação Portuguesa dos Produtores de Cerveja (APCV) (2008)

The economic impact of the brewing sector can be expressed as follows:

- There are 6 large and medium size brewing companies which together own 7 breweries. Portugal does not have strong tradition of microbreweries and their role in the Portuguese brewing sector is not significant.
- Portuguese breweries generate 3,200 jobs directly.
- The brewing sector generates important indirect effects within supply sectors. Because of goods and services bought in supplying sectors, additional indirect employment is generated of around 7,500 employees.
- The hospitality sector and retailers also benefit through beer sales. Almost 60,200 jobs in the hospitality sector can be attributed to beer, while in retail some 2,000 people owe their jobs to beer sales.
- The total number of people employed due to beer production and sales in Portugal is thus 72,900.
- Tax revenues for the Portuguese government from the production and sale of beer is estimated at around 973 million euros (91 million euros excise, 448 billion euros VAT and 426 million euros in direct income taxes and social security contributions paid by workers and their employers in the beer industry, the supplying sectors, hospitality and retail).

The employment impact of the brewing sector is presented below:

Total employment because of beer: 72,900 jobs

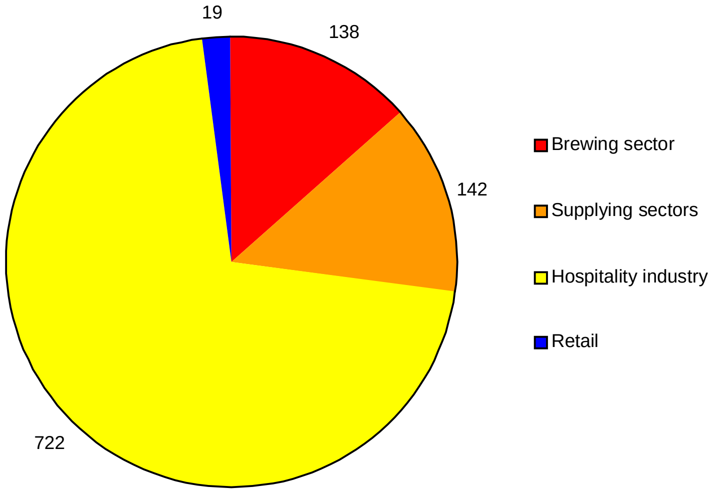


Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Portuguese economy can also be expressed in terms of value-added. The total value-added generated by these 72,900 jobs is estimated at 1.020 billion euros.

Value-added per employee is relatively high in the Portuguese brewing sector compared to others (only in the utilities sector is value-added per employee greater than in the brewing sector), reflecting its high productivity, so that the share of the breweries in total value-added generated (13%) is greater than the previously-presented share for total employment due to the production and sale of beer:

Value added due to the production and sale of beer: 1.020 billion euros



Source: Ernst & Young calculation (2009)

29.2 Industry and market structure, trends and developments

Portuguese breweries produced approximately 8.2 million hectolitres of beer in 2008. Consumption volume remained stable in recent years. The Portuguese Brewers' Association (APCV) estimates 6.2 million hectolitres of beer were consumed in 2008, the same as in 2007. Consumption per capita was about 61 litres in 2008. Around 3.5% of this consisted of non-alcoholic beers.

Consumption of imported beers is limited; in 2008 only 36,000 hectolitres of foreign beer were sold to Portuguese consumers.[137] Around 25% of the production in 2008 was exported, mainly to Africa. More than 60% of Portuguese beer sales occur in hospitality outlets. In comparison to other European countries this is rather high. Only in Spain, Ireland and Greece are sales in hospitality higher as a percentage of total beer consumption.

The beer market in Portugal is somewhat concentrated, with only six brewing companies. The market leader has a market share of 53% and the second-largest brewing company has a 44% market share.[138] Between these two brewing companies, who are both part of large multinational brewing concerns, there is a fierce competition for market share.

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Portuguese economy:

Brewing sector internal characteristics:

- Highly concentrated market, with the two largest companies having a 97% market share.
- Efficient production facilities (modern breweries, relatively large scale). Volume of beer produced per employee averages almost 2,600 hectolitres per year.
- More than 60% of the beer consumed in Portugal is sold in hospitality venues.

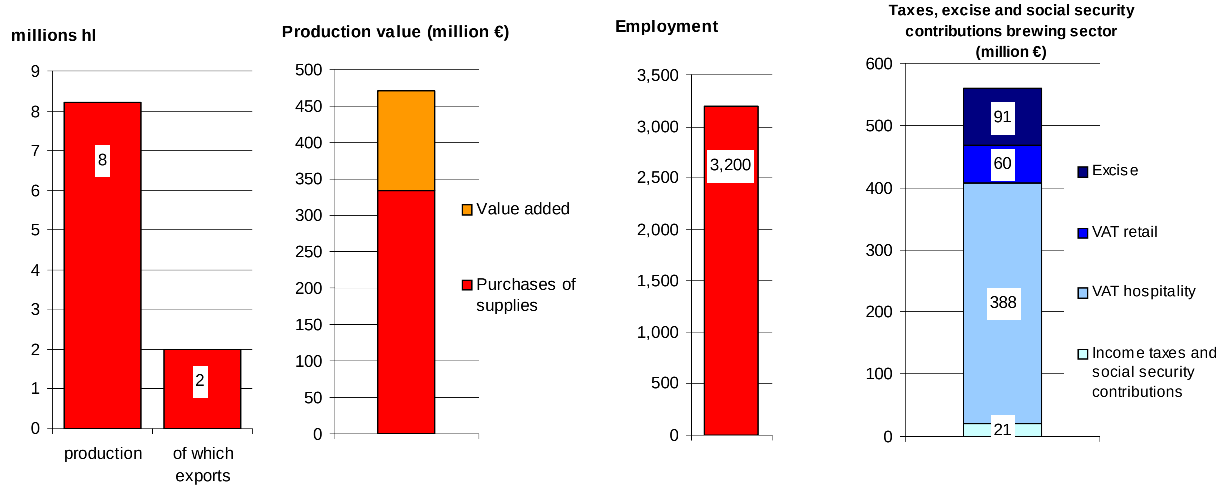
Context in which the brewing sector operates:

- On 1 January 2008 a smoking ban was introduced in Portuguese pubs and restaurants.
- Although average labour costs in Portugal have increased over the last years, they are still relatively low compared to other Western European countries.

29.3 Direct effect of the brewing sector

Portuguese brewing companies employ 3,200 people. The production value of Portuguese breweries in 2006 can be estimated at 472 million euros. Around 30% of production value stays within the breweries as value-added, which means that 70% of total value produced is transferred to supplying firms in various sectors, approximately 335 million euros. This means that Portuguese breweries together realise 138 million euros value-added:

137 Source: National Brewers' Association in Portugal, Associação Portuguesa dos Produtores de Cerveja (APCV) 2008
138 Source : E&Y data calculations, 2009.



Source: Ernst & Young calculation (2009)

The government also benefits from the production and sale of beer. Excise and VAT revenues accounted for 91 million and 488 million euros respectively. Employees and employers in the brewing sector paid 21 million euros in income taxes, social security contributions and payroll taxes.

29.4 Economic impact of breweries on goods and services suppliers

Because 70% of the total production value of Portuguese breweries is spent with suppliers, breweries exercise an important economic impact on supplying sectors. More than 80% of supplies are bought domestically.

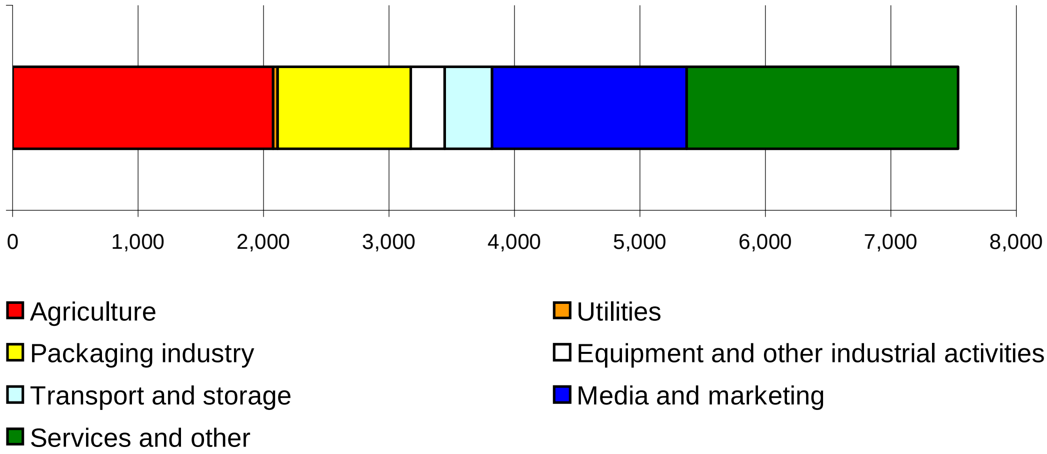
Sectors	Stimulus[139]	Stimulus for Portugal		Turnover per employee[140]	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	41	63.5	26	19,456	1,351
Utilities	13	100.0	13	540,000	24
Packaging industry	82	77.8	64	92,600	690
Equipment	37	44.1	16	92,600	174
Transport	34	100.0	34	138,300	245
Media, marketing	56	91.4	51	50,760	1,011
Services	72	99.0	71	50,760	1,403
Total	335		275		4,898
First-round impact as % of total impact					65
Total indirect effect of brewing sector					7,535

Source: Ernst & Young calculation (2009); Eurostat (2006)

The largest proportion of supplies is purchased from the services sector, while there is also significant spending on packaging, media and marketing and agricultural produce. The total first-round employment effect of the brewing sector on supplying sectors is over 4,900 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 7,500 jobs.

139 (Domestic) stimulus is calculated on basis of the questionnaire survey and Eurostat data.
140 Turnover per employee is obtained from Eurostat.

Indirect employment



Source: Ernst & Young calculation (2009)

29.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 62.5% of all beer consumed in Portugal is sold by the hospitality sector (on-trade), which means almost 3.9 million hectolitres is sold on-trade.
- The average consumer price of beer in Portuguese pubs and restaurants is estimated at 6 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 2.33 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 1.94 billion euros (using a 20% VAT tariff).
- With an average hospitality turnover of 32,200 euros (excluding VAT) per person, this results in 60,200 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

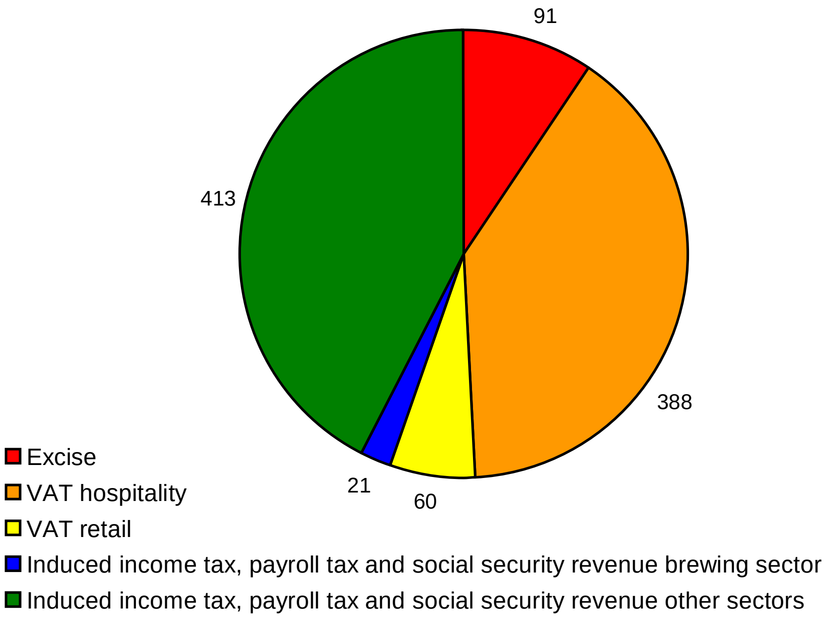
- Around 37.5% of total beer consumption (2.3 million hectolitres) in Portugal is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.56 euros per litre (including VAT), total retail consumer spending on beer is estimated at 361.5 million euros. Total consumer spending excluding VAT is thus 301 million euros.
- With turnover per employee estimated at 151,000 euros (excluding VAT), this means 2,000 people owe their jobs to retail beer sales.

29.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 973 million euros:

- VAT revenues are estimated at 448 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 91 million euros.
- Income-related revenues due to beer production and sales are approximately 434 million euros. They consist of 105 million euros in income tax, 104 million euros social security contributions paid by employees and 225 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 973 million euros



Source: Ernst & Young calculation (2009)

30 Romania: Economic impact of beer

30.1 Highlights of the economic impact

Total production (in hectolitres)	19,760,000
Total exports (in hectolitres)	60,000
Total imports (in hectolitres)	500,000
Total consumption (in hectolitres)	20,200,000
Number of brewing companies (excluding micro brewing companies)	13
Number of breweries (excluding microbreweries)	20

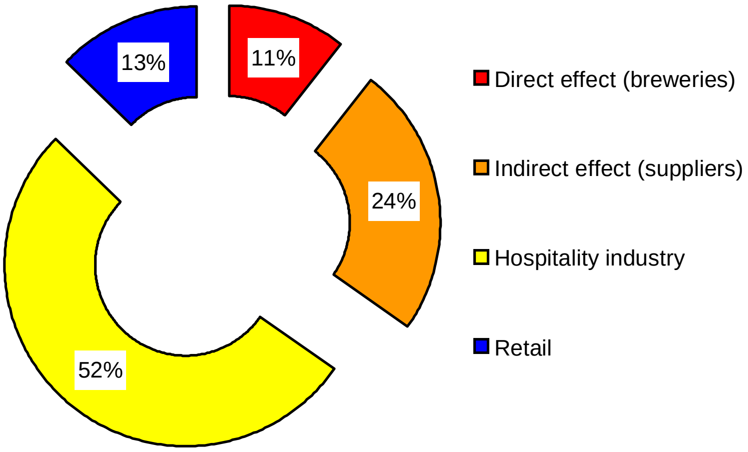
Source: Romanian Brewery Associaton: Asociatia Berarii Romaniei (2009)

The economic impact of the brewing sector can be expressed as follows:

- With an annual beer consumption that grew from 17,700,000 hectolitres in 2006 to 20,200,000 in 2008, Romania has a rapidly growing market.
- There is price competition between brewers and a preference for low-cost beers among certain consumer groups.
- Approximately 10,300 people are employed in Romanian breweries.
- Because of goods and services bought in supplying sectors, additional indirect employment of around 23,300 jobs is generated.
- In the Romanian hospitality sector 50,500 employees can be attributed to the sale of beer while in the wholesale and retail sector 12,300 persons owe their jobs to beer sales.
- Total impact of the brewing sector in terms of employment is thus estimated as 96,400 jobs.
- The government also benefits from the brewing sector, receiving approximately 680 million euros. This amount consists of 163 million euros excise, 334 million euros VAT and 183 million euros in income-related taxes.

The employment impact of the brewing sector is presented below:

Total employment because of beer: 96,400 jobs

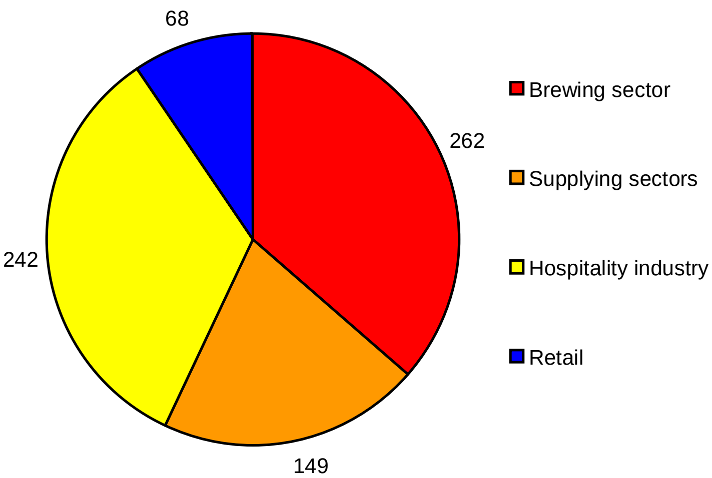


Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

Since the Romanian market is one of the fastest growing beer markets of Europe, many multinational brewing companies own a brewery in Romania. Productivity in terms of value-added per employee is relatively high in the Romanian brewing sector. Besides the entry of international companies into the Romanian brewing sector, high productivity is caused by investments in modernising breweries. Thus the brewing sector share in overall value-added arising from the production and sale of beer is 36%, far higher than the brewing sector share in total employment arising from beer (11%).

The total value-added generated by beer production and sales in Romania is estimated at 780 million euros:

Value added due to the production and sale of beer: 780 million euros



Source: Ernst & Young calculation (2009)

30.2 Industry and market structure, trends and developments

Since 2006 the volume of the Romanian beer market has grown 14% to 20,200,000 hectolitres in 2008.[141] Sales of beer in cans has increased particularly rapidly, with a growth of 25% in 2008. Annual consumption per capita increased from 66 litres of beer in 2004 to 93 litres in 2008. Certain consumer groups have a preference for low-cost beers; 46.5% of beer consumption was sold in PET bottles.

Type of packaging (% total beer sales)	2004	2005	2006	2007	2008
PET	24.4	31.4	40.4	56.6	46.5
Can	8.0	7.8	8.7	10.4	13.0
Bottle	61.9	54.5	46.2	40.5	37.5
Draught	5.7	6.3	4.7	3.5	3.0

Source: Brochure Asociatia Berarii Romaniei (2009)

Although imported beer is available in Romania, the majority of beer sold is locally-brewed. Most big multinational breweries have subsidiaries in Romania and they cover a large part of the Romanian beer market, but there are also local breweries. A total of 13 brewing companies operate in Romania with 20 brewing plants. In 2008 they produced 19,760,000 hectolitres of beer of which 60,000 hectolitres was exported. Approximately 500,000 hectolitres of beer was imported into Romania.

Factors that influence the impact of the brewing sector on the Romanian economy are the following:

Brewing sector internal characteristics:

- Fast-growing market.
- Increasing popularity of cheap beers, especially those packed in PET bottles.
- Many multinational brewing companies have entered the Romanian brewing sector, resulting in a very competitive market.

Context in which the brewing sector operates:

- Romania joined the European Union in 2007. Partially because of this, wages and overall price level in Romania have increased significantly in recent years.

30.3 Direct effect of the brewing sector

Romanian brewing companies employed approximately 10,300 people in 2008.[142] Together the breweries realised a production value of 706 million euros, of which 445 million is spent in supplying sectors. This means that the value-added of the Romanian brewing sector was 262 million euros.

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises account for 163 million euros and total VAT income for the Romanian government was estimated at 334 million euros. Personal income taxes and social security contributions paid by employees of the brewing sector are 18 million euros.

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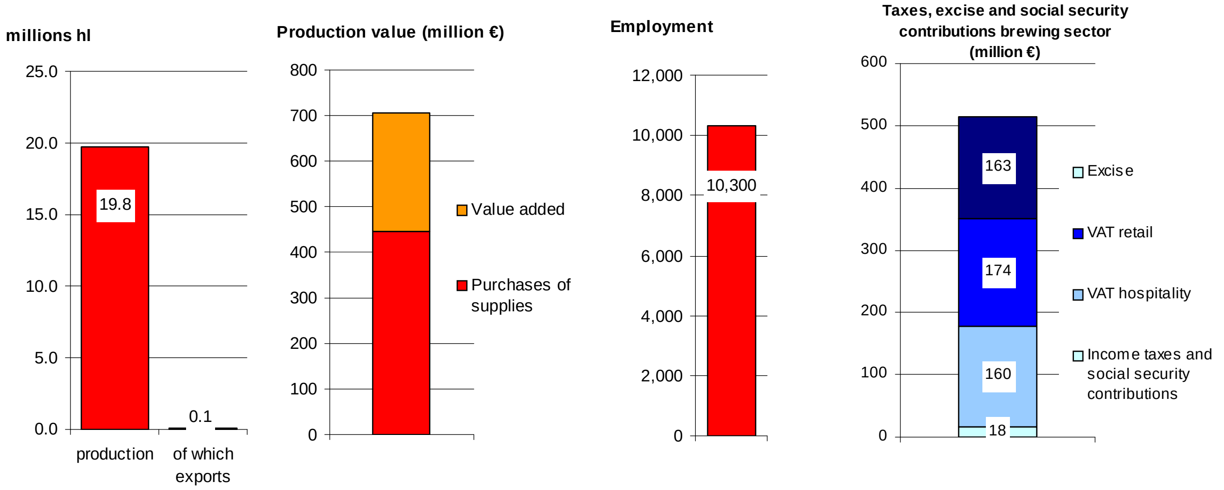
[141] Source: Brochure Asociatia Berarii Romaniei, 2009
[142] Source: EY questionnaire, completed by Associatia Berarii Romaniei, 2009



Source: Ernst & Young calculation (2009)

30.4 Economic impact of breweries on goods and services suppliers

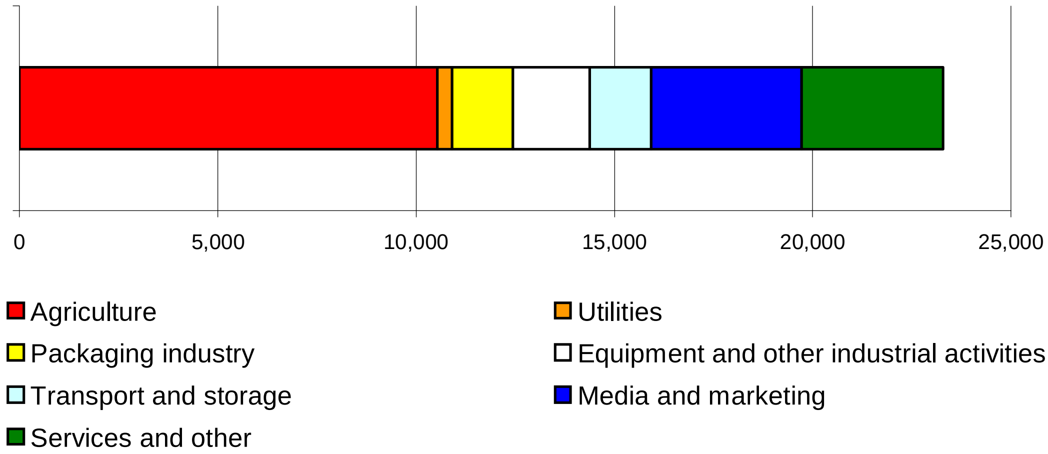
Since 63% of the total production value of the Romanian brewing sector is spent on purchasing goods and services, breweries have an important economic impact on supplying sectors. The largest proportion of supplies is purchased from the services sector, with further significant spending on agricultural products, media and marketing, transport and packaging. With 8,900 jobs, the employment effect due to the production and sale of beer is the largest in the agricultural sector.

Sectors	Stimulus	Stimulus for Romania		Turnover per employee	Number of employees
	(mln. €)	%	(mln. €)	(in €)	
Agriculture	94	55.7	53	7,667	6,848
Utilities	20	97.7	20	80.400	243
Packaging industry	59	53.3	32	31,800	995
Equipment	103	38.9	40	31,800	1,262
Transport	35	100.0	35	35,100	1,004
Media, marketing	67	89.2	59	24.111	2,465
Services	66	84.5	56	24,111	2,314
Total	445		294		15,130
First-round impact as % of total impact					65
Total indirect effect of brewing sector					23,277

Source: EY Questionnaire among breweries (2009); Eurostat (2006)

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

30.5 Retail and hospitality sectors

Hospitality sector

Employment in hospitality arising from beer sales is estimated at 50,500 jobs:

- Approximately 35% of Romanian beer consumption takes place in the hospitality sector.
- With a total consumption of 20,200,000 hectolitres in 2008 this means 7,070,000 hectolitres were consumed in pubs and restaurants.
- The average consumer price of beer is around 1.42 euros per litre (including VAT). This leads to an estimate of 1,004 million euros (VAT included) spent by consumers on beer in the hospitality sector, or 844 million euros (VAT excluded)
- Turnover per employee in the Romanian hospitality sector is 16,700 euros a year. Total employment in hospitality sector arising from beer sales is thus 50,500 jobs.

Retail

The employment effect from beer sales in retail consists of 12,342 jobs:

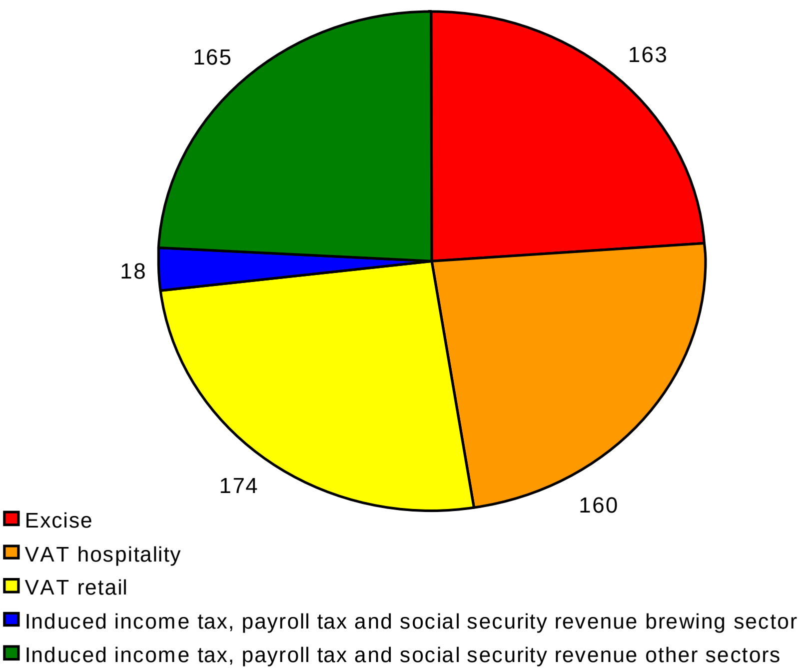
- About 65% of the total beer consumption in Romania is sold by supermarkets and other retail companies.
- This means that supermarkets and other retail companies sold 13,130,000 hectolitres.
- With an average consumer price of 0.83 euros (incl. 19% VAT) per litre, total consumer spending on beer in retail is estimated at 916 million euros (excl. VAT).
- Because the annual turnover per employee is estimated at 74,200 euros, this means that 12,300 people owe their jobs to retail beer sales.

30.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 680 million euros:

- VAT revenues due to the sales of beer are approximately 334 million euros.
- The excise revenue due to beer production and sales in 2008 amounted to 163 million euros.[143]
- The total income-related government revenues due to beer production and sales are approximately 183 million euros. Of this amount 26 million euros consists of personal income tax, 48 million euros of social security contributions paid by employees and 108 million euros are income-related taxes and contributions paid by employers.
- The tax burden for Romanian breweries has increased in recent years. For example the excise rate and the packaging tax (which is not included in the 680 million euros government revenues) increased significantly.[144]

Government revenues due to the production and sale of beer: 680 million euros



Source: Ernst & Young calculation (2009)

143 Source: Associatia Berarii Romaniei, 2009
144 Source: EY Questionnaire among breweries, 2009

31 Slovakia: Economic impact of beer

31.1 Highlights of the economic impact

Total production (in hectolitres)	3,558,000
Total exports (in hectolitres)	30,000
Total imports (in hectolitres)	650,000
Total consumption (in hectolitres)	4,178,000
Number of brewing companies (including micro brewing companies)	10
Number of breweries (including microbreweries)	11

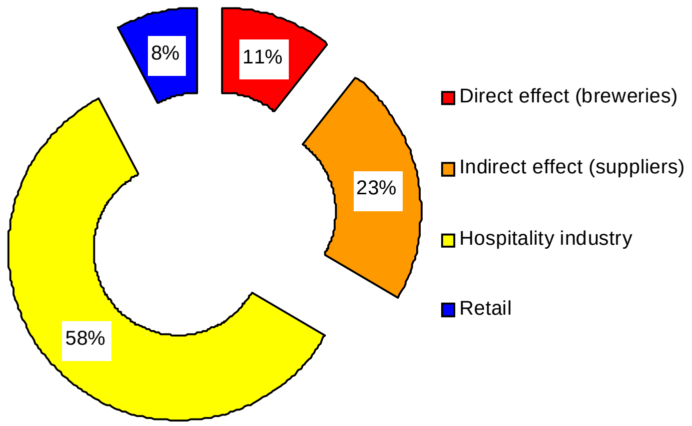
Source: Slovak Beer and Malt Association (2008)

The economic impact of the brewing sector on the Slovak economy is substantial:

- In Slovakia there are five large and medium brewing companies which own six breweries. There are also five microbreweries.
- The Slovak breweries employ 2,200 staff directly. Direct employment has increased almost 20% in 2008 over 2007.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 4,800 supply industry jobs can be attributed to the brewing sector (beer sales), with the services sectors benefiting most.
- In the hospitality sector, around 12,200 jobs can be attributed to the brewing sector and in retail around 1,600 employees owe their jobs to beer sales.
- The total employment effect of the brewing sector on the Slovak economy can be estimated at around 20,800 jobs.
- The Slovak government also benefits from the production and consumption of beer. Excise revenues are 58 million euros a year and total VAT revenues are estimated at 93 million euros. Furthermore, 64 million euros are generated through income-related revenues due to the employees who owe their jobs to the Slovakian brewing industry. The total revenues of the Slovakian government thus amount to 216 million euros.

The production and sales of beer in Slovakia generates approximately 20,800 jobs:

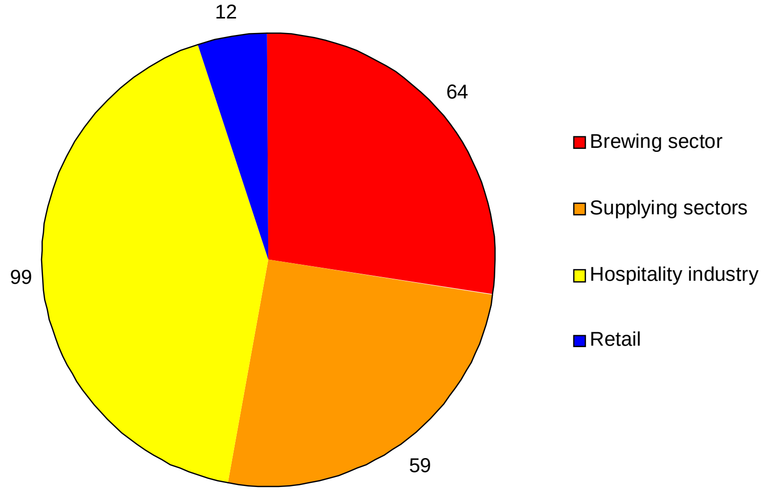
Total employment because of beer: 20,800 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The total contribution to the Slovak economy in terms of value-added due to production and the sale of beer is estimated at 234 million euros. The hospitality sector accounts for more than 40% of total value-added due to the production and consumption of beer.

Value added due to the production and sale of beer: 234 million euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 27%, which is significantly higher than the brewing sector share in total employment arising from beer (11%). An explanation for this is the high productivity of brewing sector employees.

31.2 Industry and market structure, trends and developments

Like its neighbour the Czech Republic, Slovakia has a long-standing tradition in brewing beer. Beer production dates back to the 11th century. Slovak beers can be divided into two categories: svelte (light beer with a bitter aftertaste) and tmave (dark beer with a sweeter taste).

The beer market in Slovakia is stagnating. Slovak brewers produced approximately 3.6 million hectolitres of beer in 2008, which is slightly less than in 2007 and 2006.[145] Consumption decreased from 4.4 million hectolitres in 2006 to 4.2 million hectolitres in 2008. Average annual consumption per capita also decreased (from 94 litres in 2002 to 83 litres in 2007).[146]

As in most eastern European countries, foreign companies have entered the Slovak beer market. Most of the large breweries in Slovakia are now owned by multinational brewing concerns. The two largest brewing companies, who each hold a market share of around 40%, are part of two of the biggest multinational brewing concerns. These foreign companies made large investments in modernising the Slovak breweries, resulting in high productivity (annual production amounts to more than 1,600 hectolitres per employee).

Important trends in the Slovak brewing sector are summarised below:

Brewing sector internal characteristics:

- A consolidated market, with the two largest breweries together holding a market share of approximately 80%.
- Foreign companies own a large part of the Slovak brewing facilities and have made huge investments in modernising breweries, resulting in high productivity levels.
- Because Slovakia is a relatively small country, one would expect that a large part of the supplies of the Slovak brewing industry would be purchased abroad. However, 82% of all supplies are obtained domestically.

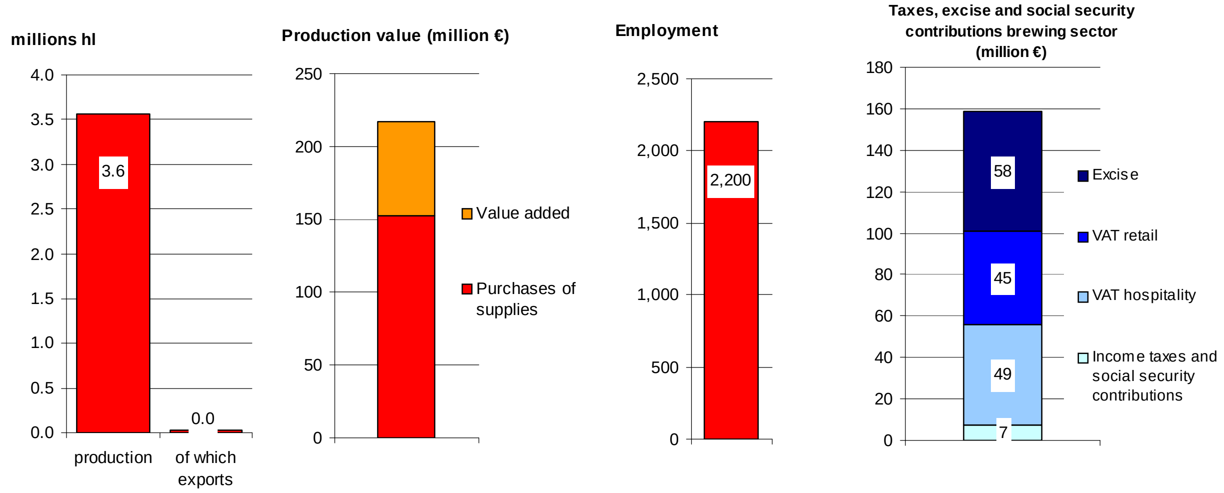
Context in which the brewing sector operates:

- The annual consumption per capita has decreased in recent years and is substantially lower than in the Czech Republic.
- Although there is a smoking ban in part of the Slovak hospitality sector, owners of facilities that only serve drinks are still allowed to choose whether smoking is prohibited or not.
- A substantial part of the beer consumption in Slovakia consists of imported beers (around 18%)[147], mainly from the Czech Republic.[148]

31.3 Direct effect of the brewing sector

Direct employment at Slovak breweries is estimated at 2,200 employees. These employees together generate a production value of approximately 217 million euros, consisting of 64 million euros value-added and 153 million euros of supplied goods. The direct revenues (excise, VAT, and income-related revenues from employees of the brewing companies) which the Slovak government receives amount to approximately 7 million euros.

[145] Source: Slovak Beer and Malt Association, 2008.
[146] Source: Global Beer Trends 2008, Canedean Ltd. 2008.
[147] Source: Slovak Beer and Malt Association, 2008.
[148] Source: Eurostat, 2006.



S

ource: Ernst & Young calculation (2009)

31.4 Economic impact of breweries on goods and services suppliers

Half of all the indirect employment generated by the brewing sector is within the agricultural sector. The production of barley and malt has a long tradition in Slovakia. For example, at the end of the nineteenth century, when Slovakia was part of Greater Hungary, Slovakia produced more than a third of Greater Hungary's barley yield. Today Slovakia is still an important producer of barley malt and hops.

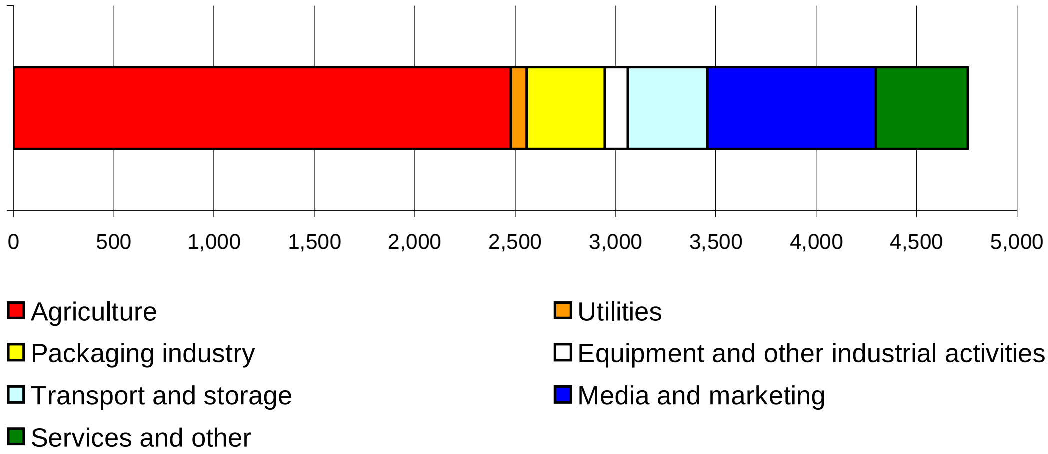
Other sectors which benefit substantially from the brewing sector are packaging, transport, the media and marketing sector and services. As the primary employment effect can be estimated at about 65% of the total impact, the total impact will be about 4,800 jobs.

Sectors	Stimulus	Stimulus for Slovakia		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	38	90.0	34	21,069	1,611
Utilities	10	100.0	10	194,500	52
Packaging industry	39	61.0	24	93,400	254
Equipment	11	61.0	7	93,400	74
Transport	14	93.7	13	50,000	258
Media, marketing	27	90.5	24	44,235	544
Services	15	90.5	13	44,235	298
Total	153		125		3,090
First-round impact as % of total impact					65
Total indirect effect of brewing sector					4,754

Source: Ernst & Young calculation (2009); Eurostat (2006)

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

31.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 40% of all beer consumed in Slovakia is sold by the hospitality sector (on-trade), which means 1.6 million hectolitres is sold on-trade.
- The average consumer price of beer in Slovakians pubs and restaurants is estimated at 1.82 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 3.4 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 2.5 billion euros (using a 19% VAT tariff).
- With an average hospitality turnover of 20,900 euros (excluding VAT) per person, this results in 12,200 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

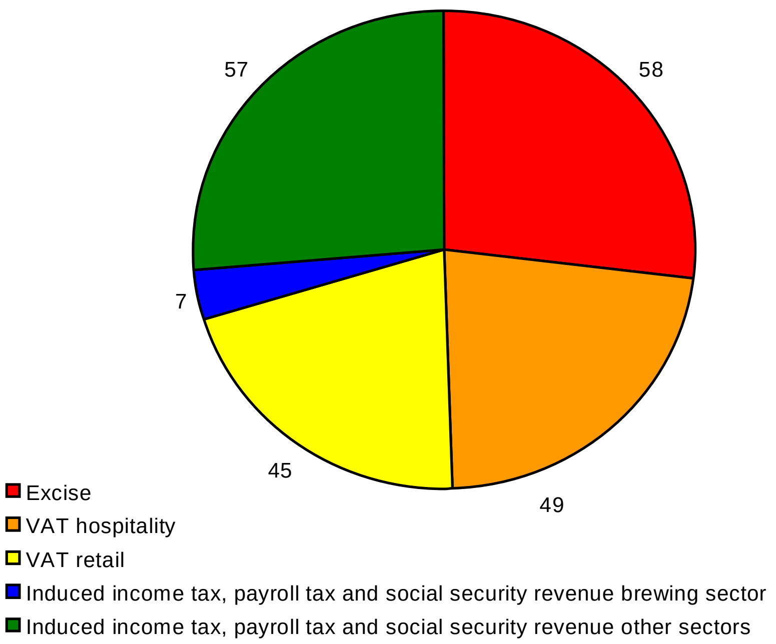
- Around 60% of total beer consumption (2.5 million hectolitres) in Slovakia is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.12 euros per litre (including VAT), total retail consumer spending on beer is estimated at 280 million euros. Total consumer spending excluding VAT is thus 236 million euros.
- With turnover per employee estimated at 144,200 euros (excluding VAT), this means 1,600 people owe their jobs to retail beer sales.

31.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 216 million euros:

- VAT revenues are estimated at 93 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 58 million euros.
- Income-related revenues due to beer production and sales are approximately 64 million euros. They consist of 12 million euros in income tax, 16 million euros social security contributions paid by employees and 36 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 216 million euros



Source: Ernst & Young calculation (2009)

32 Slovenia: Economic impact of beer

32.1 Highlights of the economic impact

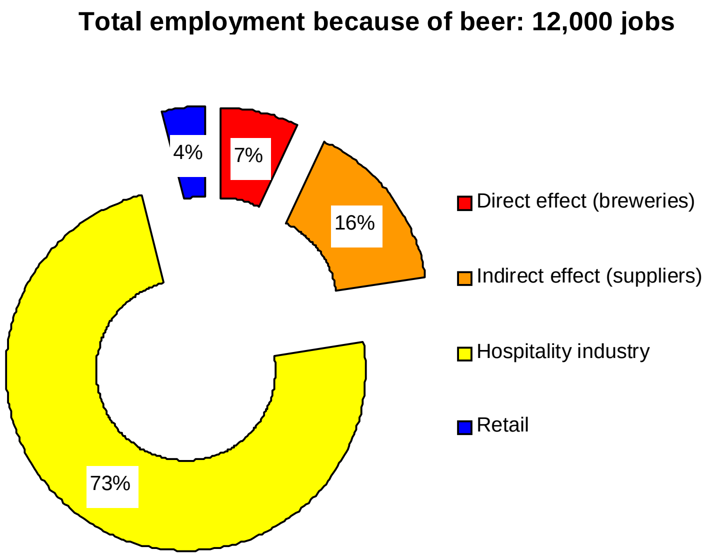
Total production (in hectolitres)	1,760,000
Total exports (in hectolitres)	403,000
Total imports (in hectolitres)	248,000
Total consumption (in hectolitres)	1,780,000
Number of brewing companies (including micro brewing companies)	22
Number of breweries (including microbreweries)	22

Source: National Brewers' Association in Slovenia (2008)

The economic impact of the brewing sector on the Slovenian economy can be summarised as follows:

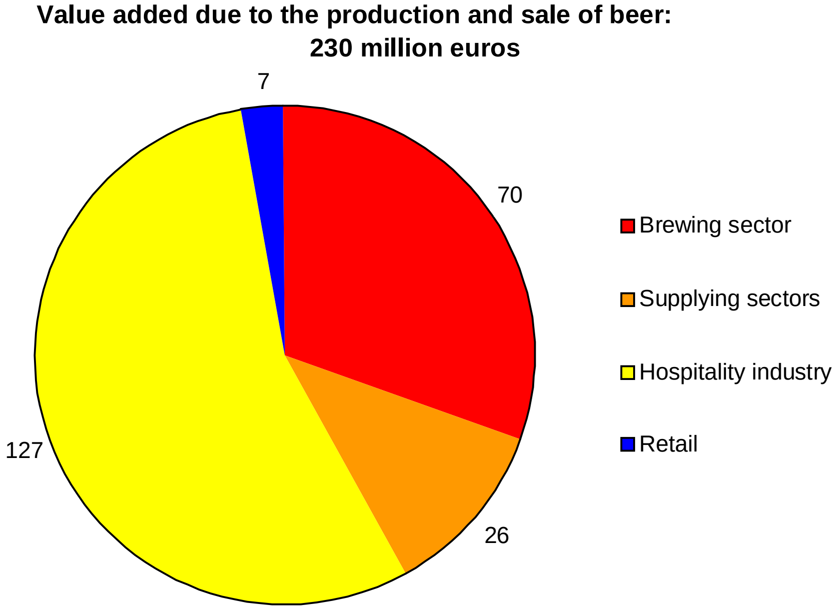
- Slovenian breweries provide 826 jobs.
- The Slovenian beer market is dominated by one large brewing company. There is also one brewery with a production of between 20,000 and 1 million hectolitres and 20 microbreweries with a production of less than 20,000 hectolitres.
- Supplying sectors benefit from the brewing sector because of the purchases needed for production and sale in these sectors. It is estimated that 1,866 jobs can be attributed to the production and sale of beer.
- Another 8,800 jobs are also generated in the hospitality sector because of the sale of beer and in retail some 460 jobs can be attributed to beer sales.
- The total impact of the brewing sector on the Slovenian economy in terms of employment is estimated at approximately 12,000 jobs.
- The government also benefits from the brewing sector, receiving some 255 million euros in taxes and excises. Excise revenues amount to 59 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 87 million euros, while revenues from direct personal taxes paid by Slovene brewery employees, their suppliers and in hospitality and retail add up to some 109 million euros.

The employment impact of the brewing sector is presented below:



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Slovene economy can also be expressed in terms of value-added. The total value-added generated by these 12,000 jobs is estimated at 230 million euros:



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 30%, which is much higher than the brewing sector share in total employment arising from beer (7%). A significant explanation for this is the high productivity of brewing sector employees.

32.2 Industry and market structure, trends and developments

Slovenia is relatively one of the smaller central European countries, but Slovenia has an historically high rate of alcohol consumption. Slovenia is a beer producing country. Slovenia's historical connections with the Austro-Hungarian Empire contribute to a tradition of beer brewing and a high popularity of beer drinking.

The local Slovenian beer market was dominated for years by two national brands. One of them has been brewed for more than 175 years in Lasko. The other has 140 years of brewing history in Ljubljana. Slovenes did not have their own beer before the founding of these breweries. The two breweries were highly competitive in aiming for Slovenia's top spot. AB InBev acquired 41.32% of the shares of the brewery in Ljubljana, and sold these shares in 2005 to the brewery in Lasko. The sale led to a monopoly position for the Lasko brewery.

Brewing sector internal characteristics:

- Lager is the main beer; its share in total consumption is 95%.
- Because of higher incomes in Slovenia, more money is spent on premium wine and beer brands.[149]
- The increased expenditure is stronger in the on-trade channel. But the ratio on-trade/off-trade consumption has not changed.
- Overall consumption has also increased. This is partly caused by a changing consumption pattern. Although wine still accounts for the majority of alcohol consumed, its volume share is falling on account of beer.
- This increase is reflected in both an increase in production and in imported beer.
- The amount of imported beer has increased from 191,000 hectolitres in 2006 to 248,000 hectolitres in 2008.
- Production has increased from 1.6 million hectolitres to 1.76 million hectolitres .
- Consumption is predicted to continue growing. The growth will be driven by the on-trade channel.

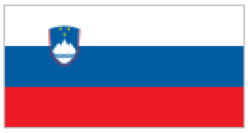
The context in which the brewing sector operates:

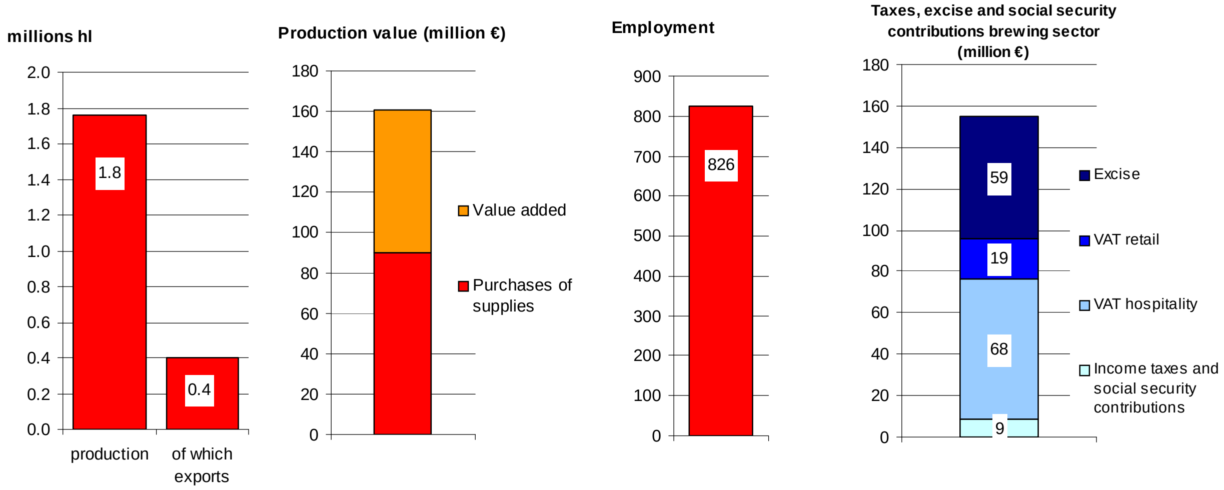
- Slovenia has one of the most restrictive laws on advertising alcohol of all European countries.
- Since 1 August 2007 smoking has been prohibited in all indoor public and work places. This smoking ban had unfavourable consequences, especially in the catering industry: bars with no exterior seating areas have recorded up to 40 per cent less income.[150]
- In Slovenia no excise is levied on wine and other fermented beverages. The excise on beer is at 9 euros for each 1 vol. % of alcohol strength above the European minimum excise rate.[151]
- Supermarkets and hypermarkets form the most important distribution channel. In Slovenia there is strong competition between the leading retailers: Mercator, Tus and Spar. Consumers benefit from this tough competition.

32.3 Direct effect of the brewing sector

Slovenian breweries employ 826 employees who together produce 1.76 million hectolitres of beer. This production has a value of 160 million euros.

149 http://www.bharatbook.com/Market-Research-Reports/Alcoholic-Drinks-in-Slovenia.html
150 http://www.slovenia.si/spotlights/200710/2007112110462449
151 http://www.carina.gov.si/en/informacije/businesses/excise_duties_system/





Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 59 million euros and total VAT income for the Slovenian government was estimated at 87 million euros. Personal direct taxes, social security contributions and payroll taxes paid by employees and employers in the brewing sector add up to another 9 million euros.

As already noted, the production value of Slovenian breweries is 160 million euros. A relatively high share (44%) of total turnover stays within the brewing sector as value-added. Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

32.4 Economic impact of breweries on goods and services suppliers

With 44% of the value of the output produced staying within the firms as value-added, the other 56% of 16 million euros in total turnover accrues to a number of suppliers. This stimulus of 90 million euros has a significant economic impact on sectors outside the brewing sector, most substantially on the agriculture sector. This high impact on the agriculture sector is due to the relatively low turnover per employee in this sector in comparison with other sectors.

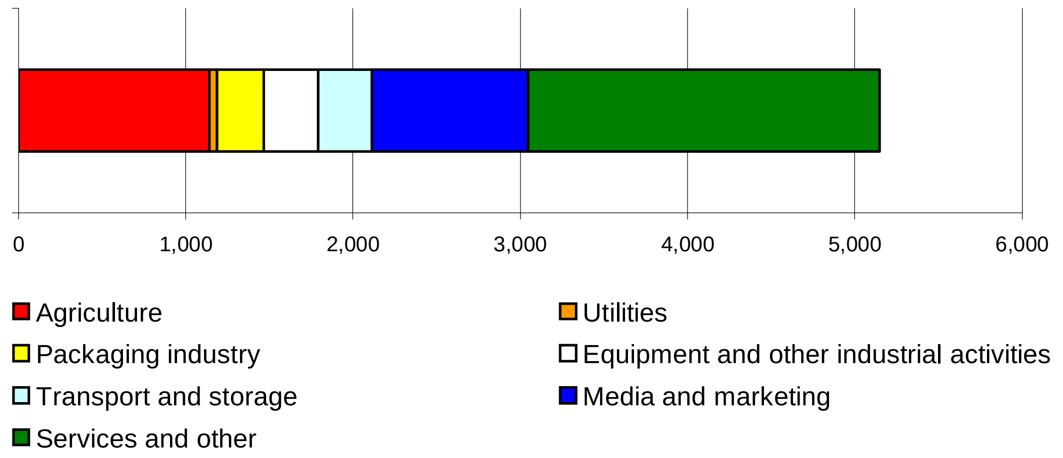
Sectors	Stimulus	Stimulus for Slovenia		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	15.77	65.0	10	14,101	727
Utilities	3.15	100.0	3	203,200	16
Packaging industry	29.37	50.0	15	98,500	149
Equipment	6.85	50.0	3	98,500	35
Transport	5.5	75.0	4	96,300	43
Media, marketing	16.4	80.0	13	96,598	136
Services	13.06	80.0	10	96,598	108
Total	90		59		1,213
First-round impact as % of total impact					65
Total indirect effect of brewing sector					1,866

Source: Ernst & Young calculation (2009); Eurostat (2006)

Almost 60% of the indirect employment effected is generated in the agriculture sector. Other substantial effects are seen in the packaging industry, media and marketing sector and other services. The total first-round employment effect of the brewing sector on supplying sectors is estimated at approximately 1,200 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 1,900 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

32.5 Retail and hospitality sectors

Hospitality sector

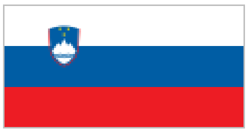
The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 60% of all beer consumed in Slovenia is sold by the hospitality sector (on-trade), which means 1.07 million hectolitres is sold on-trade.
- The average consumer price of beer in Slovenian pubs and restaurants is estimated at 3.8 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is almost 4.1 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 3.4 billion euros (using a 20% VAT tariff).
- With an average hospitality turnover of 38,400 euros (excluding VAT) per person, this results in 8,800 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

- About 40% of total beer consumption (712.000 hectolitres) in Slovenia is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.64 euros per litre (including VAT), total retail consumer spending on beer is estimated at 117 million euros. Total consumer spending excluding VAT is thus 97 million euros.
- With turnover per employee estimated at 213,400 euros (excluding VAT), this means around 460 people owe their jobs to retail beer sales.

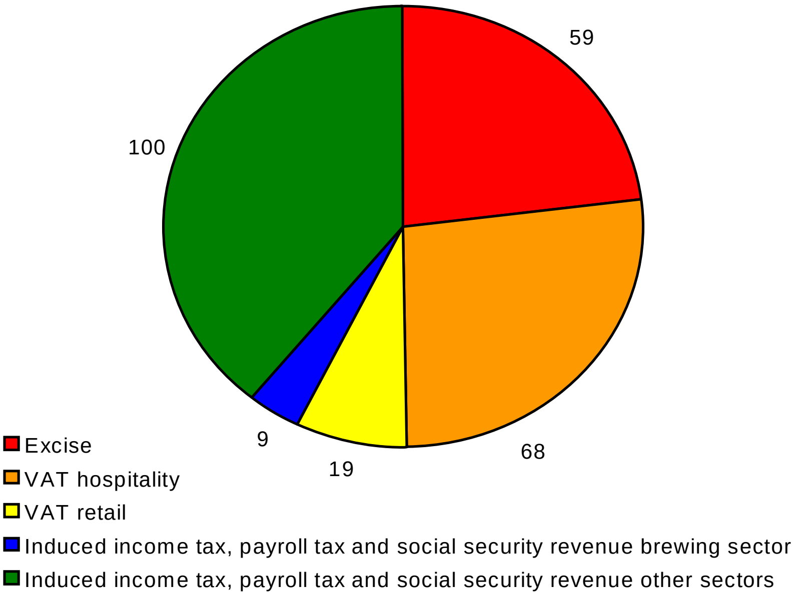


32.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 255 million euros:

- VAT revenues are estimated at 87 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 59 million euros.
- Income-related revenues due to beer production and sales are approximately 109 million euros. They consist of 28 million euros income tax, 39 million euros social security contributions paid by employees and 42 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 255 million euros



Source: Ernst & Young calculation (2009)

33 Spain: Economic impact of beer

33.1 Highlights of the economic impact

Total production (in hectolitres)	33,402,000
Total exports (in hectolitres)	825,000
Total imports (in hectolitres)	3,081,000
Total consumption (in hectolitres)	35,658,000 (*)
Number of brewing companies[152] (excluding micro brewing companies)	6
Number of breweries (excluding microbreweries)	20

Source: Cerveceros de España (2008) (*) This is apparent consumption.

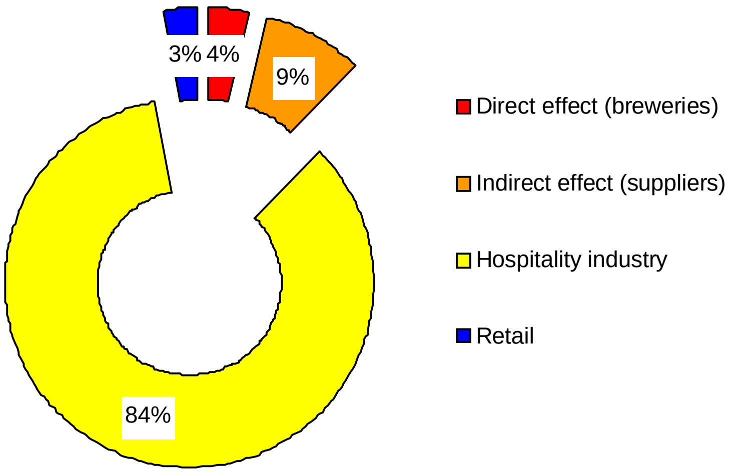
The most important characteristics of the Spanish beer market are:

- Direct employment by Spanish breweries is 8,180 jobs.
- The brewing sector generates important indirect effects within supply sectors. It is estimated that 20,100 supply industry jobs can be attributed to the brewing sector (beer sales).
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 189,900 jobs in the hospitality sector can be attributed to beer, while in retail some 7,000 people owe their jobs to beer sales.
- The total employment impact is thus 225,100 jobs.
- The Spanish government benefits from the brewing sector, receiving approximately 4.17 billion euros in taxes and excises. Excise revenues amount to 313 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 1.695 billion euros, while revenues from direct income taxes paid by Spanish brewery employees, employees of their suppliers and in hospitality and retail add up to an estimated 2.162 billion euros.

[152] Including several companies from a legal point of view, but the management is a corporative.

The employment impact of the brewing sector is presented below:

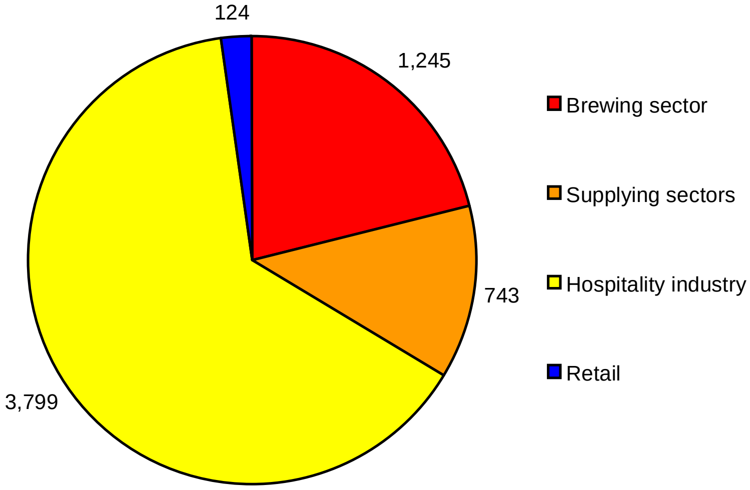
Total employment because of beer: 225,000 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Spanish economy can also be expressed in terms of value-added. The total value-added generated by these 225,100 jobs is estimated at 5,910 billion euros:

Value added due to the production and sale of beer: 5.910 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 21%, which is significantly higher than the brewing sector share in total employment arising from beer (4%). An explanation for this is the high productivity of brewing sector employees.

33.2 Industry and market structure, trends and developments

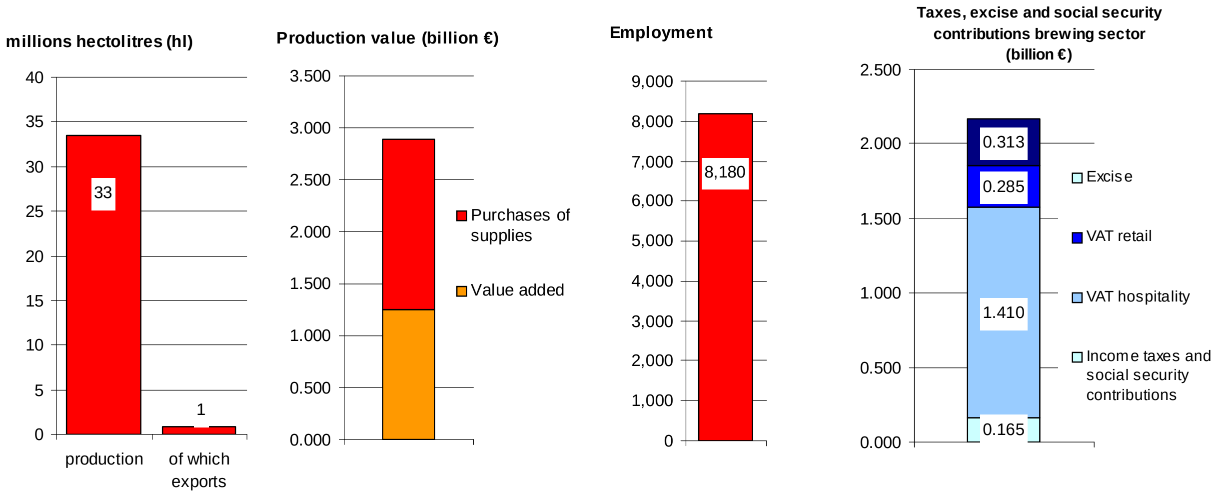
The beer sector is significant for Spain, being the fourth producing country within the EU (only after Germany, the United Kingdom and Poland) and the tenth in the world.[153] The consumption of beer per capita in Spain in was 52 litres in 2008. Sales of beer for consumption in Spain accounted for 35.7 million hectolitres. Tourism is also a very significant factor for the Spanish beer market. Nowadays 69% of beer is consumed in the hospitality sector (in 2007 this figure was 71%). Overall the Spanish beer market has shown moderate growth in recent years.

The beer market in Spain is very fragmented. Consumers tend to buy products with a well-established history and respected reputation in their own regions, and they are not likely to switch easily. The strongly regional nature of distribution for beer, cider and wine contributes to this trend.[154]

In 2006 and 2007, a limited smoking ban was introduced in Spain and drink-driving legislation saw new and tougher measures, which included imprisonment, in order to cut down the number of casualties linked to drinking and driving. While the initial impact of these measures was starting to wear off in 2008, the off-trade continued to outperform the on-trade.

33.3 Direct effect of the brewing sector

The direct brewing sector economic impact covers 8,180 employees who together produce beer worth over 2.89 billion euros, consequently the direct economic benefit of the brewing sector on the Spanish economy is significant.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. Excises account for 313 million euros and total VAT income for the Spanish government was estimated at 1.695 billion euros. Personal income taxes and social security contributions paid by employees of the brewing sector are 165 million euros.

The Spanish breweries together achieved an estimated 3.02 billion euros in production value. About 43% of this production value stays within these firms as value-added (1.245 billion euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

153 Cerveceros de España, 2008.
154 Euromonitor International "Beer in Spain", January 2009.

33.4 Economic impact of breweries on goods and services suppliers

With 43% of the value of the output produced staying within the firms as value-added, the other 57% of 2.89 billion euros in total turnover accrues to a number of suppliers. This stimulus of over 1.6 billion euros has significant economic impact on sectors outside the brewing sector:

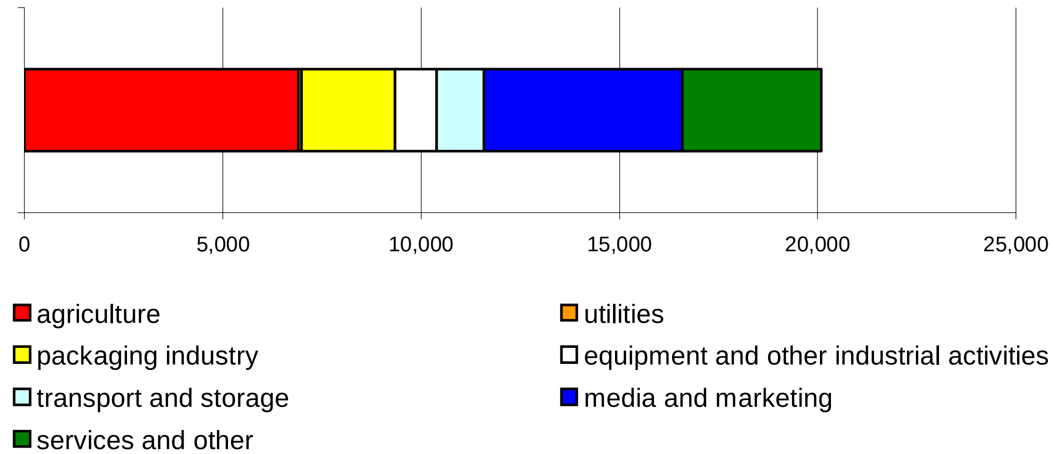
Sectors	Stimulus	Stimulus for Spain		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	213	91.7	195	43,483	4,484
Utilities	52	100.0	52	849,600	61
Packaging industry	430	72.5	312	204,100	1,526
Equipment	197	71.1	140	204,100	685
Transport	111	98.7	110	142,700	769
Media, marketing	361	95.6	345	105,797	3,257
Services	275	87.4	240	105,797	2,272
Total	1,638		1,393		13,055
First-round impact as % of total impact					65
Total indirect effect of brewing sector					20,084

Source: Ernst & Young Questionnaire among breweries (2009); Eurostat (2006)

A quarter of the indirect employment generated by the Spanish brewing sector is within the packaging sector. Other substantial effects can be observed in media and marketing, services and agriculture. The total first-round employment effect of the brewing sector on supplying sectors is over 13,100 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact will be about 20,100 jobs.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

33.5 Retail and hospitality sectors

Hospitality sector

The economic impact of breweries on the hospitality sector is assessed as follows:

- Approximately 69% of all beer consumed in Spain is sold by the hospitality sector (on-trade), which means almost 24.6 million hectolitres is sold on-trade.
- The average consumer price of beer in Spanish pubs and restaurants is estimated at 4.15 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 10 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 8.8 billion euros (using a 16% VAT tariff).
- With an average hospitality turnover of 46,400 euros (excluding VAT) per person, this results in 189,900 hospitality sector jobs attributable to beer sales.

Retail

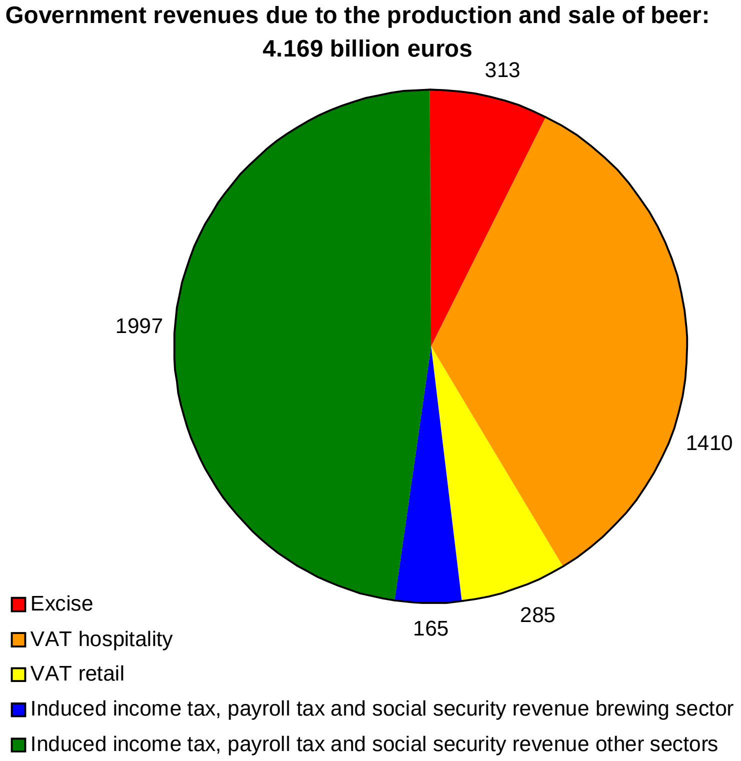
The importance of the brewing sector for retail can be similarly assessed:

- Approximately 31% of total beer consumption (11 million hectolitres) in Spain is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.61 euros per litre (including VAT), total retail consumer spending on beer is estimated at 1.78 billion euros. Total consumer spending excluding VAT is thus 1.45 billion euros.
- With turnover per employee estimated at 215,100 euros (excluding VAT), this means around 7,000 people owe their jobs to retail beer sales.

33.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 4.169 billion euros:

- VAT revenues are estimated at 1.69 billion euros. The main part of these VAT revenues is generated in the hospitality sector.
- The total in excise revenues on beer is 313 million euros.
- Income-related revenues due to beer production and sales are approximately 2.162 billion euros. They consist of 680 million euros in income tax, 867 million euros social security contributions paid by employees and 615 million euros social security taxes and payroll taxes paid by employers.



Source: Ernst & Young calculation (2009)

34 Sweden: Economic impact of beer

34.1 Highlights of the economic impact

Total production (in hectolitres)	4,200,000
Total exports (in hectolitres)	460,000
Total imports (in hectolitres)	1,160,000[155]
Total consumption (in hectolitres)	4,900,000
Number of brewing companies (including micro brewing companies)	30
Number of breweries (including microbreweries)	40

Source: National Brewers' Association in Sweden, (Sveriges Bryggerier AB) (2008)

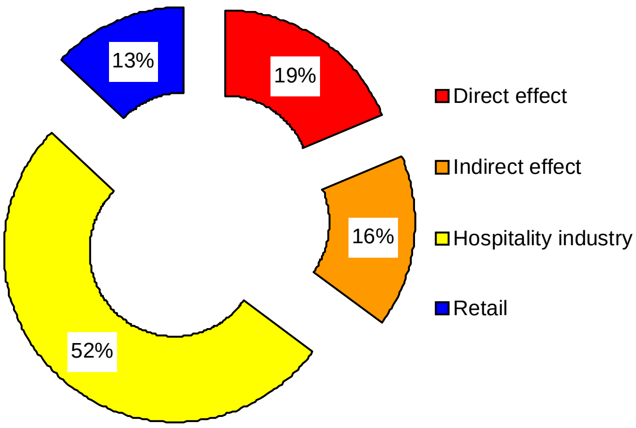
The most important characteristics of the Swedish brewing sector are:

- The production of Swedish breweries increased slightly over the past three years. In 2008 the brewing industry produced 4.2 million hectolitres of beer.
- The direct employment in Swedish breweries amounts to 3,200 persons.
- The brewing sector also generates important indirect effects within supply sectors. Approximately 2,800 supply industry jobs can be attributed to the production and sales of beer.
- In the hospitality sector 9,000 jobs depend on beer sales while in retail 2,000 jobs are generated.
- The total number of jobs that depend on beer production and sales is thus 17,200.
- Tax revenues for the Swedish government from the production and sale of beer are estimated at around 901 million euros (307 million euros excise, 342 million euros VAT and 251 million euros in income-related taxes and contributions).

155 E&Y calculation (consumption - production + exports)

The employment impact of the brewing sector is presented below:

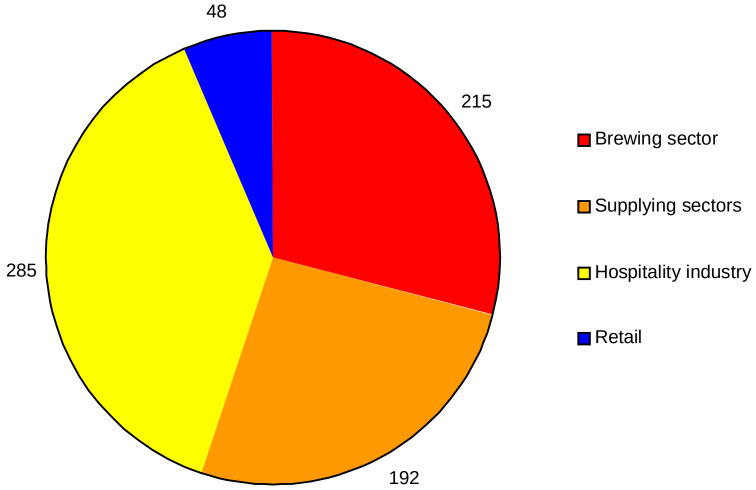
Total employment because of beer: 17,200 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Swedish economy can also be expressed in terms of value-added. Total value added of the brewing sector in Sweden and value-added generated by firms in the supply, hospitality and retail sectors arising from the production and sale of beer amounts to around 740 million euros:

Value added due to the production and sale of beer: 740 million euro's



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 29%, which is higher than the brewing sector share in total employment arising from beer (19%). The relatively high productivity in terms of value-added per employee in the brewing sector is an important explanation for this.

34.2 Industry and market structure, trends and developments

The consumption of beer in Sweden remained stable over the last years. According to the Swedish brewing association, 4.9 million hectolitres of beer were consumed in 2008, which is the same as in 2007 and 2006. There are around 30 brewing companies and 40 breweries in Sweden. Over the past three years, their production increased by 200,000 hectolitres to 4.2 million hectolitres in 2008. The main reason for this growth is that exports grew in the same period by approximately the same volume to 460,000 hectolitres.

Beer is divided into three categories:

Category	Alcohol content (ABV)
I (light beer)	<2.3%
II (folk beer)	2.3 – 3.5%
III (strong beer)	>3.5%

Class I and II beers can be obtained in supermarkets and other retail outlets. There are virtually no sales restrictions on light beers (class I), while folk beer (class II) can only be sold to those over 18. Strong beer (class III) can only be obtained in pubs, restaurants and so-called Systembolagets, which is the name for state-owned retail outlets for the sale of alcohol. These Systembolagets stock more than 300 types of beer from different countries.

Sweden has one of the highest tax rates on beer in Europe. Value added tax rates on light and folk beer are 10.7%, while the VAT for strong beer amounts 20%. Excise levels are also fairly high. For a litre of beer (5% alcohol) the excise amounts to over 90 eurocents. On beer up to 2.8% alcohol, no excise has to be paid. Due to the high taxation level, beer prices in Sweden are fairly high compared with neighbouring countries. Because of this, Swedish citizens import privately (or smuggle) beer from Denmark and Estonia where it is much cheaper.

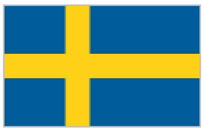
The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Swedish economy.

Brewing sector internal characteristics:

- Consumption volume remained fairly stable in recent years.
- There is a large volume of imported beers on the Swedish market (approximately 1.2 million hectolitres in 2009).
- Around 80% of the 4.9 million hectolitres of beer consumed in 2009 was sold in supermarkets and other retail outlets.
- The two largest Swedish brewing companies are both owned by big multinational brewing enterprises and together have a market share of more than 60%.

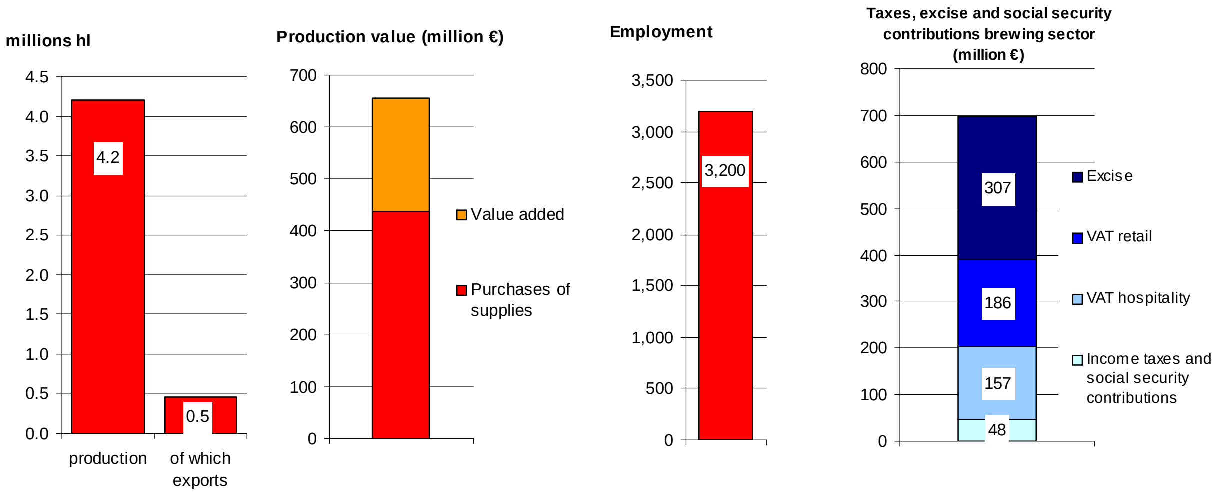
Context in which the brewing sector operates:

- The excise level on beer in Sweden is fairly high compared to their neighbouring countries, resulting in private exports and smuggling from these countries.
- Wages and overall price levels in Sweden are among the highest in Europe. Combined with the high level of contributions and taxes on labour, this leads to relatively high labour costs.



34.3 Direct effect of the brewing sector

The direct economic impact of the brewing sector covers approximately 3,200 employees who together produce beer representing a value of 654 million euros. It can thus be concluded that there is a significant direct economic benefit from the brewing sector for the Swedish economy.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 307 million euros and total VAT income for the Swedish government was estimated at 343 million euros. Direct income taxes paid by employees of the brewing sector add up to another 48 million euros (government revenues due to indirect employment are not included in this figure).

The Swedish breweries together achieved a production value of approximately 654 million euros. About 33% of total turnover stays within these firms as value-added (215 million euros). Value-added equals total reward for production factors used: labour costs, interest paid and profits made.

34.4 Economic impact of breweries on goods and services suppliers

With 33% of the value of the output produced staying within the firms as value-added, the other 67% of 654 million euros in total turnover accrues to a number of suppliers. This stimulus of 439 million euros has significant economic impact on sectors outside the brewing sector, most substantially on the services sector:

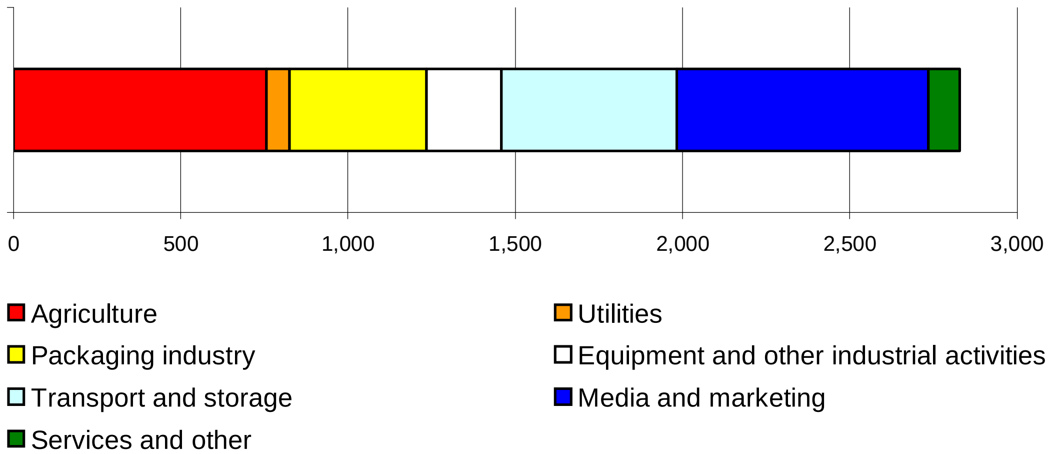
Sectors	Stimulus	Stimulus for Sweden		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	71.05	50.0	36	72,199	492
Utilities	34.21	99.0	34	761,500	44
Packaging industry	105.70	60.0	63	238,500	266
Equipment	57.9	60.0	35	238,500	146
Transport	66.7	95.0	63	185,800	341
Media, marketing	91.7	90.0	83	168,719	489
Services	11.4	90.0	10	168,719	61
Total	439		324		1,839
First-round impact as % of total impact					65
Total indirect effect of brewing sector					2,829

Source: Ernst & Young calculation (2009); Eurostat (2006)

The agricultural and the media and marketing sector benefit most from purchases by the brewing industry, with further significant spending in the packaging industry, equipment industry and the transport sector. Based on the combination of data from the Swedish Brewing Association (Sveriges Bryggerier AB), and data from Eurostat, it is estimated that the indirect employment effect is approximately 2,800 employees in the supplying sectors.

Indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

34.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 20% of all beer consumed in Sweden is sold by the hospitality sector (on-trade), which means 980,000 hectolitres is sold on-trade.
- The average consumer price of beer in Swedish pubs and restaurants is estimated at 8 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 7.8 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 6.3 billion euros (using a 25% VAT tariff).
- With an average hospitality turnover of 69,900 euros (excluding VAT) per person, this results in approximately 9,000 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

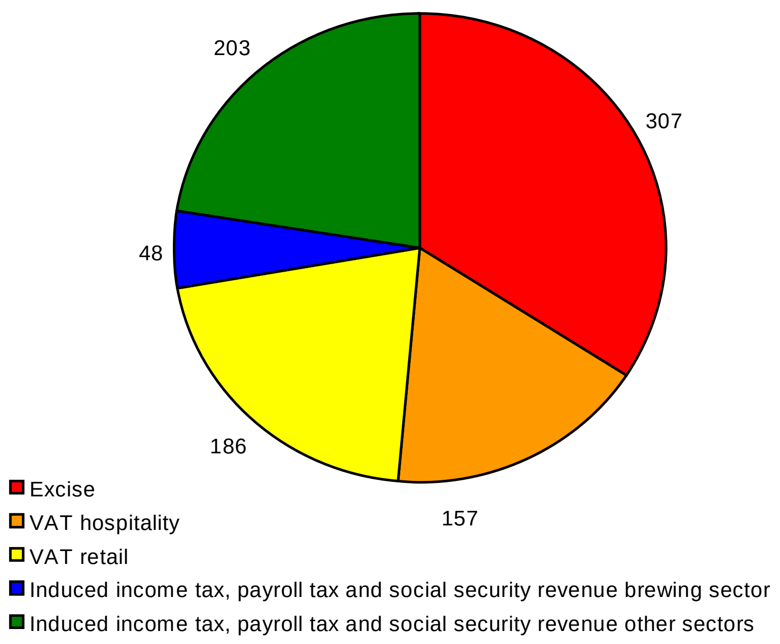
- About 80% of total beer consumption (3.9 million hectolitres) in Sweden is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 2.37 euros per litre (including VAT), total retail consumer spending on beer is estimated at 929 million euros. Total consumer spending excluding VAT is thus 743 million euros.
- With turnover per employee estimated at 399,000 euros (excluding VAT), this means 2,200 people owe their jobs to retail beer sales.

34.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 901 million euros:

- VAT revenues are estimated at 343 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- Total excise revenues on beer are 307 million euros.
- Income-related revenues due to beer production and sales are approximately 251 million euros. They consist of 102 million euros in income tax, 27 million euros social security contributions paid by employees and 122 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 901 million euros



Source: Ernst & Young calculation (2009)

35 Switzerland: Economic impact of beer

35.1 Highlights of the economic impact

Total production (in hectolitres)	3,625,300
Total exports (in hectolitres)	67,600
Total imports (in hectolitres)	863,800
Total consumption (in hectolitres)	4,489,100
Number of brewing companies (including micro brewing companies)	270
Number of breweries (including microbreweries)	270

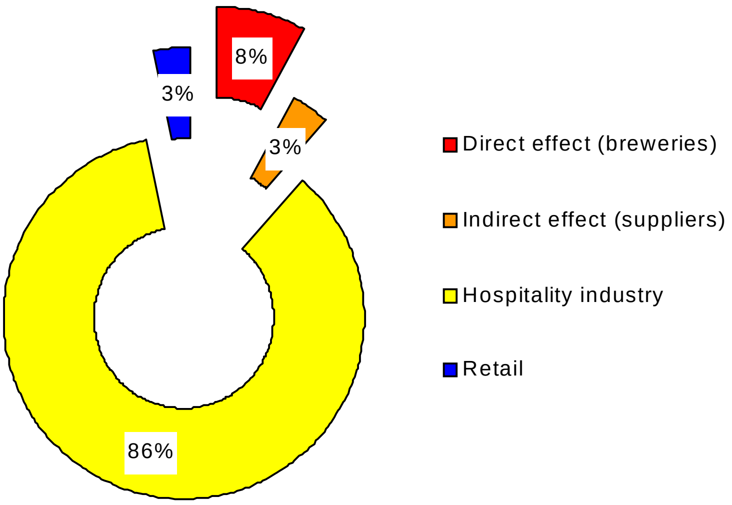
Source: National Brewers' Association in Switzerland (2008)

The economic impact of the Swiss brewing sector can be expressed as follows:

- Swiss breweries together produce some 3.6 million hectolitres of beer.
- The Swiss beer market is dominated by two multinational brewing companies. There are also eight breweries with production of between 20,000 and 1 million hectolitres.
- The number of microbreweries is increasing very rapidly. In 2008 there were approximately 260 microbreweries active in Switzerland. Of these, 250 have a production of less than 2,000 hectolitres.
- They employ about 2,250 personnel.
- It is estimated that 933 supply industry jobs can be attributed to the production and sale of beer.
- Besides these direct and indirect effects, the hospitality sector and retailers benefit through beer sales. Almost 23,900 jobs in the hospitality sector can be attributed to beer, while in retail some 920 people owe their jobs to beer sales.
- The total employment impact is thus approximately 28,000 jobs.
- The government also benefits from the brewing sector, receiving some 483 million euros in taxes and excises. Excise revenues amount to 67 million euros, VAT collected on beer (sold in the hospitality sector and through retailers) is estimated at almost 152 million euros, while revenues from direct personal taxes paid by Swiss brewery employees, their suppliers and in hospitality and retail add up to some 265 million euros.

The employment impact of the brewing sector is presented below:

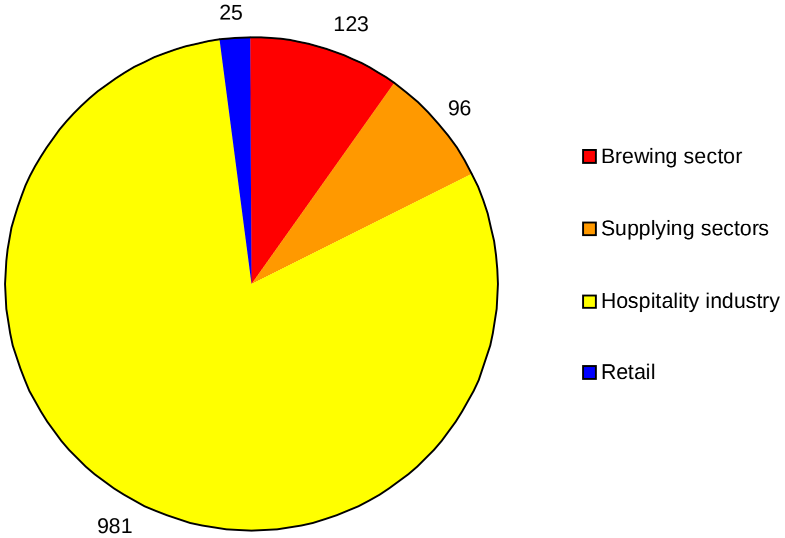
Total employment because of beer: 28,000 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Swiss economy can also be expressed in terms of value-added. The total value-added generated by these 28,000 jobs is estimated at 1.255 billion euros:

Value added due to the production and sale of beer: 1.255 billion euros

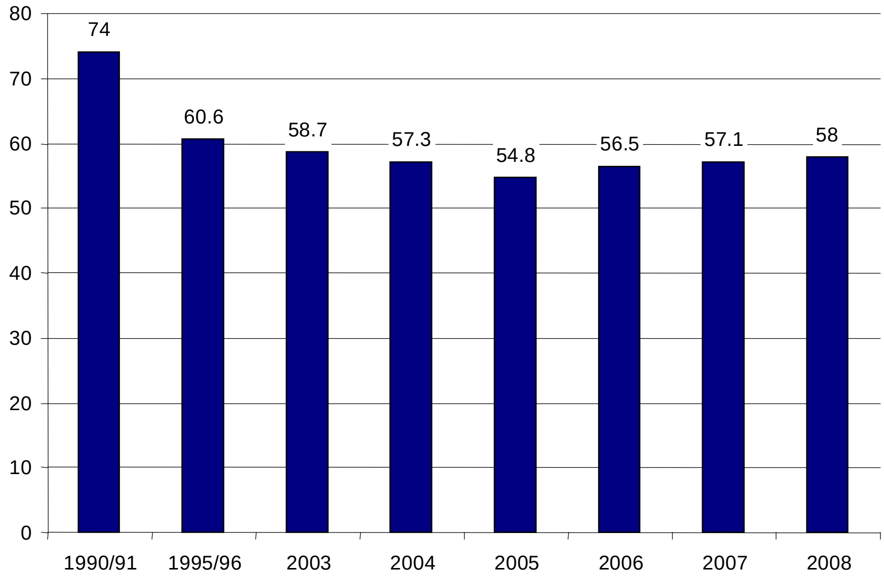


Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 13%, which is higher than the brewing sector share in total employment arising from beer (4%). A significant explanation for this is the relatively high productivity of employees in the brewing sector in comparison with other sectors.

35.2 Industry and market structure, trends and developments

In 2008 the Swiss consumed 58 litres of beer per capita. This is comparable to the EU average, but well below consumption in neighbouring countries France and Germany. Beer consumption has declined by more than 20% over the past 15 years, however per capita consumption has been fairly stable in recent years (around 57 to 59 litres of beer per capita[251]). The development of per capita consumption is depicted below:



Source: National Brewers' Association of Switzerland, Schweizer Brauerei-Verband (2009)

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Swiss beer market and the brewing sector[156]:

- The per capita beer consumption in 2008 is much lower than in the early 1990s, but has been fairly stable in recent years.
- Eastern Switzerland (the German-speaking part) is oriented towards lager beer, while western Switzerland (the French-speaking part) is more exposed to Belgian imports.
- More than three-quarters of the consumed beer is lager. Approximately 15% of the consumed beer belongs to the 'Spezialbier' category and 6% to the 'Spezialitätenbiere' category.
- The Swiss beer market is dominated by two multinationals. The number two has acquired the Swiss brewer Eichhof Holdings.
- Besides these major players, many regional breweries, microbreweries and brewing pubs are active in Switzerland. In total 270 breweries were registered in 2008. 17 of these breweries had a production of between 100,000 and 2 million hectolitres.

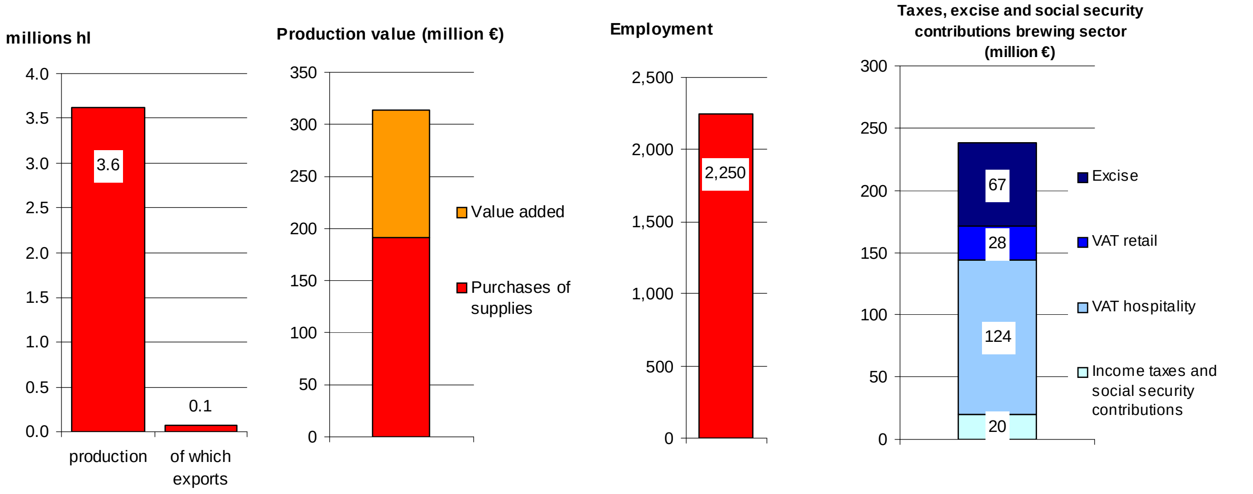
Other relevant factors are:

- The Swiss government levies excise on beer, but not on wine.
- In Switzerland decisions on smoking bans are made at the canton level. Of the 26 cantons Switzerland has, several have decided to introduce a total or partial smoking ban. It is expected that in the short term, smoking will be banned in whole Switzerland.

[156] National brewers' association of Switzerland, Schweizer Brauerei-Verband, 2009.

35.3 Direct effect of the brewing sector

In Switzerland 2,250 people are employed by breweries. Together they produce 3.6 million hectolitres of beer with a production value of 314 million euros.



Source: Ernst & Young calculation (2009)

Another substantial direct effect of the brewing sector concerns taxes and excises paid by beer brewers and consumers. In 2008 excises reached 67 million euros and total VAT income for the Swiss government was estimated at 341 million euros. Personal direct taxes, social security contributions and payroll taxes paid by employees and employers in the brewing sector add up to another 20 million euros.

35.4 Economic impact of breweries on goods and services suppliers

The value of externally bought products and services needed for production is estimated at 192 million euros. This stimulus has a significant economic impact on sectors outside the brewing sector. The marketing, media and services sectors benefit most from the indirect employment effect.

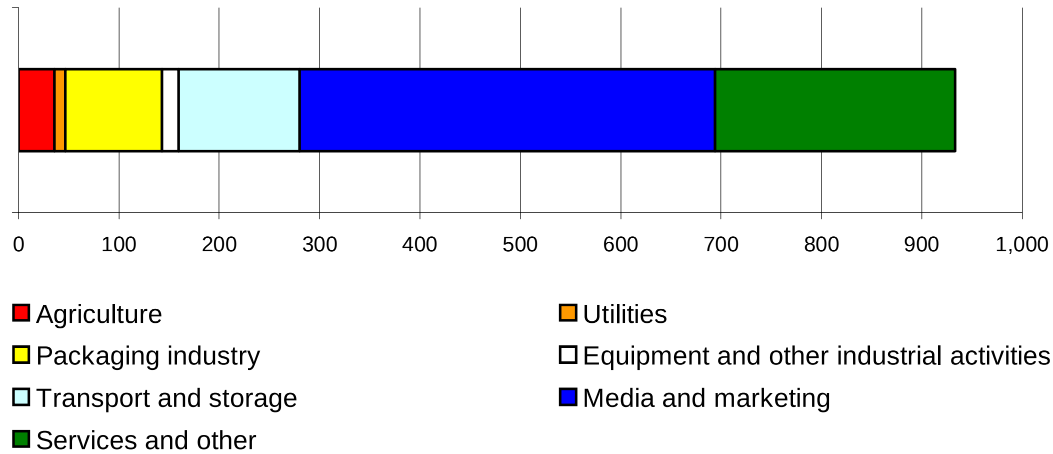
Sectors	Stimulus	Stimulus for Switzerland		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	24.92	5.0	1	53,243	23
Utilities	6.90	90.0	6	902,375	7
Packaging industry	27.80	65.0	18	287,750	63
Equipment	4.41	70.0	3	287,750	11
Transport	23.01	80.0	18	235,125	78
Media, marketing	66.34	75.0	50	184,910	269
Services	38.34	75.0	29	184,910	156
Total	191.72		126		607
First-round impact as % of total impact					65
Total indirect effect of brewing sector					933

Source: Ernst & Young calculation (2009); Eurostat (2006)

Other sectors that benefit substantially are the transport sector and the packaging industry. The total first-round employment effect of the brewing sector on supplying sectors accounts for approximately 610 employees. As this primary effect can be estimated at about 65% of the total impact, the total impact can be estimated at approximately 930 employees.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

35.5 Retail and hospitality sectors

Hospitality sector

The economic impact of the breweries on the hospitality sector is assessed as follows:

- About 45% of all beer consumed in Switzerland is sold by the hospitality sector (on-trade), which means 2 million hectolitres is sold on-trade.
- The average consumer price of beer in Swiss pubs and restaurants is estimated at 8.67 euros a litre (including VAT), so that total consumer spending on beer in the hospitality sector is 1.75 billion euros (including VAT).
- Net consumer spending on beer is thus estimated at 1.6 billion euros (using a 7.60% VAT tariff).
- With an average hospitality turnover of 68,000 euros (excluding VAT) per person, this results in 23,900 hospitality sector jobs attributable to beer sales.

Retail

The importance of the brewing sector for retail can be similarly assessed:

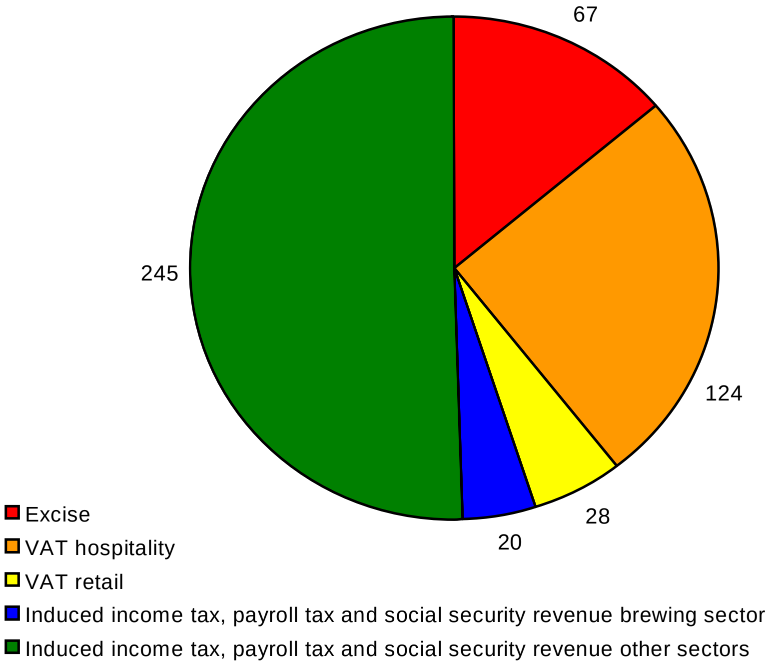
- Around 55% of total beer consumption (2.5 million hectolitres) in Switzerland is beer sold by supermarkets and other retail outlets.
- With an average consumer price of 1.60 euros per litre (including VAT), total retail consumer spending on beer is estimated at 889 million euros. Total consumer spending excluding VAT is thus 395 million euros.
- With turnover per employee estimated at 399,000 euros (excluding VAT), this means 920 people owe their jobs to retail beer sales.

35.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 483 million euros:

- VAT revenues are estimated at 152 million euros. The main part of these VAT revenues is generated in the hospitality sector.
- Total excise revenues on beer are 67 million euros.
- Income-related revenues due to beer production and sales are approximately 265 million euros. They consist of 83 million euros in income tax, 91 million euros social security contributions paid by employees and 91 million euros social security taxes and payroll taxes paid by employers.

Government revenues due to the production and sale of beer: 483 million euros



Source: Ernst & Young calculation (2009)

36 Turkey: Economic impact of beer

36.1 Highlights of the economic impact

Total production (in hectolitres)	9,244,384
Total exports (in hectolitres)	736,115
Total imports (in hectolitres)	5,821
Total consumption (in hectolitres)	8,473,000
Number of brewing companies (excluding micro brewing companies)	6
Number of breweries (excluding microbreweries)	10

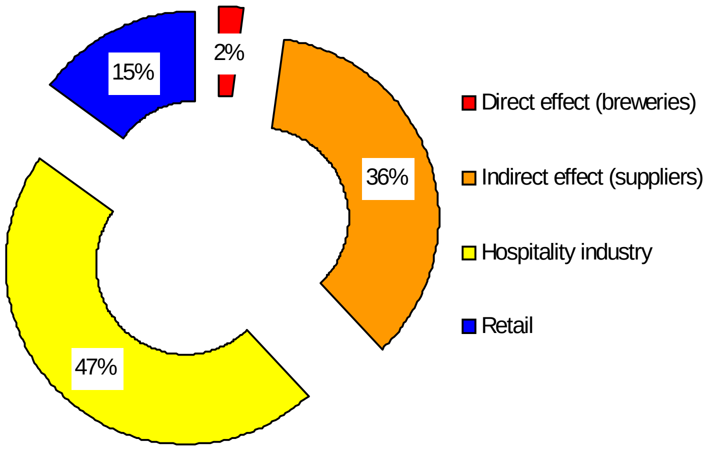
Source: National Brewers' Association of Turkey, Beer and Malt Producers' Association of Turkey (2008)

The most important characteristics of the Turkish beer market are:

- In the past three years both consumption and production increased by approximately 15%.
- Turkish breweries employ some 2,400 people.
- Because of goods and services bought in supplying sectors, additional indirect employment is generated of approximately 38,600 jobs.
- The brewing sector induces some 66,500 jobs in the hospitality and retail sectors.
- Total government revenue from the production and sale of beer equals approximately 1,084 million euros. Included in this government revenue are: VAT, excise, income taxes, social security contributions of employees and employers and payroll taxes.

The employment impact of the brewing sector is presented below:

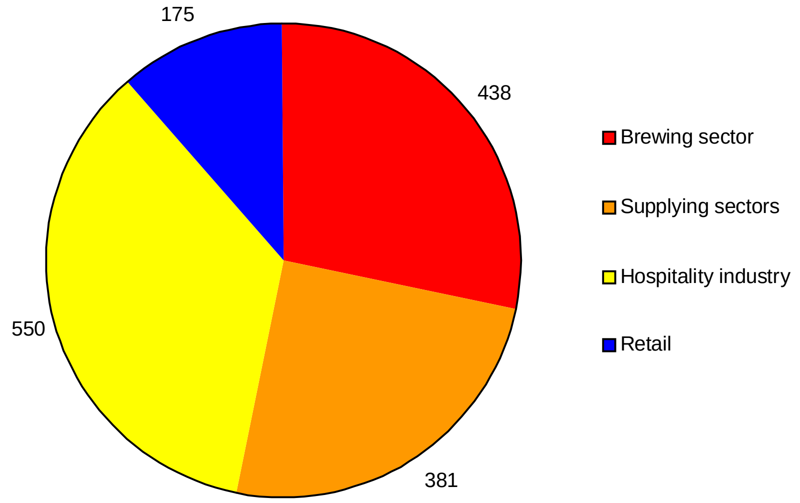
Total employment because of beer: 107,500 jobs



Source: Ernst & Young calculation (2009) (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the Turkish economy can also be expressed in terms of value-added. The total value-added generated by these 107,500 employees is estimated at 1.5 billion euros.

Value added due to the production and sale of beer: 1.544 billion euros



Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is 28%, which is much higher than the brewing sector share in total employment arising from beer (2%). A significant explanation for this is the higher productivity of employees in the brewing sector in comparison with the productivity of employees in other sectors.

36.2 Industry and market structure, trends and developments

In the past three decades the Turkish beer market has experienced both fast growth and stabilisation. Following the establishment of two private companies in 1969 the volume of sales grew from 0.5 million hectolitres in the late 1960s to 6.5 million in the mid 1990s.[157] This period is characterised by increasing per capita consumption. The period after this extreme growth is a period of stabilisation with fairly stable consumption. In recent years consumption and production have again been increasing. In the past three years both consumption and production increased by 15%.[158]

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the Turkish beer market and the brewing sector:[159]

- Unlike in other European countries, consumption is still increasing in Turkey.
- Per capita consumption increased from 4 litres in 1986 to 11 litres in 2006.
- Until the end of the 1960s Turkish beer was produced by Tekel, a state-owned monopoly. In 1969 two privately-owned companies stepped into the market, providing consumers with more alternatives.
- The Turkish beer market is currently dominated by Efes Pilsen, which consists of five breweries, two malteries and one hops-processing facility.
- Only high-priced premium beers are imported. These beers are mostly sold in upscale hotels and cafes.

Other developments which influence the economic impact of the brewing sector are[160]:

- One of the reasons for the relatively low consumption per capita is the Islamic alcohol prohibition.
- Another reason is the consumer preference for raki.
- The increasing consumption of beer is also caused by the increasing flow of tourists to Turkey.
- The excise rate per hectolitre is high in Turkey in comparison with other countries: € 66 per hectolitres beer.[161]

36.3 Direct effect of the brewing sector

Turkish breweries employ approximately 2,400 people. The value of total beer production can be estimated at more than 1.1 billion euros and value-added generated by the Turkish breweries at 438 million euros. This means that supplying sectors benefit from purchased goods and services to a value of 717 million euros.

The government also benefits from the production and sale of beer. Excise and VAT revenues accounted for 620 million and 328 million euros respectively. Employees and employers in the brewing sector paid 3 million euros in income taxes, social security contributions and payroll taxes.

157 Özgüven, C., Analysis of demand and pricing policies in Turkey's beer market, thesis, Middle East Technical University, 2004.

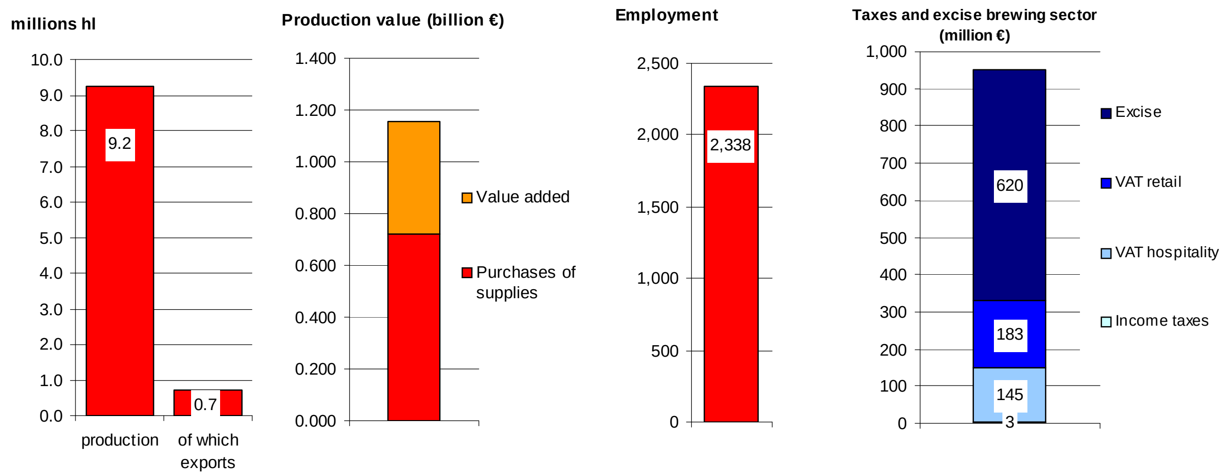
158 Source: National Brewers' Association of Turkey, Biramalt, 2008.

159 Sources: National Brewers' Association of Turkey, Özgüven, C., Analysis of demand and pricing policies in Turkey's beer market, thesis, Middle East Technical University, 2004, Efes Pilsner http://www.efesbev.com/our_group/turkey_beer_operations.aspx, 2009

160 Sources: National Brewers' Association of Turkey, Özgüven, C., Analysis of demand and pricing policies in Turkey's beer market, thesis, Middle East Technical University, 2004, Efes Pilsner http://www.efesbev.com/our_group/turkey_beer_operations.aspx, 2009

161 Source: OECD, Consumption tax trends 2008.

The direct effect of the brewing sector is depicted in the following figure.



Source: Ernst & Young calculation (2009)

36.4 Economic impact of breweries on goods and services suppliers

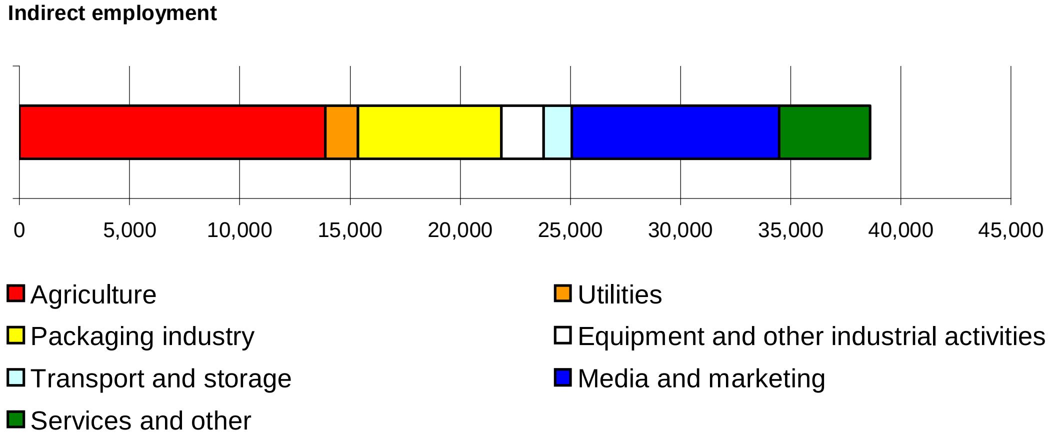
The impact of the production and sale of beer on supplying sectors is high because of the large share (62%) of production value that is spent on purchases of goods and services and the large share of domestic purchases.

Sectors	Stimulus	Stimulus for Turkey		Turnover per employee	Number of employees
	(mln, €)	%	(mln, €)	(in €)	
Agriculture	113	80.0	90		9013
Utilities	59	100.0	59	6.600	981
Packaging industry	184	75.0	138	7.200	4226
Equipment	82	50.0	41	7.200	1250
Transport	22	100.0	22	6.600	815
Media, marketing	179	95.0	170	7.800	6118
Services	79	95.0	75	7.800	2692
Total	718		595		25,095
First-round impact as % of total impact					65
Total indirect effect of brewing sector					38,608

Source: EY Questionnaire among breweries (2009); Eurostat (2006)

The largest proportion of supplies is purchased from the media and marketing sector, with further significant spending in the packaging industry and the services sector. Based on the combination of data from the brewing sector in Turkey itself and data from the previous study it is estimated that indirect the employment effect is approximately 38,600 employees in the supplying sectors.

The indirect employment effects are illustrated below:



Source: Ernst & Young calculation (2009)

The analysis shows that agriculture, the packaging industry and the media and marketing sectors benefit most from the indirect impact of Turkish breweries. The impact is relatively substantial because a high percentage of goods and services purchased by the breweries is purchased in Turkey itself.

36.5 Retail and hospitality sectors

As already mentioned the Turkish beer market is characterised by a shift from on-trade sales to off-trade sales. However the major part of consumption is still in the hospitality sector.

Hospitality sector

The employment effect of the sales of beer in the hospitality sector can be estimated as follows[162]:

- 30% of beer consumption in Turkey occurs in the hospitality sector.
- This means that 2.5 million hectolitres of beer are consumed in Turkish pubs, restaurants and other hospitality facilities.
- The consumer price of beer is approximately 3.75 per litre of beer (incl. VAT)[163] in the hospitality sector.
- By multiplying the consumer price (3.75) by the on-trade consumption (2.5 million hectolitres), the total turnover in the Turkish hospitality sector can be estimated at 953 million euros (incl. VAT). The total turnover excl. VAT equals 807 million euros.
- Turnover per employee in the Turkish hospitality sector is 16,000 euros a year.
- Dividing the total turnover excl. VAT by the turnover per employee results in the total employment in the Turkish hospitality sector due to the sale of beer: 50,500 employees.

Retail

Employment in retail arising from beer sales can be similarly assessed:

- Approximately 70% of total Turkish beer consumption concerns beer sold by supermarkets and other retail companies.
- With an average consumer price of 1.93 euros (incl. VAT) per litre[164] total consumer spending on retail beer is estimated at 1.145 billion euros (incl. VAT), 961 million euros (excl. VAT).
- Because the annual turnover per employee is estimated at 60,000 euros, this means that approximately 16,000 people owe their jobs to the sale of retail beer.

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162 Source: Ernst & Young calculation based on figures of National Brewers' Association of Turkey, OECD and Dervis et al. (2004).

163 National Brewers' Association of Turkey, Beer and Malt Producers' Association of Turkey, 2008.

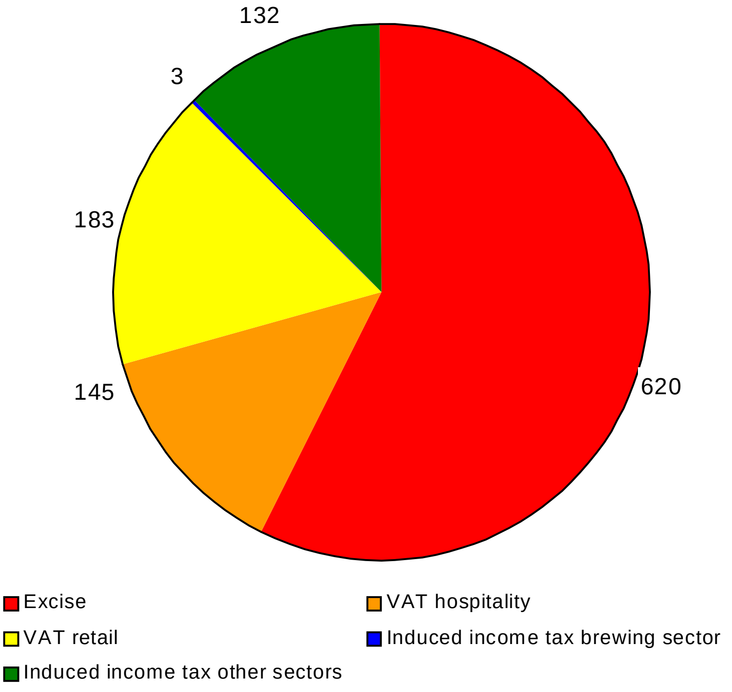
164 National Brewers' Association of Turkey, Beer and Malt Producers' Association of Turkey, 2008.

36.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 1.084 billion euros:

- VAT revenues are estimated at 328 million euros. The main part of these VAT revenues is generated in the retail sector.
- Total excise revenues on beer are 620 million euros.
- Income taxes due to beer production and sales are approximately 135 million euros. Payroll taxes and social security contributions of employees and employers could not be estimated because of a lack of data.

Government revenues due to the production and sale of beer: 1.084 billion euros



Source: Ernst & Young calculation (2009)

37 United Kingdom: Economic impact of beer

37.1 Highlights of the economic impact

Total production (in hectolitres)	49,500,000
Total exports (in hectolitres)	4,700,000
Total imports (in hectolitres)	9,100,000
Total consumption (in hectolitres)	51,300,000
Number of brewing companies (including micro brewing companies)	654
Number of breweries (including microbreweries)	667

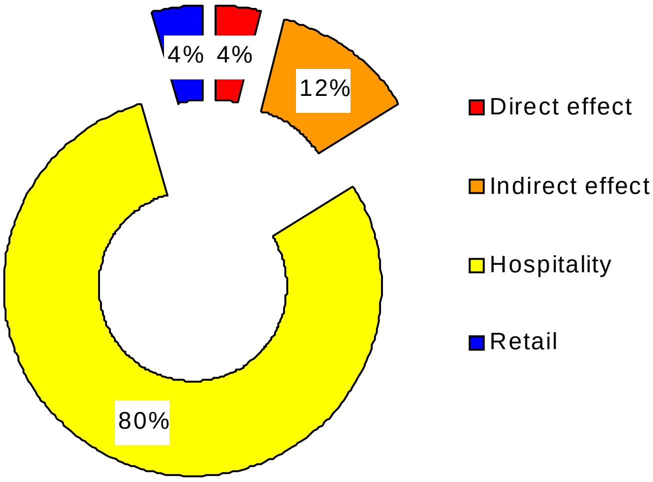
Source: British Beer and Pub Association (2008).

The most important characteristics of the British beer market are:

- More than 650 breweries are active in the United Kingdom. Of these, 13 breweries have a production of more than 1 million hectolitres and about 40 a production of between 20,000 and 1 million hectolitres. There are more than 600 microbreweries active in the UK.
- Together these breweries produce 49.5 million hectolitres of beer.
- The consumption of beer has been declining in the United Kingdom in recent years. Consumption has declined from 60.3 million hectolitres in 2003 to 51.3 million hectolitres in 2008.
- British breweries employ some 15,000 people.
- Because of goods and services bought in supplying sectors, additional indirect employment is generated of approximately 48,500 jobs.
- The brewing sector induces some 333,700 jobs in the hospitality and retail sectors.
- Total government revenue from the production and sale of beer equals over 13 billion euros. Included in this government revenue are: VAT, excise, income taxes, social security contributions of employees and employers and payroll taxes.

The employment impact of the brewing sector is presented below:

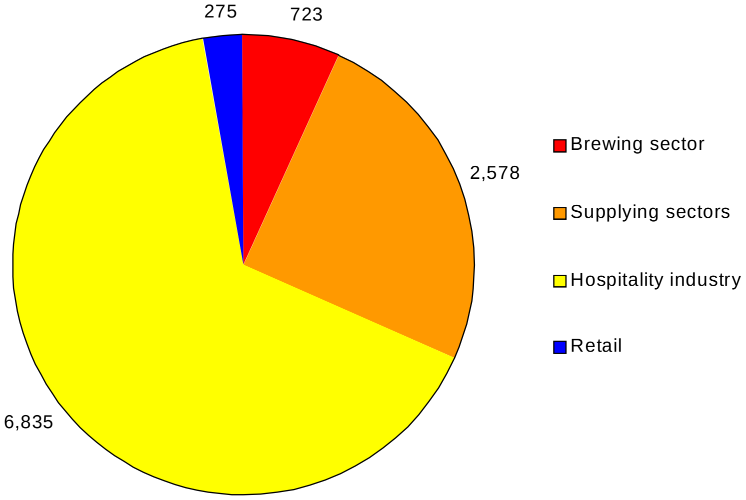
Total employment because of beer: 397,200 jobs



Source: Ernst & Young calculation (2009). (See Annex III for an explanation on methodology).

The contribution of the brewing sector to the British economy can also be expressed in terms of value-added. The total value-added generated by these 397,200 employees is estimated at 10.4 billion euros:

Value added due to the production and sale of beer: 10.412 billion euros

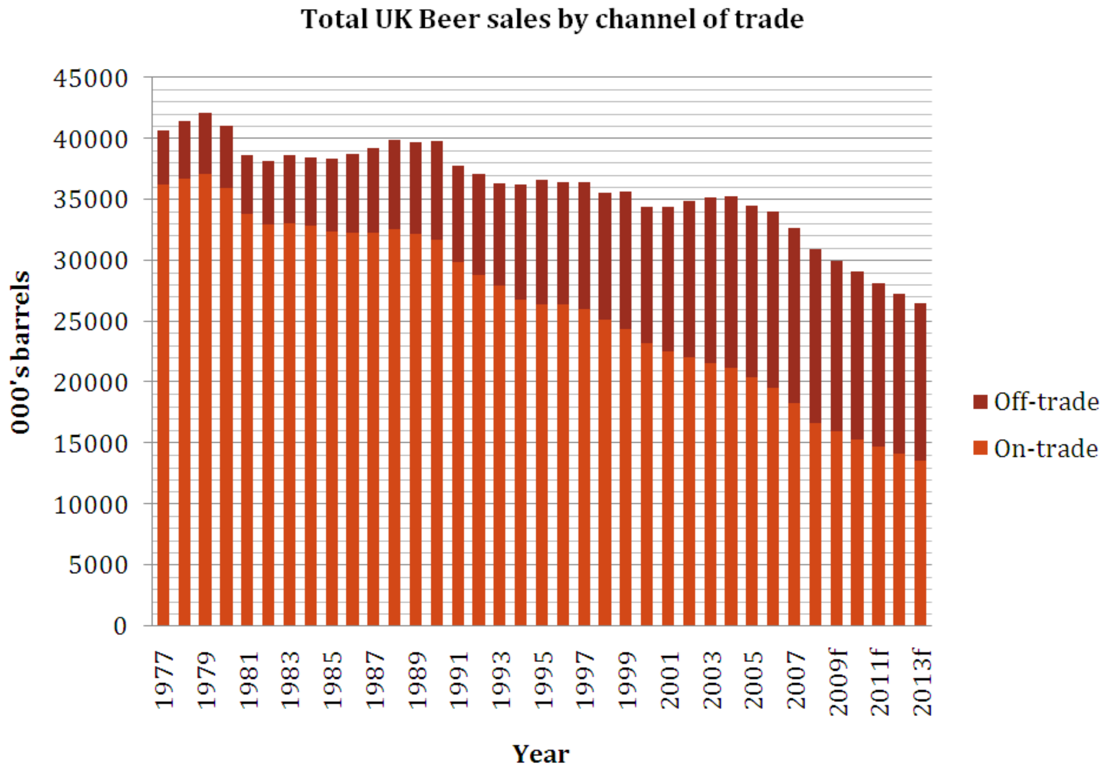


Source: Ernst & Young calculation (2009)

The brewing sector share in overall value-added arising from the production and sale of beer is almost 7%, which is higher than the brewing sector share in total employment arising from beer (4%). A significant explanation for this is the higher productivity of employees in the brewing sector in comparison with the productivity of employees in other sectors.

37.2 Industry and market structure, trends and developments

British breweries together produced 49.5 million hectolitres of beer in 2008. Total consumption in the same year was 51.3 million hectolitres. Since 2003 both the production and consumption of beer have been declining in the UK. Production declined faster than consumption. This is related to the fact that more beer is being imported. British breweries exported 4.7 million hectolitres in 2008. The decline in consumption is presented in the figure below. On-trade consumption declined particularly rapidly.



Source: BBPA, A Wake-up for Westminster, Economic trends in the beer and pub sector (2008)

The economic impact of the brewing sector is influenced by the following trends, developments and characteristics of the British beer market and the brewing sector[165]:

- The shift from on-trade consumption (hospitality) to off-trade consumption (retail).
- In 2007 a smoking ban was introduced. According to the BBPA this smoking ban will entail a further decline in sales. Sales have already declined from 42 million barrels of beer in 1979 to 34 million barrels in 2006.
- Competition regulation forced brewing companies to sell many pubs they originally owned.
- Shifting consumer preferences (from beer to wine, RTDs, non-alcoholic drinks). According to the BBPA the shift from beer to other alcoholic drinks is further encouraged by current excise policy.
- Around 90% of beer sold in the UK is produced in the UK.
- Over one-third of the UK barley crop is bought by UK brewers who are also major users of English hops.
- In the UK there are over 2,000 different beer brands available. Many of these beers are brewed by over 500 microbreweries, of which some are brew-pubs.
- Together these microbreweries are responsible for only a small share (1.3%) of the beer production.

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165 British Beer and Pub Association, 2009

- UK brewers are industry leaders on environmental issues. Since 1976, energy usage per pint of beer produced has been reduced by 59%, water consumption reduced by 46% and total carbon dioxide emissions reduced by over 70%.
- The BBPA has entered into a Climate Change Agreement with the government, on behalf of brewing companies, making further stringent energy-saving targets over the period to 2010 in exchange for an 80% abatement in the Climate Change levy on fuel. The industry achieved its first four milestone targets up to September 2008 and all members of the Agreement have been recertified for the next two-year period.

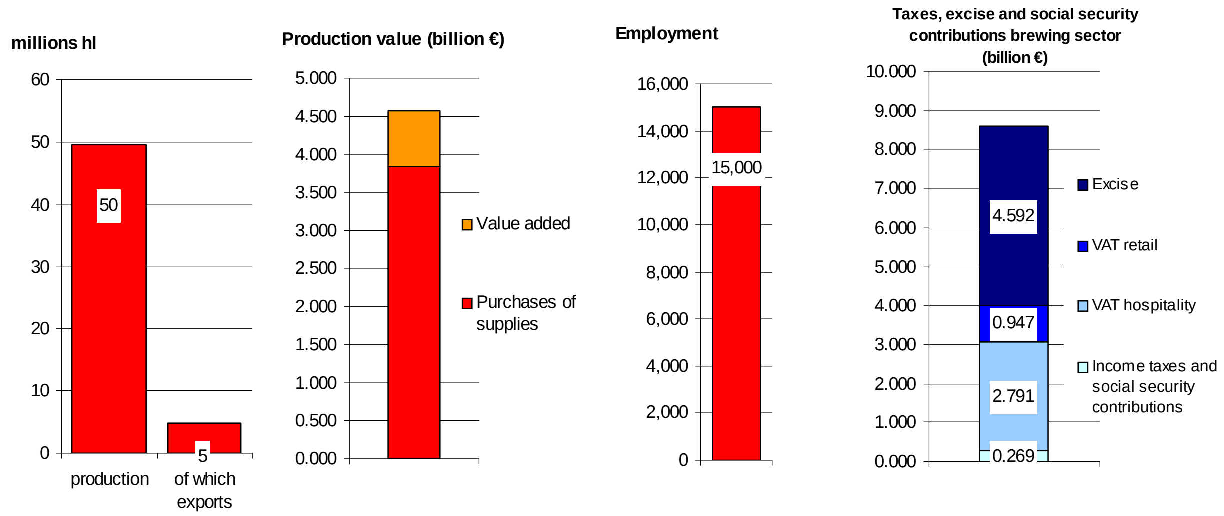
Other developments which influence the economic impact of the brewing sector are:

- In 2007 a smoking ban was introduced. According to the BBPA this smoking ban will entail a further decline in sales. Sales have already declined from 42 million barrels of beer in 1979 to 34 million barrels in 2006.
- Competition regulation forced brewing companies to sell many pubs they originally owned.
- Shifting consumer preferences (from beer to wine, RTDs, non-alcoholic drinks). According to the BBPA the shift from beer to other alcoholic drinks is further encouraged by current excise policy.

37.3 Direct effect of the brewing sector

British breweries employ approximately 15,000 people. The production value of total beer production can be estimated at 4.6 billion euros and value-added generated by the British breweries at 723 million euros (approximately 16% of total production value). This means that supplying sectors benefit from purchased goods and services to a value of 3.8 billion euros.

The government also benefits from the production and sale of beer. Excise and VAT revenues accounted for 4.592 billion and 3.738 billion euros respectively. Employees and employers in the brewing sector paid 269 million euros in income taxes, social security contributions and payroll taxes.



Source: Ernst & Young calculation (2009)

37.4 Economic impact of breweries on goods and services suppliers

The impact of the production and sale of beer on supplying sectors is high because of the large share (84%) of production value spent on purchases of goods and services.

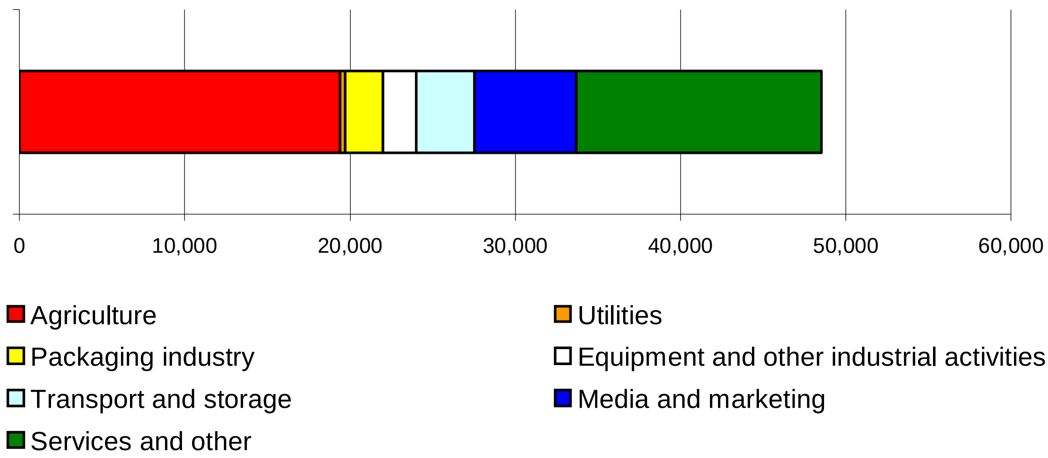
Sectors	**Stimulus**	**Stimulus for United Kingdom**		**Turnover per employee**	**Number of employees**
	(mln, €)	**%**	**(mln, €)**	**(in €)**	
Agriculture	1.274	78.3	998	79,228	12,595
Utilities	165	99.2	164	791,800	207
Packaging industry	452	74.2	335	226,100	1,482
Equipment	409	73.7	301	226,100	1,331
Transport	469	100.0	469	206,700	2,271
Media, marketing	525	93.3	490	122,306	4,009
Services	1,274	92.5	1,178	122,306	9,635
Total	4,568		3,936		31,530
First-round impact as % of total impact					65
Total indirect effect of brewing sector (including second-round effects)					48,507

Source: EY Questionnaire among breweries (2009); Eurostat (2006)

The largest proportion of supplies is purchased from the packaging industry, with further significant spending on services, media and marketing and transport. Based on the combination of data from the brewing sector in the United Kingdom itself and on data from the previous study, it is estimated that the indirect employment effect is approximately 48,500 employees in the supplying sectors.

The indirect employment effects are illustrated below:

Indirect employment



Source: Ernst & Young calculation (2009)

The analysis shows that agriculture, the packaging industry and the services sector benefit most from the indirect impact of British breweries. The impact is relatively substantial because a high percentage of goods and services purchased by the breweries is purchased in the United Kingdom itself.

37.5 Retail and hospitality sectors

As already mentioned the British beer market is characterised by a shift from on-trade sales to off-trade sales. However the major part of consumption is still consumed in the hospitality sector.

Hospitality sector

Many jobs in the British hospitality sector can be attributed to the sale of beer:

- 54% of beer consumption in the United Kingdom occurs in the hospitality sector.[166]
- This means that 27.7 million hectolitres of beer are consumed in British pubs, restaurants and other hospitality facilities.
- The consumer price of beer is approximately 6.60 euros per litre of beer (incl. VAT) in the hospitality sector.[167]
- By multiplying the consumer price by the on-trade consumption, the total turnover in the British hospitality sector can be estimated at 15.5 billion euros (excl. VAT).
- Turnover per employee in the British hospitality sector is 49,000 euros a year.[168]
- Total employment in the British hospitality sector because of beer sales thus equals 316,400 employees.

Retail

Employment in retail arising from beer sales can be similarly assessed:

- Approximately 46% of total British beer consumption is beer sold by supermarkets and other retail companies.
- With an average consumer price of 2.63 euros (incl. VAT) per litre[169] total consumer spending on retail beer is estimated at 5.2 billion euros (excl. VAT).
- Because the annual turnover per employee is estimated at 305,700 euros, this means that approximately 17,200 people owe their jobs to the sale of retail beer.

37.6 Government revenues

The revenues of excise, VAT and income-related contributions due to beer production and sales are estimated at 13,289 million euros:

- VAT revenues are estimated at 3.737 billion euros. The main part of these VAT revenues is generated in the hospitality sector.
- Total excise revenues on beer are 4.592 billion euros.
- Income-related revenues due to beer production and sales are approximately 4.959 billion euros. They consist of 2.675 billion euros in income tax, 976 million euros social security contributions paid by employees and 1.308 billion euros social security taxes and payroll taxes paid by employers.

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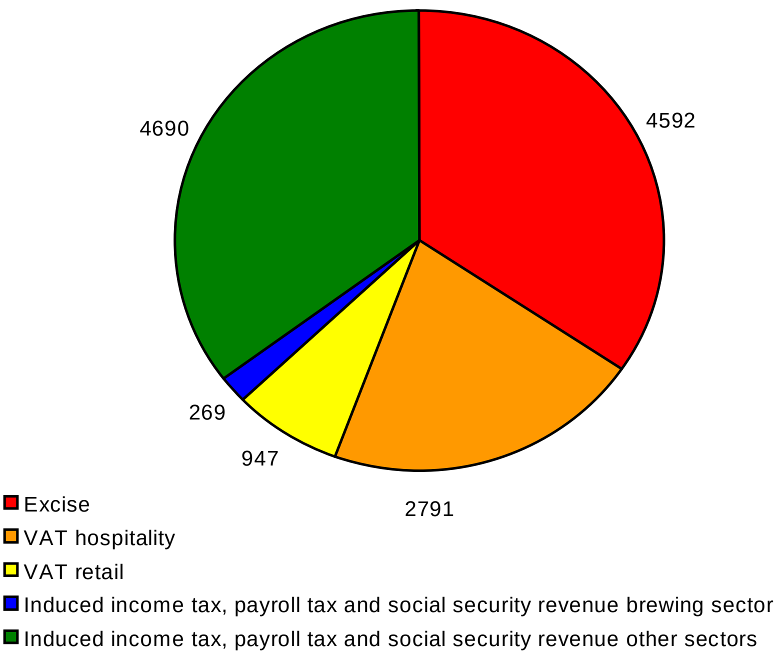
166 Source : BBPA, 2008.
167 Source: BBPA, 2008.
168 Source: Eurostat, statistics on turnover per persons employed in services ('hospitality sector').
169 Source: BBPA, 2008.

Government revenues due to the production and sale of beer: 13.289 billion euros



Source: Ernst & Young calculation (2009)

Annex I: Methodology & scope

This study focuses on the economic impact of the brewing sector in **27 European union Member States plus 4 countries** (Croatia, Norway, Switzerland and Turkey). Although the brewing sector is international in scope and many brewing companies are organisations operating as multinationals, the analyses were carried out at country level. In this manner, the impact on individual national economies could be measured.

The base year for the analysis is **2008**. If data was not available for this year, data for 2007 and in some exceptional cases, data for 2006 was used.

Some of the reported outcomes are estimated on the basis of a **model** constructed by Ernst & Young. For this reason these outcomes are not a direct representation and are dependent on decisions made by Ernst & Young. These decisions are elucidated in Annex III.

To represent the economic impact of the brewing sector, three different effects can be distinguished:

- direct impact
- indirect impact
- induced impact

The **direct impact** is defined straightforwardly as the effect generated directly by the brewing sector.

The **indirect impact** represents the impact of breweries on their suppliers. To be able to produce beer, breweries need to purchase a highly diverse range of goods and services. To mention just a selection: barley malt, hops and water and many types of packaging materials such as glass and aluminium. Breweries also hire engineers, marketers, communications agencies and many more services. In this study, six supplying sectors are distinguished: agriculture, utilities, packaging industry, transport, media and marketing and other services.

The sale of beer by retail outlets and hospitality firms is an important source of economic benefits. The economic contribution of firms in the retail and hospitality sectors arising from the sale of beer is labelled in this study as the brewing sector's **induced impact**.

The abovementioned effects have been measured in three areas (**employment, value added and government revenues**). Together this results in nine dimensions:

	Direct impact	**Indirect impact**	**Induced impact**
Employment	Total number of jobs in the brewing sector	Total number of jobs in supplying sectors resulting from the production and sale of beer	Total number of jobs in the hospitality and wholesale/retail sector resulting from the sale of beer
Value Added	Value added by brewing companies	Value added in supply sectors resulting from the production and sale of beer	Value added in the hospitality and wholesale/ retail sector resulting from the sale of beer
Government Revenues	Excise revenues resulting from the production and sale of beer and income tax and social contributions from employers and employees in the brewing industry	Income tax and social contributions from employers and employees in supply sectors	VAT revenues, income tax and social contributions from employers and employees in the hospitality and wholesale/retail sector resulting from the sale of beer

Annex II: Data sources

The results presented in this report derive from multiple data sources. In hierarchical order of importance these sources are:

a data obtained from a questionnaire completed by national associations representing the brewing sector;
b statistics obtained from The Brewers of Europe;
c data collected directly from individual breweries across Europe through a detailed questionnaire;
d data from Eurostat;
e data from other (public) sources, such as national statistics agencies and the OECD;
f data used in the 2006 study: The Contribution Made by Beer to the European Economy.

Sub a

The **national brewing associations** have been a major source of valuable data. 29 associations completed a detailed questionnaire (only the associations from Croatia and Malta did not respond). Important elements of this questionnaire were:

- production and consumption volume, imports and exports;
- number of breweries and employees in the brewing sector;
- consumer prices in the on-trade and off-trade sectors and distribution margins of production sold on-trade and off-trade;
- information on the tax structure and changes in taxation over the last years.

Another important role of the national associations was to validate the outcomes of the study. To strengthen the underlying database for this study, Ernst & Young has presented draft country reports on the economic impact of the brewing sector to all national associations representing the brewing sector. The validated reports provide necessary national checks on the European data series used.

Sub b

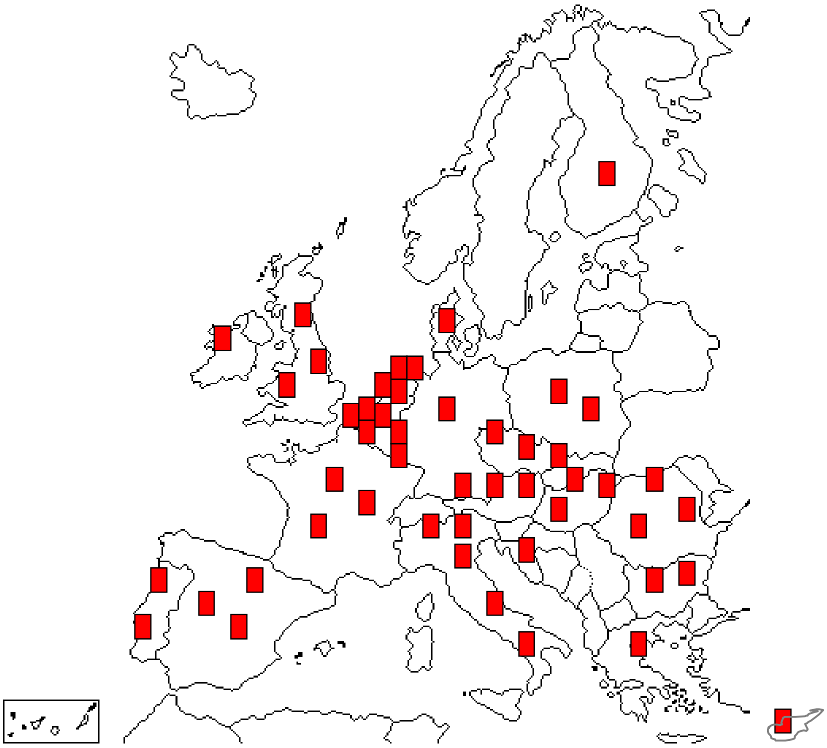
In addition to the information from the questionnaires, statistics provided by **The Brewers of Europe** have been used. These statistics consisted of general information on the beer industry in particular countries, for example: data on production, consumption and direct employment in the brewing sector.

Sub c

Some of the data on the brewing sector could not be provided by the national brewing associations. In addition to the questionnaire that was sent to the national brewing associations, a different questionnaire was completed directly by 49 individual **brewing companies** all over Europe. It consisted of questions about:

- procurement and purchase management (amounts of money spent on a variety of goods and services needed to produce beer, and the proportion of purchases made domestically).
- consumer prices on-trade and off-trade and a breakdown of consumer prices in distribution margins for the retail and hospitality sector, VAT and excise duties, value-added for the brewing sector and goods and services purchased by the brewing sector.

Questionnaires returned by brewing companies provided good coverage of European regions:



Sub d

Whereas specific data on the brewing sector was collected through questionnaires completed by national brewing associations and breweries, more general data on individual European economies was obtained from **Eurostat**. Eurostat statistics have provided useful data on labour costs, turnover and value-added per employee generally covering all or most of the countries considered.

Sub e

If data could not be collected through the questionnaires, statistics by The Brewers of Europe and Eurostat, **alternative sources** have been used. For general data on national economies this data derives primarily from public sources such as national statistics agencies and OECD statistics. For more specific data, commercial reports on the brewing industry (for example Canadean[170] and Euromonitor[171]) have been used.

Sub f

In the exceptional case where no new data could be obtained at all, data has been used from the **2006 study**. This is mainly data which is unlikely to change much over time, for example the division of purchased goods among supply sectors in terms of percentages.

170 http://www.canadean.com/Products_Services/Beverages/Beer.aspx

171 http://www.euromonitor.com/Beer

Annex III: Variables and estimates

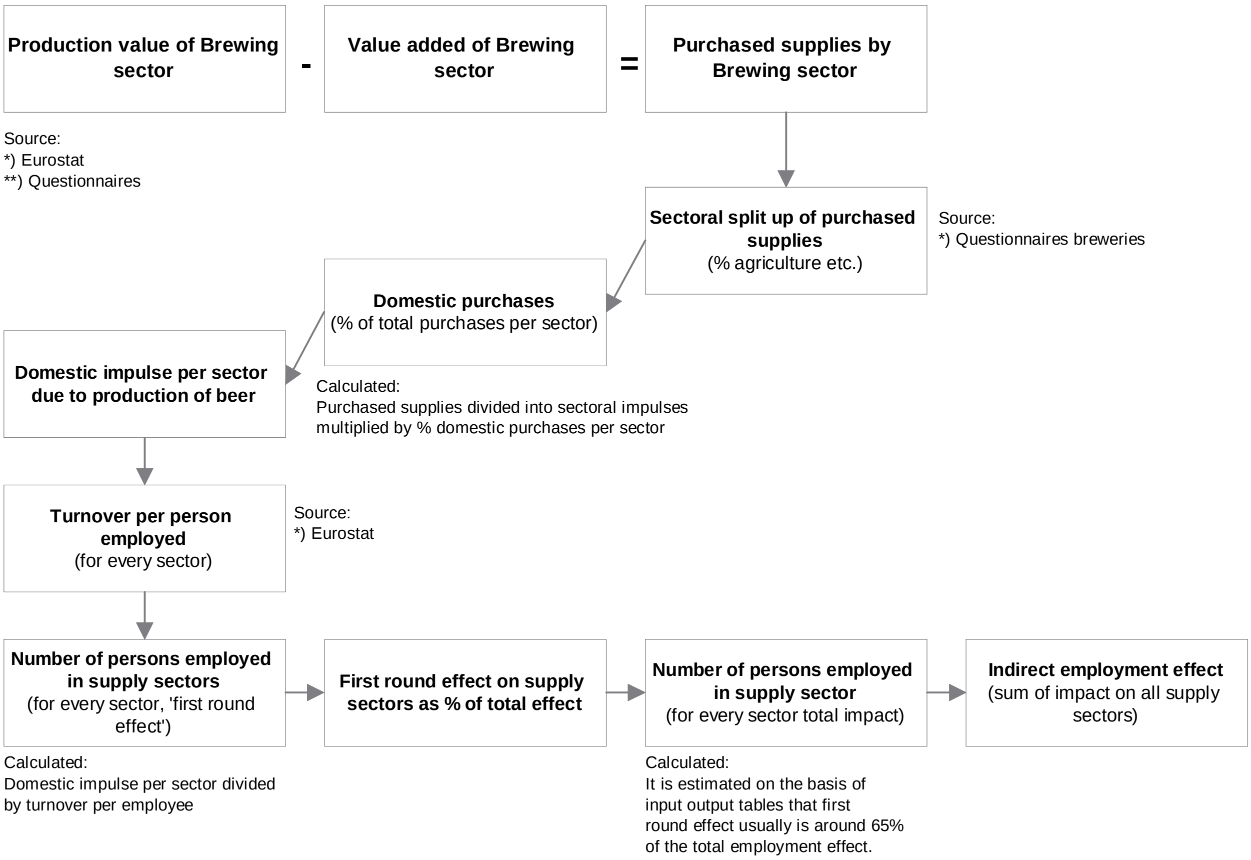
Some of the reported outcomes concerning the economic impact of the brewing sector are based on estimates. These estimates derived from a **model** constructed by Ernst & Young. We illustrate here how these variables have been estimated, focusing on:

- Employment effects
- Value-added due to the production and sale of beer
- Government revenues due to the production and sale of beer

Employment effects

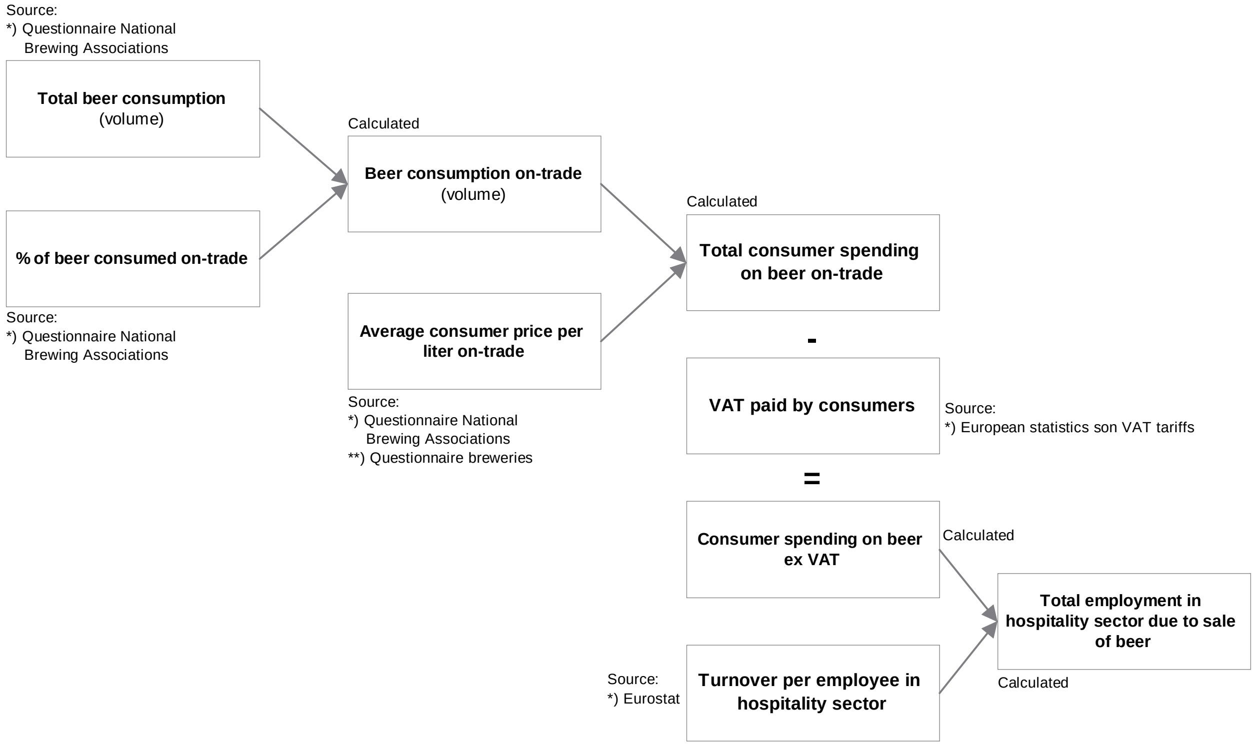
The **direct employment** effect signifies the number of people employed in the brewing sector. The data on direct employment was obtained from statistics from The Brewers of Europe and the results of the questionnaires among national brewing associations. If these sources were not available, alternative sources (mainly Eurostat) have been used.

The **indirect employment** effect concerns the employment generated in supply sectors due to the production and sale of beer. The starting point of the estimates on indirect employment is the impulse in supply sectors resulting from purchases made by the brewing sector.



Data on turnover and value added per employee per sector was obtained from Eurostat. For sector data NACE codes (classification of economic activities by the European Union) have been used: for agriculture data with NACE code A (agriculture, forestry and fishing) were used; packaging industry and equipment (C manufacturing); utilities (E electricity, gas, water supply); wholesale and retail[172] (G wholesale and retail trade; repair of motor vehicles and motorcycles); hospitality (H Hotels and restaurants); transport (I Transport storage and communication); marketing and services and other (K retail renting and business activities).

The **induced employment** effect, resulting in employment due to the sale of beer in the hospitality sector and in retail, is estimated as follows:

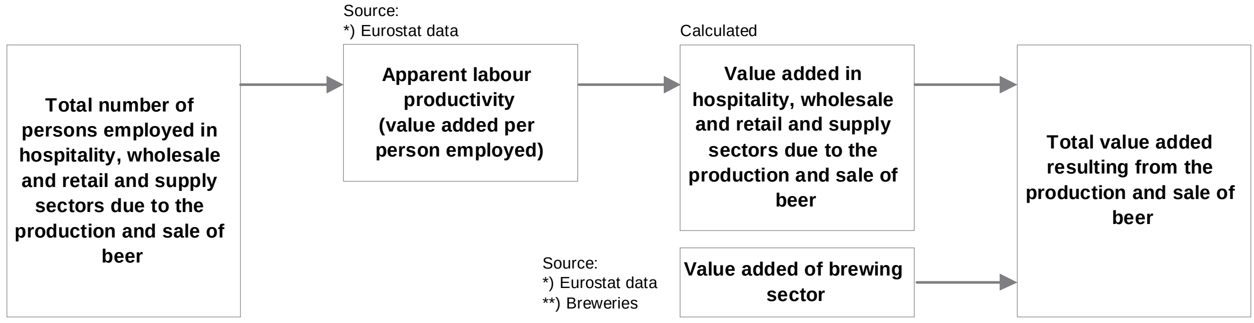


Depicted is the way the employment impact on the hospitality sector is estimated. Estimates for retail are made in a similar way.

Value-added due to the production and sale of beer

The **direct value-added** in the brewing sector is obtained through the questionnaires completed by breweries and brewing associations and through Eurostat data. The value-added in other sectors resulting from the production and sale of beer (**indirect and induced value-added**) is estimated on the basis of the employment effects. The value-added in a particular sector is estimated 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.

172 The percentage of added-value on beer in the wholesale and retail sector differs significantly from other products. For this reason NACE code G5225 (Retail sale of alcoholic and other beverages) has been used for the added-value per employee in wholesale and retail.



Government revenues due to the production and sale of beer

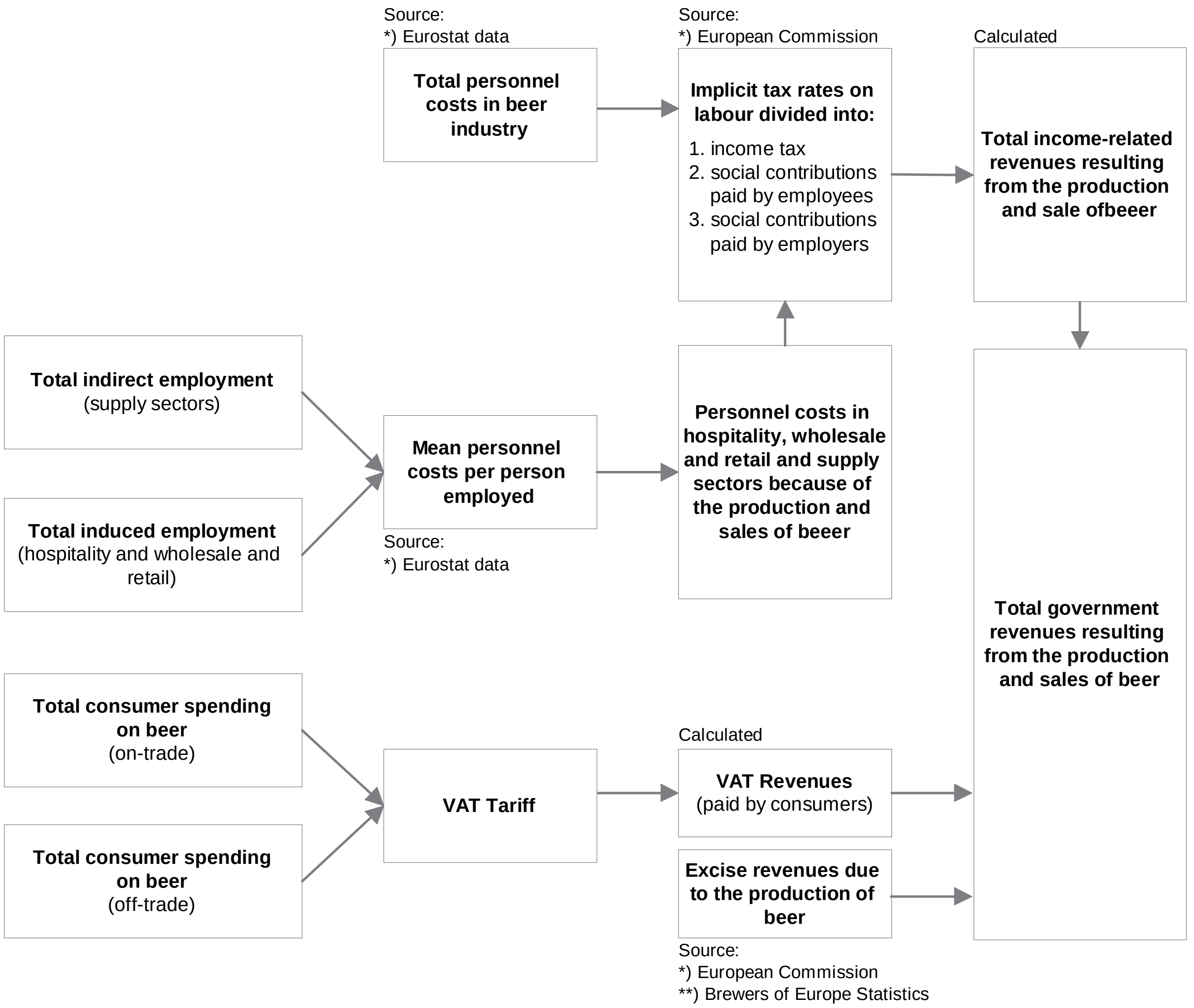
The government revenues due to the brewing industry consist of three segments:

- excise revenues
- VAT revenues
- income-related revenues

Data on **excise revenues** is obtained from the European Commission and from statistics from The Brewers of Europe. **VAT revenues** resulting from the sale of beer are calculated by multiplying the total consumer spending on beer (on-trade and off-trade) in a particular country.

Income-related revenues have been estimated by multiplying personnel costs with implicit tax rates. The personnel costs in the brewing industry were obtained directly from Eurostat. Personnel costs in supply sectors, hospitality and wholesale and retail were calculated by multiplying indirect and induced employment by the mean personnel costs per person employed according to Eurostat.

Implicit tax rates on labour were obtained from statistics from the European Commission. The implicit tax rate is the percentage of personnel costs which consists of taxes and social contributions. It consists of three parts: mean ratio of 1) income tax, 2) social contributions paid by employees and 3) social contributions paid by employers. Using implicit tax rates made it possible to report separately on income tax revenues and social contributions.


Source:
*) Eurostat data
Total personnel costs in beer industry
Source:
*) European Commission
Implicit tax rates on labour divided into:
1. income tax
2. social contributions paid by employees
3. social contributions paid by employers
Calculated
Total income-related revenues resulting from the production and sale ofbeeer
Total indirect employment (supply sectors)
Total induced employment (hospitality and wholesale and retail)
Mean personnel costs per person employed
Source:
*) Eurostat data
Personnel costs in hospitality, wholesale and retail and supply sectors because of the production and sales of beeer
Total government revenues resulting from the production and sales of beer
Total consumer spending on beer (on-trade)
Total consumer spending on beer (off-trade)
VAT Tariff
Calculated
VAT Revenues (paid by consumers)
Excise revenues due to the production of beer
Source:
*) European Commission
**) Brewers of Europe Statistics

Annex IV: Exchange Rates

Since most data sources used for the study apply to the year 2008, the mean exchange rates of that year have been used for the majority of data calculations. For data that applied to an earlier period, mean exchange rates of 2007 were used.

Table 3: Exchange rates used in the report

Currency	Mean euro exchange rate in 2007	Mean euro exchange rate in 2008
Bulgarian Leva	1.9558	1.9558
Croatian Kuna	7.338	7.224
Czech Koruny	27.766	24.946
Danish Krone	7.4506	7.4560
Estonian Krooni	15.6466	15.6466
Hungarian Forint	251.3520	251.5121
Latvia Lats	0.7001	0.7027
Lithuanian Litas	3.4528	3.4528
Norwegian Krone	8.0165	8.2237
Polish Zlotych	3.7837	3.5121
Romanian Lei	3.3353	3.6826
Slovakian Koruna	33.7745	31.2617
Swedish Krone	9.2501	9.6152
Swiss Franc	1.6427	1.5874
Turkish Lira	1.7865	1.9064
UK Pound Sterling	0.68434	0.79628

Source: www.statistics.dnb.nl

Annex V: Glossary

Backward linkage	See indirect employment
Bottom up approach	Analysis of the direct, indirect and induced effects, taking a selection of brewing companies as a starting point.
Brewing sector	All the brewing companies located within a certain geographical area. These companies may also be involved in activities other than brewing beer, such as the production of soft drinks and bottled mineral water.
Brewery	A plant where beer is brewed by fermentation.
Brewing company	A company which produces and/or sells beer.
Direct employment	Employment, value-added and tax revenues for governments generated directly by the brewing sector.
Europe	27 Member States of the European Union (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom) plus Norway, Switzerland, Croatia and Turkey.
Excise	A taxation on the production volume, rather than the production value, of a certain good. In the case of beer it is often related to the amount of alcohol released for consumption.
Exports	The annual volume of beer sold and shipped to foreign countries. Both intra-European (within Europe) as well extra-European (to countries outside Europe) flows are included in this figure.
First round employment effect	The amount of jobs that is directly generated in supplying sectors by purchases of the brewing sector. The employment that is generated by purchases of these supplying sectors is not included.
Forward linkage	See induced employment
FTEs	Full time equivalents
Government revenues	Amount of money received by the government from outside the government entity. In this study they include excise revenues on beer, VAT on beer sold in hospitality and retail sectors and all labour-income-related revenues from jobs in the brewing sector and jobs in other sectors generated by beer production and sales. These income-related revenues include personal income tax, social security contributions paid by employees and social security contributions and payroll taxes paid by employers.

Hectolitre (hl)	One hectolitre equals 100 litres.
Implicit tax rate on labour	Ratio of taxes and social security contributions on employed labour income to total compensation of employees. It is the sum of all direct and indirect taxes and employees' and employers' social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory increased by taxes on wage bills and payroll.
Indirect employment	Impact of the brewing sector on supplying sectors in terms of employment or value-added. For example: farmers selling hops or barley or manufacturing industry producing bottles, cans, kegs or brewing equipment.
Induced employment	Employment at companies that distribute or sell beer, mainly in the wholesale, retail and hospitality sectors. For example: bartenders, waitresses and shopkeepers. For this study the induced employment is confined to the retail and hospitality sectors.
Input output table	A detailed matrix containing data on how much one industry purchases from other industries. These tables were used to calculate the purchases of the brewing sector from supplying industries.
Imports	The annual volume of beer bought and brought in from foreign countries. Both intra European (within Europe) as well extra European (from countries outside Europe) flows are included in this figure.
Multiplier	The multiplier in this study is defined as indirect employment divided by direct employment. Multipliers can also be estimated for induced impact and they can be expressed in terms of employment and in terms of value-added.
On-trade	Beer sales through (licensed) pubs, clubs, bars, restaurants and the like.
Off-trade	Beer sales through shops, supermarkets and other retail outlets.
Personal income tax	A tax levied on the personal income of people. In this study taxes on income out of labour generated by beer production and sales are included in the figures.
Personnel costs	The total remuneration payable by an employer to an employee in return for work done by the latter during the reference period. Besides salary, personnel costs also include taxes and employees' social security contributions retained as well as the employer's social contributions.
PET bottle	A bottle made of polyester (polyethylene terephthalate).
Production Value	The amount actually produced by the unit, based on sales, including changes in stocks and the resale of goods and services. The production value is defined as turnover, plus or minus the changes in stocks of finished products, work in progress and goods and services purchased for resale, minus the purchases of goods and services for resale, plus capitalised production, plus other operating income (excluding subsidies). Income and expenditure classified as financial or extraordinary in company accounts is excluded from production value.

Purchases of goods	The value of all goods and services purchased during the and services accounting period for resale or consumption in the production process, excluding capital goods. It refers to externally-bought products and services.
Social security contributions	Financial contributions paid by employees and their employers giving access to the social security system and entitlement to certain benefits in situations of unemployment, sickness, disability or old age
SSC	See: Social security contributions.
Top down approach	Analysis of the direct, indirect and induced effects, taking existing statistics as a starting point.
Value-added	Difference between the production value and the value of purchased inputs (goods and services). In economic terminology value-added is also defined as the reward for all production factors (mainly labour, capital, entrepreneurship).
VAT	Value Added Tax

Annex VI: Comparison with the 2006 study

In January 2006, for the first time The Brewers of Europe published a report conducted by Ernst & Young on the economic impact of the production and sale of beer in Europe. The current report is an update of this study, pointing out that in 2009 the European brewing sector still generates a substantial contribution to the economy in terms of employment, value-added and governmental revenues.

Although most of the methods and data sources used are the same as in the 2006 study, there are some differences that cause deviations in the outcomes at the country level and make it difficult to draw comparisons between the two studies. The most important reasons for these deviations are:

- more accurate statistics available;
- improvements in the quality of the model;
- developments in regional economies.

There was a higher response rate to the questionnaire. More national brewers' associations as well as more breweries completed the questionnaire. There is also a wider coverage of country statistics through Eurostat in comparison with 2006. Due to the higher response rate and the wider coverage of statistics we had more accurate data and we were less dependent on estimates as an input for our calculations.

In comparison to the 2006 study some adjustments have been made in the methods used for the data calculations. The indirect employment is now calculated more directly (see Annex III). An adjustment is also made in the way the income-related taxes and revenues have been calculated. Due to more accurate statistics we were able to estimate not only the income taxes but also the payroll taxes and social security contributions for almost all countries.

Economic developments in certain countries also led to substantial differences in outcomes in 2006. The most prominent example of this is the increase in price levels in some Eastern European countries in recent years. This led to higher expenses by consumers and to higher labour costs for employers, and ultimately influenced the outcomes of the economic impact of the brewing industry in these countries substantially.

The abovementioned effects are most prominent at the country level. On a higher scale these deviations level out and the effect at the European level is therefore limited.

Annex VII: Contact information

For more information about this study, please contact us. See below for contact details.

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