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Department of Economics

Diploma Thesis

Title: Position of a Chosen Brewery on the Czech Beer Market

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Declaration

I hereby declare that I have worked on my diploma thesis “Position of a Chosen Brewery on the Czech Beer Market” solely by myself, and I have used only the resources listed in bibliography.

In Prague 14.4.2009

…………..………….

Barbora Strouhalová

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Position of a Chosen Brewery on the Czech Beer Market

Postavení vybraného pivovaru na českém pivním trhu

Souhrn

Tématem diplomové práce je zkoumání vývoje a postavení společnosti Starobrno, a.s. na českém trhu s pivem. V práci je analyzován český pivní trh vzhledem k výstavu piva, objemu domácí spotřeby a vývozu největších českých pivovarů, stejně tak jako čísel pro celou Českou republiku. Jednotlivé pivovary jsou porovnávány s pivovarem Starobrno a se skupinou Heineken, která Starobrno a další české pivovary vlastní. Část práce je soustředěna na finanční analýzu pivovaru Starobrno, a.s. na základě absolutních (vertikální a horizontální analýza) a poměrových ukazatelů (rentabilita, likvidita, zadluženost a aktivita).

Klíčová slova

Pivovar

Pivní trh

Výstav piva

Konkurenti

Finanční analýza

Poměrové ukazatele

Summary

The diploma thesis deals with a research of the development and position of Starobrno, a.s. on the Czech beer market. In the work is analysed Czech beer market according to barrelage, inland consumption and export of Czech key breweries as well as the Czech Republic as a total. Breweries are on those bases compared with Starobrno brewery and Heineken Group. Part of the thesis is aimed at the financial analysis of Starobrno, a .s. using absolute indices (vertical and horizontal analysis) and rate indices (profitability, liquidity, indebtedness and activity)

Key words

Brewery

Beer market

Barrelage

Competitors

Financial analysis

Rate indicators

Content:

1 Introduction

Beer is one of the oldest low alcohol beverages. The first allusion to beer dates back to 6th millennium BC to Sumerian civilisation. Egyptians, Romans, Celts and even Chinese tribes also made beer and the process lasts up to present. In the Czech countries was beer made by monks and later primitively at home. In the 15th century brewing was moved to buildings and later in the 16th century we could found over 3,000 breweries in the Czech countries.

It is obvious that brewing has a great tradition in Czech lands. Czech Republic is well known all over the world for beer because of its taste and long tradition. Beer can also be called a “national drink” because the consumption of beer makes around 160 litres per inhabitant. That is almost one glass of beer every day for every Czech citizen. It is no surprise the Czech Republic is a country with the highest beer consumption. When it gets to the amount of beer produced we are also great players on the world beer market. On the other hand it is nonsense to compare such a small country with large producing countries as China, the United States of America, Germany or Latin America (Mexico, Brazil…)

In the worldwide basis beer production and consumption is increasing. It can be caused by the increasing growth of population as beer consumers. Also the drink is becoming more popular even for female consumers. Breweries are developing new brands and new types (for example flavoured beers, low sugar beers, premium beers) aimed at new and younger groups of consumers. Massive commercials by international enterprises help to promote and find more consumers through out the world. Brazilian InBev with new great gain by American Anheuser Busch, SABMiller and Heineken are the world key players. AB InBev owns in the Czech Republic Pivovary Staropramen, second biggest producer and SABMiller owns Plzeňský Prazdroj, number one company in beer production and exports. Third Heineken bought in last few years Starobrno, Krušovice and Drinks Union.

Situation on the Czech beer market is acting well as for the future. Even though the number of breweries is decreasing (now around 50 breweries) the beer barrelage is increasing as well as the beer export. The consumption is not changing in last few years.

Some breweries, namely Krušovice, Pivovary Staropramen, Svijany and Starobrno are increasing the barrelage numbers. Other key players as Drinks Union and PMS Přerov are stable with their numbers.

Together with beer also Czech hops are an export commodity. In the Czech countries were hops grown by old Slavonic tribes around 1,500 BC. From the 11th and 12th century are documents of hop gardens. But it was emperor Charles IV. who looked after the development of Czech vineyards and hop gardens. Czech hops, in particular from Žatec area, belong to the best in the world.

2 Objectives of the thesis and methodology

2.1 Objectives

The main aim of the diploma thesis is to analyse and evaluate the position of Starobrno Brewery on the beer market based on:

- Amount of beer produced by each brewery
- Types of beer
- Packaging
- Proportion of production for inland and abroad
- Export

Then to compare Starobrno Brewery and Heineken group calculated results with key competitors (Plzeňský Prazdroj, a.s., Pivovary Staropramen, a.s., Budějovický Budvar, n.p. and PMS Přerov, a.s.)

Next goal is to analyse and explore existing conditions on the beer market and compare those with other countries based on:

- Total barrelage
- Beer consumption
- Beer exports
- Beer imports

Part of the analysis is given to financial results of the Starobrno Brewery between years 2005 and 2007.

2.2 Methodology

First part of the diploma thesis is based on literature research. The theoretical tools used were searched in library (books and journals) and through the internet (web pages of Czech breweries and of the Czech Statistical Office).

Second part of the diploma thesis is given to the analysis of data provided by each brewery. Brewery's total barrelage, barrelage by sale destination (intended for inland and abroad as the export), barrelage classifications according to packing structure (bottles, cans, PET bottles, barrels, mini-barrels and tanks), to beer types (draught beers, lager beers, light beers, low-sugar beers, non-alcoholic beers, premium beers, flavoured beers and top fermented beers) and to colours (pale, dark and semi dark and mixed beers). Also comparing those numbers of the Czech Republic with other countries on that of total barrelage, export and import numbers as well as the consumption per inhabitant. This practical part is based on the Statistical Surveys complied by the Research Institute of Brewing and Malting.

The financial analysis points out rate indicators (profitability, liquidity, activity, leverage - debt ratios and market ratios) and absolute indicators (vertical and horizontal analysis). The financial performance measures are important to the business shareholders to know that the business is prospering and working profitably. Two main sources of information available to shareholders, regulators and competitors as well as the public are the income statement and balance sheet. Income statement is company's financial statement showing performance of the company (flows of revenues and expenses) during a time interval, usually one year. Balance sheet on the other hand provides a business view (stocks of assets and liabilities) at a point in a time, usually at the end of the trading period.

Profitability measures the firm's use of assets and expenses.

- Gross margin = $\dfrac{\text{Gross Revenue}}{\text{Net Sales}}$

- Return on Equity (ROE) = $\dfrac{\text{Net Profit}}{\text{Equity (Own Assets)}}$

- Return on Assets (ROA) = $\dfrac{\text{Net Profit}}{\text{Assets}}$

- Return on Capital Employed (ROCE) = $\dfrac{\text{Net Profit}}{\text{Own Assets + Long-term Liabilities}}$

- Return on Sales = $\dfrac{\text{Net Profit}}{\text{Sales}}$

Liquidity measures the ability to convert assets into cash to meet the liabilities (to pay short-term obligations).

- Immediate Ratio = $\dfrac{\text{Financial Assets}}{\text{Short-term Liabilities}}$

- Quick Ratio = $\dfrac{\text{Financial Assets + Short-term Claims}}{\text{Short-term Liabilities}}$

- Current Ratio = $\dfrac{\text{Financial Assets + Short-term Claims + Stocks}}{\text{Short-term Liabilities}}$

Leverage ratios measure the firm's ability to pay long-term debts.

- Financial Gearing (Leverage) = $\dfrac{\text{Assets}}{\text{Stockholders' Equity}}$

- Debt Ratio = $\dfrac{\text{Total Liabilities}}{\text{Total Assets}}$

- Debt to Equity Ratio = $\dfrac{\text{Total Liabilities}}{\text{Total Equity}}$

- Times Interest Cover = $\dfrac{\text{EBIT}}{\text{Interest Expense}}$

- Total Indebtedness = $\frac{\text{Foreign Assets}}{\text{Total Assets}}$

- Rate of Self Financing = $\frac{\text{Own Assets}}{\text{Total Assets}}$

- Interest Coverage = $\frac{\text{Gross Profit + Interest Payable}}{\text{Interest Payable}}$

Activity ratios show how effectively is the firm using its resources.

- Assets Turnover = $\frac{\text{Sales}}{\text{Assets}}$

- Inventory Turnover = $\frac{\text{Sales}}{\text{Inventory}}$

- DSO Ratio (Days Sales Outstanding Ratio) = $\frac{\text{Accounts Receivable}}{\text{Total Annual Sales}} * 365$

- Account Receivables Turnover = $\frac{\text{Net Sales}}{\text{Average Gross Receivables}}$

- Average Collection Period = $\frac{\text{Accounts Receivable}}{\text{Credit Sales}} * 365$

- Days Inventory = $\frac{\text{Average Inventory}}{\text{Costs of Goods Sold}} * 365$

Market ratios measure investors’ response to owning company’s stock.

- Earnings per Share (EPS) = $\dfrac{\text{Net Income}}{\text{Number of Shares}}$

- Price – Earnings Ratio = $\dfrac{\text{Stock Price}}{\text{EPS}} = \dfrac{\text{Market Value of Equity}}{\text{Net Income}}$

- Market Value of Equity = Number of Shares * Stock (Share) Price

- Market to Book Ratio = $\dfrac{\text{Market Value per Share}}{\text{Book Value per Share}}$

- Dividend per Share (DPS) = $\dfrac{\text{Total Dividend}}{\text{Number of Shares}}$

- Stock Return = $\dfrac{\text{Closing Price – Opening Price of Share + DPS}}{\text{Opening Price of Share}}$

- Dividend Payout Ratio = $\dfrac{\text{Dividend}}{\text{Net Income}}$

3 Literature review

3.1 Beer history

Beer is a fermented malt beverage. The word beer comes originally from the Latin word “bibere” meaning to drink. The Greek goddess of agriculture, Ceres, gave the base of the Spanish word for beer, cerveza. English word for beer might come from word used for fermented drink “cale” from which we now use ale. Some other resources state the word ale comes from old-German word “alu” or “alo”. Beer has played an important role in the lives of many cultures throughout history. In 18th and beginning of 19th century people believed that first people drinking beer were from ancient Egypt. This was proven in written history of this ancient country. Later were found proofs about extinct Sumerian civilization, dated back at about 6th millennium BC. The land lay between the Tigris and Euphrates rivers in Southern Mesopotamia. No one knows how exactly and when Sumerians discovered fermentation but they were probably the first ones using the process. Sumerians even had patronesses of brewing Siris and Nimkasi. They also made special types of beers exclusively for temple ceremonies. Poem dated around 4,000 years back called Hymn to Ninkasi was even a recipe for beer making. The main ingredient was baked bread, crumbled into water, which together formed a mash. Then it was made to a drink.

When the Sumerian empire collapsed in the 2nd millennium BC new tribe came to this land. Those were Babylonians. Their culture was derived from that of the Sumerians. Babylonians brewed 20 different kinds of this “Divine Drink” (dark beer, pale beer, red beer, three fold beer, beer with a head, without a head etc.) by brew masters who were women and priestesses. In 2,100 BC Hammurabi, the 6th King of Babylonia, decreed the first written laws. These laws included a daily beer ration based on the individual established social standing. A normal worker received 2 litres, civil servants 3 litres, administrators and high priests 5 litres per day. During this time beer was used for trade and not sold. From the Gilgamesh Epic, written in the 3rd millennium BC, we learn beer was very important. This epic is recognized as one of the first great works of world literature.

The Egyptians carried on the tradition of beer brewing. They prepared the beer in a similar way to Babylonians but they also added some ingredients (saffron or for special red beer mandrake) to the brew to improve its taste. They used malt from barley, millet or from some other crop plants. The importance of beer in the Egyptian culture can be seen in a specific hieroglyph for the word brewer. Beer was also used as medicine. It was found more than hundred recipes containing beer from about 1,600 BC. Beer was in Egypt also offered as a gift to the gods. Isis, the goddess of nature, was a patroness of brewing.

"It is believed that the Egyptians taught the Greeks how to brew beer. Historians even suggest that the pre-historic beer god Dionysis is the root of the Greek wine god Dionysus. Beer was important to the Greeks so much so that the famous writer Sophocles included beer as part of his suggested diet. The Greeks then taught the Romans how to brew beer that in turn taught the savage tribes in Britain. However, once wine became more prevalent in Rome, beer was only brewed on the extreme outskirts of the empire, where one could not get wine. Because of this, beer became known as a drink of savages."
(<http://www.drinkingbeer.net/BeerArticles/Beer_History.php5> [cit. 2008-06-23])

"From the Romans the art of brewing beer was spread to the Celtic and Teutonic people of Britain and central Europe. But beer did not regain its stature until the Christian monasteries began to brew and improved it. The monks built the first breweries that provided food, shelter, and drink to travellers, the start of the hotel industry. There are three Christian Saints that are considered the patrons of brewing; Saint Augustine of Hippo, author of the confessions; Saint Luke the Evangelist; and Saint Nicholas of Myra."
(<http://www.drinkingbeer.net/BeerArticles/Beer_History.php5> [cit. 2008-06-23])

Other nations also made a beverage similar to beer. Those were various kinds of fermented drinks. For example in the middle France was popular "Korma drink". Some nations in Russia also drank fermented drink rather than wine. Even old Finish national epopee Kalevala has about four hundred rhymes on beer and beer cooking. Various tribes in Africa, Europe and Asia made many kinds of fermented drinks from different kinds of corn. But they were Chinese and Tibetans who as first added flavours to their beers (rice or bamboo). It is even believed Chinese tribes were the first one, much earlier than European brewers.

3.2 Beer in Czech lands

Slavonic nations made beer from many kinds of grain (barley was used for more beer kinds, wheat was used for better beer kinds and from oat were made beers for special occasions). From 993 comes the first mention of beer cooking in Czech lands. Monks from Břevnov monastery made both beer and wine. Other monasteries probably cooked beer as well but there are proofs missing. Malt production is on the other hand dated few years later to the 11th century from the Act of prince Břetislav I. First written testimony of beer making in Czech territory is the first Czech king Vratislav II's Act (1061 – 1092).

Beer cooking was not only in the hands of aristocracy and liege people but more in the hands of common people. The way to make beer was handed over from one generation to another. In the Czech countries new cities were built during 12th century. One of the privileges given to new cities was beer cooking. This brewing privilege ("právo várečné") had just few houses in the city. It was also set that beer production is not a craft but a business while malting was a craft. Beer was until 12th century made very primitively at home. Women usually spent most of their time in the kitchen so they were the ones who brew the beer. Another city right was the mile privilege. This was an arrangement that allowed distributing beer only in the given city or up to a given distance from the city (usually up to 12 km). This created something as a monopoly on the regional market.

Czech brewers also wanted their own patron for brewing, not ruler Gambrinus (Duke of Brabant) that many nations used. They chose St. Wenceslas, who was probably agreed as brewing patron in Czech countries by Karel IV. (<http://www.cspas.cz/pivo.asp?lang=1> [cit. 2008-09-04])

Brewing was later moved to more specialised building as breweries. It is estimated that in 16th century there were around 3,000 breweries. Since 1750 was brewing process stabilized and beer was brewed only from malted barley in Bohemian and Moravian lands. This was a big step for the beer quality.

František Ondřej Poupě (1753 – 1805) played a big role in the 18th century in Czech brewing industry due to his reform in brewing and malt production. He was a great brew master with experience from various breweries from Czech countries and also abroad. He studied books about beer production that helped him write many books, for example “Die Kunst des Bierbrauens” which can be translated as “The art of brewing”. (<http://www.brno.cz/index.php?nav01=2222&nav02=2220&nav03=2447&idosobnosti=196> [cit. 2008-09-05])

During 19th century has the level of brewing increased due to new discovered processes. Many new breweries were established. In the middle of 19th century could be found 1,052 breweries in Bohemia and Moravia. Also many players from nowadays were starting their business. For example Plzeňský Prazdroj (Pilsner Urquell brewery - 1842), Smíchovský Staropramen brewery (1869), Gambrinus brewery (1869), Velké Popovice brewery (1874), Budějovický Budvar (Budweisser Budvar in 1895) and in Moravia brewery in Přerov (1872) and in Brno (Starobrno brewery, 1872). On the other hand also many smaller or mini breweries are being closed. In 1912 there were only 526 breweries in Czech lands and after the Second World War only 260.

In the second half of 20th century all breweries were transformed to regional national enterprises and became a possession of the state, all this due to political reasons. In 1960s were established eight regions and beer enterprises belonged to these regions. There were Prague breweries, Central-bohemian breweries, Eastern-bohemian breweries, South-bohemian breweries etc. Most of the breweries had obsolete equipment and their capacity was surpassed. Even though the beer quality remained stable. Period after 1990 made a big change in brewing industry. At that time only over 70 breweries were in running. Many breweries invested into modernization of their production lines. Some of those changes and rebuilding took even years. Many of those changes were made to increase beer production and ease the whole process. (Basařová, 1998; <http://www.cspas.cz/pivo.asp?lang=1> [cit. 2008-09-04]) In 2004 the Czech Republic entered European Union. This was a step that helped Czech brewing industry in meaning of opening borders to export.

3.3 Beer production and ingredients

Beer is low alcohol beverage made in the process of brewing mainly from malt, yeast, water and hops. Most common crop used is barley, but in some cases beer is also made from wheat, rice or corn. When poured into a bottle beer has golden colour (scale can be from light yellow to almost black). Taste is improved by hops, which give beer a bitter taste. Some kinds of beer are flavoured even with herbs or fruit.

3.3.1 Water

Water quality influences the taste and character of the final product. It is also used as an instrument for cleaning and cooling processes. Different places have water with various mineral components. This gives to regional beers differences in taste. Up to that is water divided into four types according to content of CaO (calcium lime).

- Soft water (up to 1.4 mmol/l) – mostly used for Czech beers
- Mediumly hard water (up to 2.1 mmol/l)
- Hard water (up to 5.3 mmol/l)
- Very hard water (more than 5.3 mmol/l)

(Chládek, 2007)

3.3.2 Hops and hops products

Hops were known already in Mesopotamia. Old Slavonic tribes used hops as a beer ingredient from 1,500 BC. In Czech lands have hops grown since 13^{th} century. All brewers grew hops themselves up to 16^{th} century. After that were hop gardens planted in many Czech areas. The hop cones are added into beer for their alpha and beta acids that give the beer typical bitter taste, add characteristic aroma, influence frothing quality and have conservative effect. Harvested hops have to be dried because they consist 72 - 82% of water.

Hops are divided into soft (aromatic) hops that are grown in the surroundings of Žatec city and to bitter (high content of resin). Hops can also be divided according to colour. Green kinds are grown in United Kingdom, Belgium etc. Red kinds are typical for Czech lands.

3.3.3 Malt

In our countries is malt made of malting barley. Quality of beer barley is focused on dampness (up to 16%), seed quality (germination activity at least 90%) and content of proteins in solids (maximum of 12.5%). (Basařová, 1998) The process of malt production is made in these steps: soaking, germination and drying. Pilsen kinds of beer are made out of light malt and dark malt is used to dark beer kinds.

3.3.4 Yeast

Yeast is actually responsible for the fermentation process but also influences character and flavour of beer. Before the fermentation process was understood were used wild yeasts (spontaneous process). Yeasts extract starch sugar from milled malt and start the fermentation. Today we know two types of beer yeast.

Yeast for top - fermentation - used for beer types as “ale”, “porter” or “stout”. After the fermentation these yeasts are lifted up by carbon dioxide. The temperature of fermentation is between 20 – 24°C.

Yeast for bottom - fermentation - used for pilsner types of beer. After the fermentation these yeasts settle down at the bottom of fermenting vat. The temperature of fermentation is lower, between 8 – 14°C. (Chládek, 2007)

3.4 Beer scale

Nowadays we have many kinds of beer worldwide. First and obvious criterion is the colour. We can define:

- Pale beers
- Mixed beers
- Dark beers

Another criterion is the type of fermentation used.

- Bottom-fermented beers
- Top-fermented beers

Czech law divides beer kinds into groups according to share of fermentable extract in hopped wort, so-called original hopped wort extract (in Czech EPM). Some other countries as Germany, Austria or Belgium are still dividing beer by Plato degrees.

- Light beers up to 7.99 % of fermentable extract
- Draught beers with fermentable extract from 8.00 % to 10.99 %
- Lagers with fermentable extract from 11.00 % to 12.99 %
- Specialty beers with fermentable extract share higher than 13.00 %

There are other types of beer that are made for example for drivers, diabetics etc.

- Beer with low alcohol content (up to 1.2 % alcohol content in volume)
- Non-alcoholic beer (with alcohol content up to 0.5 % in volume)
- Beer with low sugar content (beer for diabetics)
- Yeasty beer (beer to which after filtration is added part of pure yeasts)
- Herb beer (beer made with herbs or extract of herbs)
- Wheat beer (beer with more than one third of malted wheat in total malt grist)

(Chládek, 2007)

All around the world various types of beer are made. Some are so called country specials, some beer kinds are named after a brewery that is producing them. Here are some of those kinds.

- Ale (also Pale Ale, India Ale etc.) – top-fermented bitter beers sometimes also made with fruit flavours. The green hops and malted oat is used.
- Alt – “Old beer” that is either mellowed for a long time or prepared by old traditional way.
- Bitter – typical English ale with more bitter taste. Usually sold as tapped beer in pubs.
- Brown Ale – top-fermented beer flavoured with caramelised malt.
- Export – German bottom-fermented beer similar to Pils type but a little less hopped.
- Gose – top-fermented originally German beer made of malt with salt, coriander and milk acid.
- Duvel – “Devil” is a Belgian beer made since 1970 in Moortgat Brewery by original recipe. This beer s also called Belgian Strong Golden Ale.
- Faro – lambic type of beer with sugar or fruit syrup.
- Hoogarden – Belgian beer named after brewery and the city where is made. It is a top-fermented beer with addition of orange peel, coriander and other ingredients. Malted wheat is used in grist.
- Lambic – beer made in Belgian city Lambeek made out of barley and wheat (40%) malt using wild fermentation.
- Kölsch – bitter mixed beer with wheat malt addition made largely in German mini-breweries.
- La Kriek – Belgian beer with cherry flavour.
- Leffe – top-fermented beer with cherry flavour.
- Märzen – traditional, quite strong and rich in colour type of beer that usually smells like malt.
- Pils – Czech type of beer named after the city of Pilsen where it is brewed since 1842. It is a bitter pale beer made by bottom fermentation with two stage fermenting – main fermentation and maturation. 75 % of world beer production is of this type of beer.

- Porter – top-fermented beer with dark red to black colour and high alcohol content. This beer is typical for England.
- Weissbier – top-fermented wheat beer with lower bitter taste.
- Stout – very dark top-fermented beer with caramelised sugar addition.
- Ginger Ale – English beer with addition of herbs (for example ginger).

(Chládek, 2007)

4 Beer market in the Czech Republic

4.1 Heineken Company – introduction of owned breweries

4.1.1 Heineken

Gerard Adriaan Heineken found Heineken Company in 1864. He purchased a brewery in Amsterdam that is dated back to 1592. Gerard Heineken travelled around Europe to find out how beer is made in different places. He discovered German beers were bottom fermented while other beers were made by top fermentation. This new way of brewing gave Heineken beer famous taste and led to opening of a brewery company in Rotterdam. The brewery needed its own laboratory that presented new yeast culture, the Type A yeast. In 1884 Heineken had registered its export label. From the beginning of 19th century was Heineken expanding (Belgium, United Kingdom, West Africa, West Indies etc.) and entered even Asian beer market. It was also first beer imported to the US after prohibition. Heineken's first foreign brewery was built in 1931 in Indonesia. Few years later Heineken set up a brewery in Malaysia together with Asia Pacific Breweries (APB). In the1970s Heineken Company started paying more attention to European market buying Dutch Amstel or later Irish brewery Murphy's. In the 1980s became Heineken brands very popular in the USA and led to great sales increase. Also licensing contracts allowed Heineken to expand more over the world. In 2000 over 98 million hectolitres of beer was made under the Heineken brand name. In 2003 Heineken acquired Austrian brewery group BBAG that by then owned Czech Starobrno brewery. This was its first enter to Czech beer market. In 2007 bought Heineken Krušovice brewery and only a year later Drinks Union group. This made Heineken third largest brewing company in the Czech Republic after Plzeňský Prazdroj (owned by SAB/Miller) and Staropramen Breweries (owned by world's largest brew company AB InBev).

4.1.2 Starobrno Brewery

"Holding over five percent of the domestic market share, STAROBRNO, a.s., a member of the Heineken Group, belongs to the leading brewery groups in the Czech Republic. The Company runs Starobrno Brewery in Brno and Hostan Brewery in Znojmo. In terms of barrel beer sales in the domestic market, the Company has, over the last years, held the third position in fierce competition from all breweries. In South Moravia, the Starobrno and Hostan brands control a quarter of the beer market whereas in Brno alone, Starobrno Brewery delivers its products to over a half of all on-trade outlets." (<http://www.starobrno.cz/en/cms/280> [cit. 2008-10-15]) In the table can be seen brewery's barrelage in last seven years. Since 2001 Starobrno increased its production by 200,000 hectolitres of beer thanks to which is the position on the home market improving.

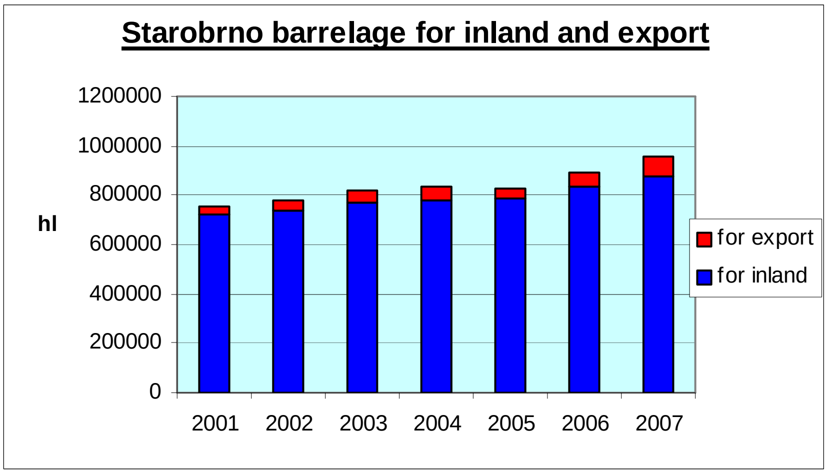
Table 1 – Barrelage of Starobrno according to sale destination

Year	Total barrelage		of which: for inland		for export		% of total barrelage for inland in CR
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	754361	4.22	722588	95.79	31773	4.21	4.51
2002	779827	4.29	739150	94.78	40677	5.22	4.56
2003	816103	4.40	766729	93.95	49374	6.05	4.67
2004	831243	4.43	778274	93.63	52969	6.37	4.83
2005	826005	4.33	784791	95.01	41214	4.99	4.91
2006	890833	4.50	836047	93.85	54786	6.15	5.14
2007	954313	4.80	878913	92.10	75400	7.90	5.39

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Starobrno is with increasing barrelage also increasing export. In 2007 the export jumped from 6.15 % to 7.9 %. Key export markets include Sweden (where is Starobrno best selling Czech beer brand), Germany, Austria and Great Britain. Slovakian market was always the main export market for Starobrno and after 2004 was replaced under licence production at Heineken Slovakia. Even though Starobrno is one of the less exporting Czech breweries. The next table shows the share of inland and export consumption. Also from the chart can be seen the increasing trend of beer production.

Graph 1 – Barrelage of Starobrno according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

"The brewing tradition in Brno began well over 750 years ago. In 1243, Wenceslas I, including the right to brew beer, conferred royal privileges upon the town. Townsmen who were producing beer began to set up associations that led to establishing the first breweries. In 1323, enlightened Queen Eliška Rejčka founded a Cistercian convent in Old Brno and, two years later, there arose a brewery. The second half of the 19th century saw an expansion of the brewing industry in the Czech lands. The last abbots of the convent brewery, Josef Mandel and Herrmann Hayek, therefore decided to build a new modern brewery. Construction works on what was immediately called an 'Old Brno Brewery' began in 1872 and the beer that was brewed there became well known as 'Old Brno beer'.

In the post-WW II period, Starobrno Brewery underwent several phases of modernisation. The most recent one, the construction of cylinder-conical tanks, commenced in 1995, thus becoming part of the Company's modern history that began in 1994 when the ownership structure changed, with STAROBRNO, a.s., being acquired by BBAG, an Austrian group. In autumn 2001, the Znojmo-based Hostan Brewery was taken over by STAROBRNO, a.s. In 2003, the BBAG Group became a 100 % subsidiary of the Heineken Group, with STAROBRNO thus joining the world's fourth biggest brewery group.” (<http://www.starobrno.cz/en/cms/280> [cit. 2008-10-15])

Starobrno is a joint stock company with following corporate bodies in 2007:

Supervisory Board:

- Thomas Polanyi - Chairman
- Dr. Max Schwarzmair - Vice-chairman
- Steven Lucien Marie Siemer
- Mag. Werner Mihatsch
- Jaroslav Hladík - Personnel representative

Board of Directors:

- Ing. František Krakeš - Chairman
- Erik Jan G. Hamel
- Ing. Jiří Imrýšek

The brewery supplies the Czech beer market with many brands.

- Starobrno product range:
    - Osma - a low-calorie refreshing drink with low alcohol content.
    - Tradiční (Traditional) - a strong beer for both everyday and festive occasions with 10 % of original hopped wort extract.
    - Černé (Dark) - a beer for connoisseurs and also enjoyed by women.
    - Řezák (Mixed pale & dark beer) – a mild bitterness of hops and a noble tone of caramel malt intertwine in this beer. The product is distinctive for its colour and caramel taste.
    - Medium - brewed from the finest Žatec hops and the best Moravian malt with 11 % of original hopped wort extract.
    - Ležák (Lager) - for centuries, this beer has been a symbol of the Moravian art of brewing (12 % of original hopped wort extract).
    - Fríí - alcohol-free beer.

- Hostan product range:
    - Naše Pivko (Our beer) - classic draught beer made by the traditional process (10 % of original hopped wort extract).
    - Hradní (Castle beer) – a pale lager produced by a classic time-tested procedure.
    - Premium - for centuries, this beer has been a symbol of the Znojmo art of brewing whose historic roots date back to the times of the brewer Hostan. The beer is distinctive for its light amber colour (12 % of original hopped wort extract).
    - Zámecké (Chateaux beer)
- Baron Trenck – beer special
- Červený Drak (Red Dragon) – contain few nature find herbs that give this beer special colour. One of favourite beer specials.
- Black Drak (Black Dragon)
- Heineken – imported pale lager
- Heineken – imported non-alcoholic beer
- Zlatý Bažant (Golden Pheasant) range – beer produced under a licence:
    - Světlý ležák (Pale lager)
    - Světlé výčepní pivo (Pale draught beer)
    - Tmavý ležák (Dark lager) – imported beer
    - Nealkoholické pivo (Alcohol-free beer) – imported beer

These Czech brands are extended by imported concern brands as Amstel, Murphy´s and Edelweiss. Other products made by the company are ZULU soft drinks. The range includes ZULU Kola - a typical cola-flavoured beverage and ZULU Citron - lemon flavoured soft drink. These drinks are free of any artificial sweeteners, containing natural sugar and other ingredients of aromatic substances. In addition to the standard range of products, Starobrno also put on the market one-off beer rarities (for example Green Beer on Maundy Thursday or special Christmas beer).

4.1.3 Krušovice Brewery

“The Royal Brewery of Krušovice is one of the oldest breweries in the Czech Republic. The brewery was established in 1517 when the St. Wenceslas Contract enabled the aristocracy to brew beer on their own farms. Jiří Birka from Násile inherited such a farm in Krušovice. He also owned a house with a brewery in the square nearby Rakovnik. He brewed good beer and, according to the legend, people drank and ate in his house all day and night. But some inhabitants of Rakovník did not take too kindly to this wild lifestyle, so Jiří Birka from Násile began to brew his beer one mile (12 km) away from the town walls of Krušovice.” (<http://www.krusovice.cz/en/index.php?p=1> [cit. 2008-10-16]) In 1581 Jiří Birka from Násile offered the brewery to Rudolf II. The Emperor bought this brewery two years later and then it became a part of the Křivoklát Estate. Rudolf II., himself, made sure that the brewery was supplied with the best quality materials so the production could increase. Since that time Krušovice beer was delivered to the Pague Emperor’s Court.

“A.J.Valdštejn bought the Krušovice Farm from the Czech Crown in 1685 and conducted a thorough maintenance on the property. After he died in 1731, his daughter Marie brought the entire property as a part of her dowry when she married into the Furstenberk Family. The brewery underwent major reconstruction during the time when it belonged to this family. For the next 200 years, the Furnstenberk Family equipped the brewery with the most modern facilities available. The brewery belonged to the family until 1945. After 1945, the Krušovice Brewery was part of many state-owned companies until 1991. Production reached a quarter of million hectolitres a year. But most of this beer was consumed in the areas nearby Rakovník, Kladno and Slaný so other customers were not familiar with the beer. The Krušovice Brewery became a privatised company in 1991 when it broke its alliance with Central Bohemia Breweries, State Company Velké Popovice.” (<http://www.krusovice.cz/en/index.php?p=1> [cit. 2008-10-16]) As a state company, Krušovice brewery made 252 025 hl of beer and 41 419 hl of soft drinks in 1991. Unfortunately for a lack of space was in 1992, after fifty years tradition, cancelled the production of soft drinks.

In 1993 was the Krušovice brewery fully privatised and became part of Dr. Oetker Company, one of the world's biggest food company. With this financial help begun a large reconstruction of CK tanks, filling lines for bottles, barrels and cans etc. Very successful year was 1997 when the brewery sold over 1 million hectolitres of beer for the first time. Nowadays is the Royal Brewery of Krušovice counted as the 7th largest producer of beer as independent brewery but because it is a part of Heineken group it actually holds third position together with Starobrno and Drinks Union. The brewery made it's way from just a local brewery to a well-known brewery in the Czech Republic as well as in the world. The table shows barrelage for both inland consumption and for export and share of Krušovice brewery on the Czech beer market. Krušovice is one of few bigger breweries whose share on the market is decreasing (from 4 % to 2.6 %). It is caused by focusing more on foreign markets and export.

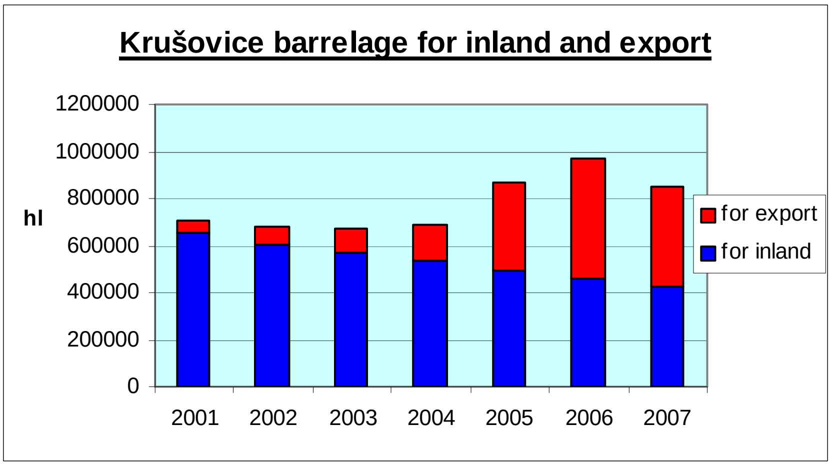
Table 2 – Barrelage of Krušovice according to sale destination

Year	Total barrelage		of which: for inland		of which: for export		% of total barrelage for inland in CR
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	710588	3.97	653458	91.96	57130	8.04	4.08
2002	678399	3.73	603861	89.01	74538	10.99	3.73
2003	675061	3.64	569869	84.42	105192	15.58	3.47
2004	690387	3.68	536574	77.72	153813	22.28	3.33
2005	872000	4.57	497816	57.09	374184	42.91	3.12
2006	968208	4.89	459532	47.46	508676	52.54	2.83
2007	850592	4.27	429745	50.52	420847	49.48	2.64

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

More obvious than in the previous table is the change in division of beer production in graph. The graph also indicates how the amount of total barrelage is changing. From 2006 to 2007 Krušovice's barrelage dropped by almost 100,000 hectolitres. On the other hand year 2006 was very rare in comparison with 2005 or 2007.

Graph 2 - Barrelage of Krušovice according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

In 2007 The Royal Brewery of Krušovice a. s. became part of Heineken Group. This connected Krušovice brewery with Starobrno brewery that is part of Heineken Group since 2003. The integrated Starobrno – Krušovice Company leads Lieven Van der Borght, as the Senior General Manager, who came to the Czech Republic from a very similar post in Cambodian Heineken brewery.

The brewery supplies the Czech beer market with these brands:

- Světlé (Pale beer) – with 3,8 %vol. alcohol.
- Černé (Dark beer) - the traditional product of the brewery with more than 100 years production tradition with sweet caramel taste and a light hop flavour.
- Mušketýr (Musketeer lager) - firstly produced at the beginning of the 1980's and brewed in accordance with a special recipe developed by Krušovice's Master Brewers. The alcohol content makes 4,5 % vol. and original hopped wort extract makes 11 %.
- Imperial - pale lager is among products of the Premium group
- Radler – mixed beverage from beer and a lemon flavoured soft drink. This quite new product to Krušovice family is very popular alike mixture from German breweries.
- Jubilejní ležák (Jubilee lager) – with alcohol content of 4,7 % vol. was this beer introduced according to the 425th brewery anniversary in 2006.

4.1.4 Drinks Union

Drinks Union Company started in 1997 providing beer services in North Bohemia. In 2002 the company already owned breweries in Velké Březno, Krásné Březno, Louny and Kutná Hora that became the main subject of its business. In 2007 was Drinks Union sixth largest brewery enterprise in the Czech Republic according to barrelage.

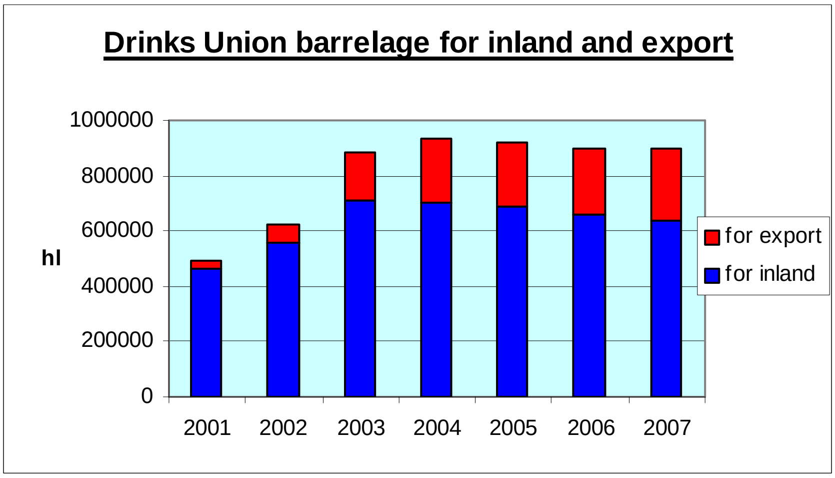
Table 3 – Barrelage of Drinks Union according to sale destination

Year	Total barrelage		of which:				% of total barrelage for inland in CR
			for inland		for export		
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	492029	2.75	463832	94.27	28197	5.73	2.89
2002	625515	3.44	561485	89.76	64030	10.24	3.47
2003	887563	4.79	707669	79.73	179894	20.27	4.31
2004	935887	4.99	702136	75.02	233751	24.98	4.36
2005	921298	4.83	690128	74.91	231170	25.09	4.32
2006	901300	4.55	656728	72.86	244572	27.14	4.04
2007	899744	4.52	635843	70.67	263901	29.33	3.90

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Table three indicates development of Drinks Union. In 2001 with only 2.75 % of the total Czech barrelage Drinks Union relied mainly on Czech consumers. In the seven-year period their barrelage almost doubled and the brewery was also able to increase export numbers to 30 % of its total barrelage. This is a huge change in business strategy, which ensured steady position on the Czech beer market.

Graph 3 - Barrelage of Drinks Union according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

In the graph is showed fast increase in production between 2001 and 2004. Since then are the numbers stable. In 2004 exported amount of beer stabilized around 30 % of the total production. Key export destinations are Germany and Sweden. In 2008 became these breweries part of Heineken Group.

The brewery in Krásné Březno was firstly mentioned in 1867. It was very modern brewery built by JUDr. Viktor Russ. Since 1992 was brewery part of Ústecké Pivovary, a company that later also bought brewery in Velké Březno with its key brand Březňák. Brewery in Velké Březno was first mentioned in 1606. In 1900 the brewery made 18 different types of beer (for example Senátor, Priessner-Urquell, Bavaria, Březňák and others). The city of Louny was more than for beer known for malt production. Some resources say in 1590 were there fifty malt houses owned by 24 of the wealthiest man in the area. Today's brewery in Louny was built in 1890 and became part of Drinks Union in 2001 that was till then its biggest competitor in beer market in North Bohemia. Kutná Hora used to be a strong town in older days. First brewery was built there in 1538. Remarkable person in brewery in Kutná Hora was Ondřej Dačický who rebuilt in 1573 part of the town. Part of this change was also a new brewery building. Next to the brewery was also situated malt house and hop-garden.

Drinks Union consists of these breweries and brands:

- ❖ Krásné Březno – Zlatopramen
  - o Pale lager - Zlatopramen 11 % of original hopped wort extract, beer with long tradition from 1642.
  - o Pale lager – 12 % of original hopped wort extract, beer cooked by original recipe from 1894 (Kaiser Bier).
  - o Dark lager - beer with bitterness from hops and little sweetness from caramel (11 % of original hopped wort extract).
  - o Pale draught beer with 10 % of original hopped wort extract
  - o Non-alcoholic beer
- ❖ Velké Březno – Březňák
  - o Pale draught beer – typical 10 % beer.
  - o Pale lager
  - o Dark draught beer – beer with flavour of caramelised malt starch made of four kinds of malt.
  - o Special lager – beer with high alcohol content (6,5 %).
- ❖ Louny
  - o Louny Klasik – beer with strong hops flavour.
  - o Louny Diamant – deeply fermented beer with lower sugar content.
  - o Pale draught beer (10 % of original hopped wort extract)
  - o Pale lager Lounský ležák – beer with strong hops bitterness and aroma.
  - o Dark draught beer (10 % of original hopped wort extract)
  - o Dark lager (12 % of original hopped wort extract)
  - o Semi dark bitter special beer – this beer was made in limited edition for year 2008 with 5,8 % alcohol content.
  - o Extra bitter special beer 16 % – also beer made in limited edition with very high alcohol content.
- ❖ Kutná Hora – Dačický
  - o Pale draught beer – typical taproom beer (10%)
  - o Pale lager – 12 % of original hopped wort extract beer
  - o Dark draught beer – beer with dark garnet colour used also to mix with pale beer.

- Lorec - pale special beer, 14 % of original hopped wort extract, strong lager with alcohol content up to 6,5 %.

- Pivrnec – pale draught beer with 4, % alcohol content named after feature from Czech caricaturist Petr Urban.
- Jarošov – brewery production moved to Krásné Březno
  - Pale draught beer
  - Pale lager

4.2 Heineken's Market Competitors

4.2.1 Plzeňský Prazdroj

According to barrelage share of the Czech beer market is Plzeňský Prazdroj number one. The beginning of brewing in the Plzeň (Pilsen) is dated to 1295. The actual brewery Plzeňský Prazdroj was established in 1842 where the first Bavarian type of beer (bottom fermented pale lager) was brewed. 1.3.1859 was registered at the Chamber of Commerce and Trade in Pilsen brand name "Pilsner Bier". Almost forty years later in 1898 was registered trademark Prazdroj – Urquell.

In 1869 Gambrinus brewery (under the name of První akciový pivovar) was established. In the 20th century is Pilsner Urquell distributed to many countries (in 1913 around 34 countries). After nationalization of breweries in the second half of 20th century was formed a national enterprise Západočeské Pivovary. During the privatisation process in 90's the company was transformed to joint stock company Plzeňský Prazdroj. In 1999 became Plzeňský Prazdroj, a. s. part of South African Breweries plc. In 2002 was completed an acquisition with two other breweries Pivovar Velké Popovice, a.s. and Pivovar Radegast, a.s.. Plzeňský Prazdroj holds for many years status of the largest Czech brewery group. Total barrelage share the same as domestic market share of barrelage keeps Plzeňský Prazdroj on 44 – 50 %. For other breweries are these numbers due to lower capacity of other breweries unattainable. Plzeňský Prazdroj made almost 9 million hectolitres of beer in 2007 and the production is still increasing. Over the last seven years the barrelage of Plzeňský Prazdroj increased by one million hectolitres.

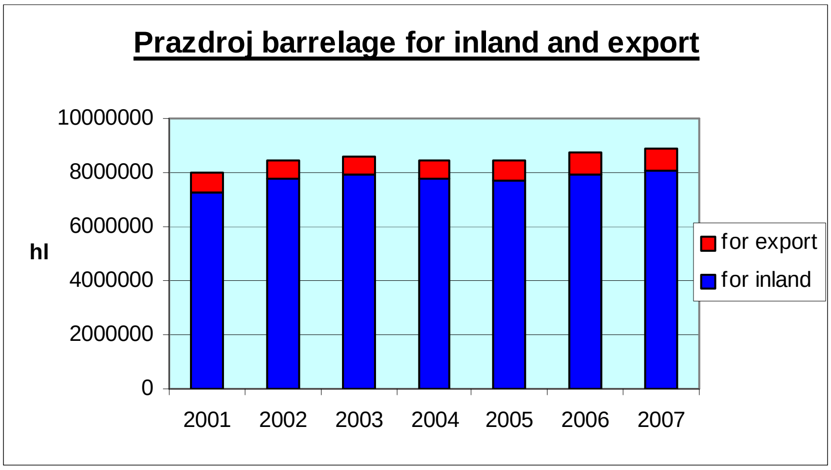
Table 4 – Barrelage of Plzeňský Prazdroj according to sale destination

Year	Total barrelage		of which:				% of total barrelage for inland in CR
			for inland		for export		
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	7964138	44.54	7277193	91.37	686945	8.63	45.41
2002	8478496	46.64	7744748	91.35	733748	8.65	47.80
2003	8591222	46.32	7908016	92.05	683206	7.95	48.17
2004	8447957	45.05	7746392	91.70	701565	8.30	48.07
2005	8432156	44.22	7721313	91.57	710843	8.43	48.35
2006	8715931	44.05	7923851	90.91	792080	9.09	48.76
2007	8915091	44.81	8063015	90.44	852076	9.56	49.45

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Plzeňský Prazdroj is a member of global brewing company SAB/Miller (South African Breweries/Miller Brewing Company) that is the second largest brewing company in the world by volume of beer produced. SAB/Miller Plc. was formed in 2002 by acquisition of Miller Brewing Company (by the time second largest brewery in the United States by volume) by SAB (South African Breweries). SAB/Miller brands include Peroni Nastro Azzurro, Miller, Snow, Aguila, Grolsch and Tyskie. The flagship brand for the group is Pilsner Urquell. The company is also bottler of Coca-Cola products.

Graph 4 - Barrelage of Plzeňský Prazdroj according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Plzeňský Prazdroj exports beers to more than 50 countries through out the world mainly thanks to its brands as Pilsner Urquell, Gambrinus, Radegast and Velkopopovický Kozel. Their share of exported beer is low in comparison with average export share on the Czech market but in absolute numbers are Pilsner brands the most exported Czech brands. Portfolio includes many brands:

- Pilsner Urquell – pale lager (12 % of original hopped wort extract)
- Gambrinus – pale lager (12 % of original hopped wort extract)
- Gambrinus – pale draught beer (10 % of original hopped wort extract)
- Gambrinus Excelent – 11% pale lager
- Gambrinus – with reduced sugar content
- Radegast Premium – pale lager (12 % of original hopped wort extract)
- Radegast Original – pale draught beer (10 % of original hopped wort extract)
- Radegast Birell – non – alcoholic beer
- Velkopopovický Kozel Premium – 12 % pale lager
- Velkopopovický Kozel – 10 % pale draught beer
- Velkopopovický Kozel – dark beer (10 % of original hopped wort extract)
- Velkopopovický Kozel 11 % Medium – pale lager
- Master semi – dark – 13 % premium beer
- Master dark – 18 % of original hopped wort extract, premium beer
- Klasik – pale tap beer

- Primus – pale draught beer
- Frisco – flavoured malt drink

4.2.2 Pivovary Staropramen

Pivovary Stropramen, a.s. is the second best selling brewery in the Czech Republic. To this group belong three breweries: Pivovar Braník, Pivovary Staropramen and Pivovar Ostravar in the city of Ostrava. The main brewery of those three, Staropramen Brewery was established in 1869 in Prague, Smíchov, right next to Vltava River. The brewery began to grow real fast with great success. Staropramen Brewery was popular among Prague consumers for its typical Czech beer taste. Second brewery belonging to this group was also built in Prague and was called by the district where the actual brewery lies. Braník brewery was established by a group of owners of small historic breweries in 1898. The brew masters decided to offer a wide range of product so the brewery could compete with bigger breweries in the Czech lands. Next to classic pale draught beer they also brewed 14 % dark beer, 11% dark lager called “Slaďák” (“Sweet malt beer”), “Mnichovák” (“Municher beer”) and specialty beer “Chantecler noir”. Brewery in Ostrava was established in 1897 as “Czech Joint Stock Brewery in Moravská Ostrava” (many other breweries were owned by Germans). The beer because of its location has a specific taste and character.

In 1992 Staropramen and Braník breweries formed a group called Pražské Pivovary, a.s. (Prague’s Breweries). Two years later British brewery corporation Bass Breweres (one of main players on European beer market) became a strategic partner of Prague’s group. Brewery in the city of Ostrava Ostrovar was acquired in 1997. In 2003 was changed the name Pražské Pivovary to Pivovary Staropramen. Since 2000 is the brewery part of multinational InBev Company, which was formed from two major companies Interbrew (old Belgian brewery) and Brazilian AmBev (beverage company). InBev is the world’s largest brewing company with sales volume of 273.9 million hectolitres (in 2007). At the end of 2008 InBev purchased American Anheuser Busch

(Budweisser). After this acquisition the company renamed to AB InBev. The main brands of AB InBev are Stella Artois, Beck's, Leffe, Hoegaarden and Brahma.

Staropramen covers 15 % of the beer market with both rising barrelage and export. The leading product brand on the market is Staropramen, which sales raised by 8.8 % over the year. Stella Artois lager that is produced under a license is also performing well.

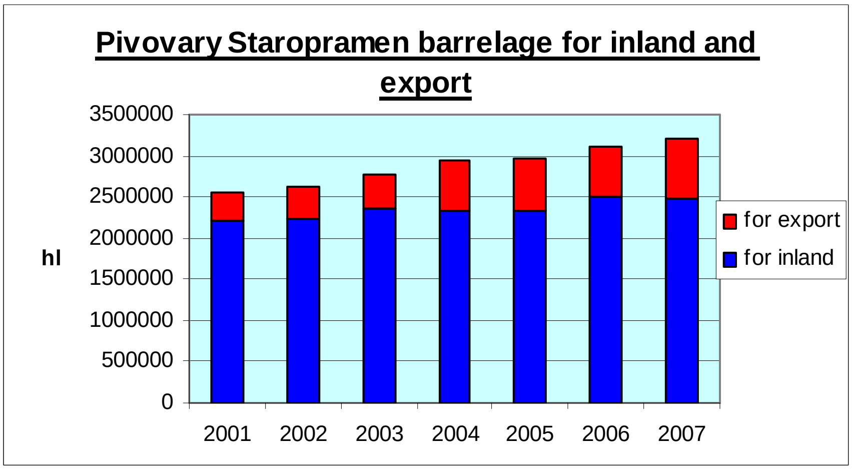
Table 5 – Barrelage of Pivovary Staropramen according to sale destination

Year	Total barrelage		of which: for inland		for export		% of total barrelage for inland in CR
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	2558628	14.31	2218199	86.69	340429	13.31	13.84
2002	2629595	14.47	2235025	85.00	394570	15.00	13.79
2003	2766050	14.91	2350685	84.98	415365	15.02	14.32
2004	2946614	15.71	2326163	78.94	620451	21.06	14.43
2005	2968841	15.57	2326031	78.35	642810	21.65	14.56
2006	3105740	15.70	2511494	80.87	594246	19.13	15.45
2007	3207440	16.12	2491234	77.67	716206	22.33	15.28

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Pivovary Staropramen is the second largest beer exporter and is exported to over 30 countries worldwide. Key export destinations are United Kingdom, Sweden, Germany and Slovakia. Abroad sales are becoming more important. In year 2007 Staropramen exported even 22 % of its total production (grow of 20 % according to previous year).

Graph 5 – Barrelage of Pivovary Staropramen according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007.

Staropramen's brands are:

- Staropramen – pale lager (12 % of original hopped wort extract)
- Staropramen – pale draught beer (11 % of original hopped wort extract)
- Staropramen Dark – dark lager
- Staropramen Granát (Garnet) – semi dark beer
- Staropramen D Beer – beer with reduced sugar
- Staropramen – non-alcoholic beer
- Braník – pale draught beer (10 % of original hopped wort extract)
- Braník – pale lager (12 % of original hopped wort extract)
- Velvet – special pale beer
- Ostravar Originál – pale draught beer
- Ostravar Premium – pale lager
- Ostravar Strong – strong beer with higher alcohol content
- Kelt – special dark beer of stout type
- Stella Artois – pale lager
- Stella Artois – non-alcoholic beer

4.2.3 Budějovický Budvar

The history of brewing in the city of Budějovice (Budweiss) is dated back to 13th century. “The direct predecessor of the Budweiser Budvar brewery as a national enterprise was the Czech Joint Stock Brewery. The initiative for its foundation came mainly from Czech brewers (August Zátka and many others). The Czech Joint Stock Brewery produced the first batch of beer on 1st October 1895. Up to the end of 1896, sales of beer represented 51,100 hectolitres of beer. In the beginning of the 20th century, lager from the brewery was also very well known abroad. In 1920s the brewery registered trademarks as “Český budějovický granát” (Czech Budějovice Garnet), “Budweiser bier”, “Budbräu” and others. In 1930 the trademark “Budvar” was registered. In accordance with this registered trademark the brewery changed its name in 1936 to Budvar – Český akciový pivovar České Budějovice.”
(<http://www.budvar.cz/en/o-nas/historie-a-soucasnost.html> [cit. 2008-10-22])

Budějovický Budvar National Enterprise is the only one of breweries in the Czech Republic owned by Czech state. With more than 380 trademarks registered is Budvar one of the main beer exporters of the Czech Republic.

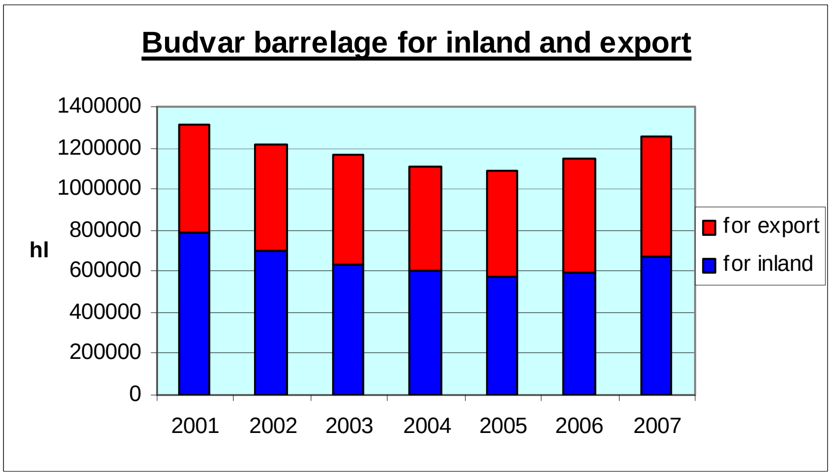
Table 6 – Barrelage of Budějovický Budvar according to sale destination

Year	Total barrelage		of which: for inland		for export		% of total barrelage for inland in CR
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	1316584	7.36	788506	59.89	528078	40.11	4.92
2002	1213121	6.67	699699	57.68	513422	42.32	4.32
2003	1170653	6.31	631728	53.96	538925	46.04	3.85
2004	1112360	5.93	602759	54.19	509601	45.81	3.74
2005	1091303	5.72	577581	52.93	513722	47.07	3.62
2006	1152035	5.82	596780	51.80	555255	48.20	3.67
2007	1253048	6.30	666163	53.16	585885	46.76	4.09

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007

Budějovický Budvar is the third biggest producer of beer by volume. After Pivovary Staropramen and Plzeňský Prazdroj is the last brewery with barrelage over million hectolitres. Also this brewery is keeping good name for great taste. The volume of production was falling since the beginning of this decade but recovered in 2005. Even that Budějovický Budvar did not reach capacity it had seven years ago. The focus of Budějovický Budvar is on export. Almost 47 % of total barrelage is directed to outland. Essential export countries are Germany, United Kingdom, Slovakia, Austria, Russia, Switzerland, USA and Italy. In Germany is Budějovický Budvar even second best selling foreign lager. In the United States and Canada is Budvar sold under the name of Czechvar because of lawsuits for trademark with Anheuser Busch. In 2001 started Budějovický Budvar an importing company in Great Britain in London under the name of Budweiser Budvar U.K. Ltd. and later also a subsidiary in Erfurt, Germany.

Graph 6 – Barrelage of Budějovický Budvar according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007

Portfolio is made of these brands:

- Budweiser Budvar – premium 12 % pale lager
- Budweiser Budvar – pale draught beer (10 % of original hopped wort extract)
- Budweiser Budvar – premium dark lager (12 % of original hopped wort extract)
- Budweiser Budvar – non-alcoholic beer
- Bud Super Strong – special pale beer
- Budweiser Budvar – circled lager (delivered only in KEG barrels)
- Pardál – pale draught beer (10 % of original hopped wort extract)
- Carlsberg – imported premium lager (bottled)

4.2.4 PMS Přerov

First brewery is mentioned in the city of Přerov in 15th century. In 1872 few businessmen decided to make a bigger Moravian brewery with a malt house in the city of Přerov as a joint venture. It was a great idea because at that time there were around 30 breweries in the city area. All the competitors could not compete with a brewery of this size.

In 1990 Severomoravské Pivovary (North Moravian Breweries) owned breweries in Přerov, Opava, Litovel, Hanušovice and Vsetín. The name of the company changed to Moravskoslezské Pivovary Přerov (Moravia – Silesian Breweries Přerov). Nowadays the PMS company owns Zubr (brewery in the city of Přerov), Litovel and Holba (brewery in the city of Hanušovice). In 2006 purchased PMS Přerov minority equity share of Slovakian Steiger brewery. This cooperation gives PMS brewery opportunity to easily distribute their brands in Slovakia. Also Budějovický Budvar distributes its beer to Slovakia through Steiger brewery. Therefore PMS Přerov gained advantage to distribute Czech competitor brewery abroad thus profits from it.

Table 7 – Barrelage of PMS Přerov according to sale destination

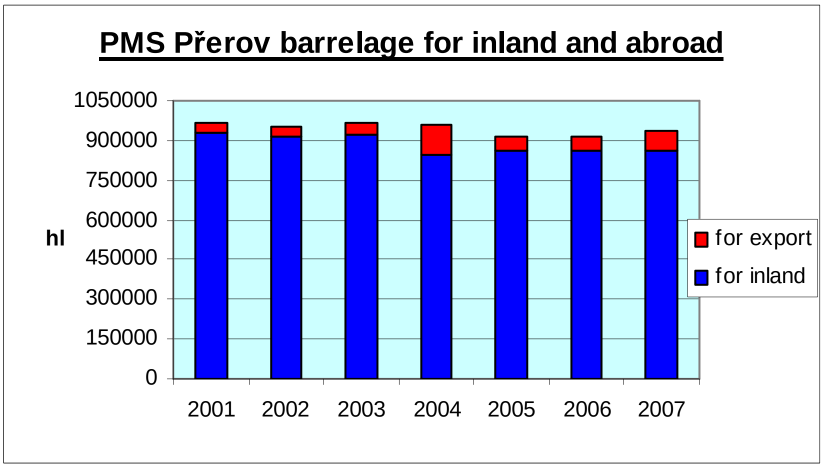
Year	Total barrelage		of which:				% of total barrelage for inland in CR
			for inland		for export		
	hl	% of total output in CR	hl	% of company output	hl	% of company output	
2001	965237	5.40	932703	96.63	32534	3.37	5.82
2002	953366	5.24	916049	96.09	37317	3.91	5.65
2003	964369	5.20	921382	95.54	42987	4.46	5.61
2004	956276	5.10	849326	88.82	106950	11.18	5.27
2005	916307	4.81	859729	93.83	56578	6.17	5.38
2006	916792	4.63	859372	93.74	57420	6.26	5.29
2007	936882	4.71	860577	91.86	76305	8.14	5.28

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007

On the Czech beer market is this brewery holding fifth position in beer barrelage right behind fourth Starobrno (these two are the main competitors in Moravia where Starobrno supplies mainly south and PMS Přerov mainly north of Moravia) and in face of Drinks Union. Both Drinks Union and Starobrno are performing in Heineken group.

PMS Přerov is brewery that is lowering output. Total barrelage has more or less decreasing curve, which is not very common phenomenon on the market. Share on the market is slightly above 5 %. Export is not the main goal of PMS Přerov, in spite of Slovakia is great exporting opportunity. Out of total Czech export holds PMS 2 %.

Graph 7 – Barrelage of PMS Přerov according to sale destination



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 - 2007

PMS group includes these brands:

- Holba Premium – pale lager (12 % of original hopped wort extract)
- Holba Šerák – pale draught beer (10 % of original hopped wort extract)
- Holba Classic – 11 % pale draught beer
- Litovel Classic – pale draught beer (10 % of original hopped wort extract)
- Litovel Moravan – pale draught beer
- Litovel Premium – 12 % pale beer
- Litovel Dark – dark beer
- Litovel Free – non-alcoholic beer
- Maestro – special pale beer
- Zubr Classic – pale draught beer (10 % of original hopped wort extract)
- Zubr Classic Dark – dark draught beer (10 % of original hopped wort extract)
- Zubr Gold – pale draught beer (10 % of original hopped wort extract)
- Zubr Premium – pale lager (12 % of original hopped wort extract)
- Zubr Free – non-alcoholic beer

4.3 General environment analysis

4.3.1 Porter’s five forces model

The reason of going through Porter’s five forces model is to show firm’s strengths, weaknesses, opportunities and threats as well as to help managers to define the right strategy. By following formulated strategy, there can be much easier positioning business within the marketplace.

4.3.1.1 Threat of new entrants

- High cost of plant and equipment
- Economies of scale, economies of scope
- Limited skilled and experienced labour force
- Distribution network arranged
- Sourcing of hops and barley
- Rise in import

4.3.1.2 Power of suppliers

- Quality inputs (water, hops, malt, barley, energy)
- Cost of inputs (level of quality for adequate price)
- Availability of inputs (home production, import)
- Many of suppliers (less of real quality suppliers)
- No switching costs in case of replacing supplier

4.3.1.3 Power of buyers

- Buyers set the price of the beer (pushing it down)
- Buyers influence the quality of beer
- Supermarkets, pubs, restaurants, hotel bars, entertainment locations – 49 % sold in bottles and 45 % sold in barrels for tapped beer
- Beer drinkers loyal to regional brands

- ❖ Due to tradition and many brands in case of switching brand there is always huge scale of beer kinds and brands

4.3.1.4 *Threat of product substitutes*

- ❖ Customers face few switching costs
- ❖ Substitute product's (wine, spirits and ready-to-drink) – favour ness of beer over other drinks
- ❖ Substitute product's (wine, spirits and soft drinks) - quality is more or less the same

4.3.1.5 *Intensity of rivalry among competitors*

- ❖ Level of beer consumption is stabilized
- ❖ High fixed costs (plant and equipment)
- ❖ 7 national wide breweries, 50 regional breweries, other 70 mini breweries – huge number of competitors (real competitors seen in Plzeňský Prazdroj, Pivovary Staropramen, Budějovický Budvar and PMS Přerov in Moravia)
- ❖ High exit barriers (specialized assets)

Table 8 – Porter's five forces model

Industry forces	Low/Medium/High	Impact on strategy
Threats of new entrants	Low	Spreading of distribution network
Barging power of suppliers	Medium	Having few suppliers, using standardized equipment and inputs, stock keeping of important inputs
Barging power of buyers	High	Having many buyers, supporting of drinkers, differentiating of product
Threat of substitutes	Medium	Increasing quality, adequate pricing, differentiating of product, extra customer care
Rivalry among competitors	High	Decrease of assets - increase of outsourcing (decreasing exit barriers), differentiating of product, extra customer care

4.4 *Introduction to the Czech beer market*

Brewing has a long tradition in the Czech Republic. Beer is even called the "national beverage" or "liquid bread". Many Czech breweries date back to 15th century but many cities had own brewery since 12th century. With this history behind there is no doubt the Czech Republic is one of the main producers and consumers of beer. Many tourists come to the country to visit beautiful castles and chateaus in various cities and other monuments and to taste the notorious Czech beer.

4.4.1 Total barrelage

Almost everything is changing over time and beer market is no exception. In 1950s there were over 170 breweries with average year barrelage per one brewery of 53,000 hl. Today (in 2007) there are just 53 breweries in the Czech Republic but the average yearly barrelage per one brewery since 1950s septuplet to 375,000 hl. The total beer barrelage of the Czech Republic as well as the consumption per capita increased. The following chart shows number of breweries, total barrelage, barrelage per one brewery, beer export and beer consumption per capita.

Table 9 – Barrelage in the Czech Republic 1950 - 2005

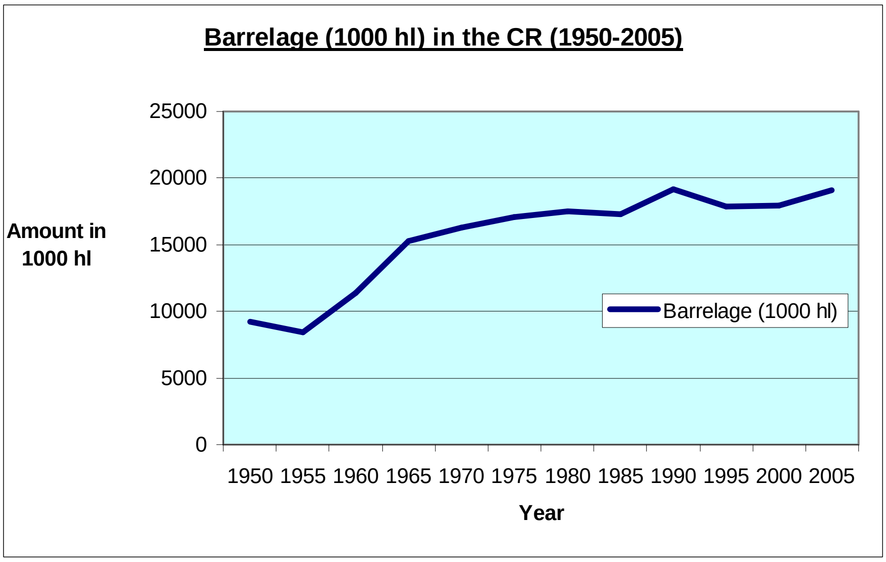
Year	Barrelage (1000 hl)	Number of breweries	Barrelage per one brewery (1000 hl/year)	Beer export	Beer consumption (l per capita)
1950	9245	176	53	36	98.4
1955	8457	137	62	213	86.1
1960	11418	129	89	425	108.6
1965	15272	120	127	330	141.7
1970	16276	104	157	950	152.7
1975	17074	90	190	1216	157.3
1980	17475	79	221	1601	148.5
1985	17265	76	227	1398	146.9
1990	19198	71	270	1071	155.2
1995	17838	70	255	1403	159.1
2000	17924	57	314	1589	159.0
2005	19069	53	360	3099	156.5

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

Since 1950 is the number of breweries decreasing but at the same time is the barrelage increasing. The trend can be seen practically until 2005 (with few exceptions as a large growth of total barrelage and barrelage per one brewery in 1990). With increasing barrelage and lowering number of breweries is the capacity of breweries rising. What is also obvious from the graph is the changing barrelage in 1955 to 1965 caused primarily by economic growth of the country. In the technology of brewing no change was made. Till then beer was served only in restaurants and pubs and consumers were not able to drink beer anywhere else. At that time barmen discovered beer could be kept in glass bottles and later breweries started selling bottled beer for home consumption.

In the next chart is shown the increase in barrelage as total. Obviously from the 1960s to 1980s and again at the beginning of 1990s the total beer production grew very fast.

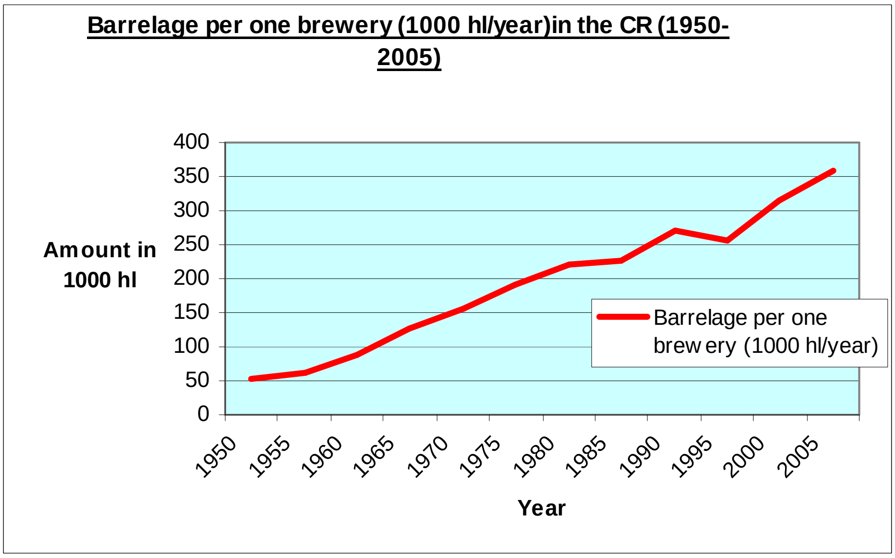
Graph 8 – Barrelage in the Czech Republic 1950 - 2005



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

On the other hand the look at an average barrelage per one brewery between the same time series shows much faster increasing trend. In last few years is the country barrelage not changing that fast and the number of breweries in the Czech Republic is stabilized. From 1950s until 1990 were breweries owned by state that did not invest into new technology of the breweries. Some breweries were closed due to old and insufficient technology and lack of money. Breweries that could brew beer had to increase their production to fulfil consumer demand. Than later after the Velvet Revolution foreign enterprises entered Czech market and that gave an opportunity for breweries to increase their capacity and buy new brewing equipment as cylinder-conical tanks. In the last three or four years the beer market has stabilized therefore fast growth of productivity in breweries is not expected anymore. The barrelage per one brewery will be fixed and change just in relation to consumers' needs (adjust to seasonal demand).

Graph 9 – Barrelage per one brewery 1950 - 2005



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

As was mentioned earlier after 1990 more foreign enterprises invested into Czech beer market. These enterprises were mainly from Austria, Germany and Great Britain. But when really things started to change is when beer world's leaders came to this country. Concretely SABMiller group who bought Plzeňský Prazdroj and InBev who invested into Staropramen Breweries. Later also Heineken took their part on the Czech beer market. The move can be easily explained. Czech beer market was always one of the stable ones and with good perspective. Forbes magazine even called Czech Republic "the world's most beer-crazy country" in one of their article.

(<http://www.forbes.com/2008/03/25/heineken-beer-czech-markets-equity-cx_jm_0325markets07.html > [cit. 2008-06-24]) This statement is based on the amount of beer consumed per capita. Amount of beer produced is increasing very slowly and the number of breweries is also stabilized around 50. The following table shows how are breweries performing on market since 1998. The only change in the last decade is showing the export. Breweries try to expand abroad via their foreign owners or to some places even on their own.

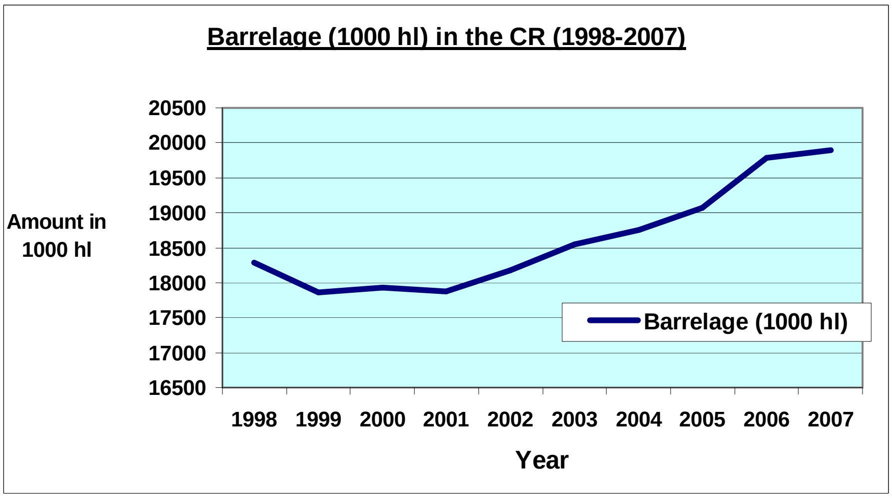
Table 10 - Barrelage in the Czech Republic 1998 - 2007

Year	Barrelage (1000 hl)	Number of breweries	Barrelage per one brewery (1000 hl/year)	Beer export	Beer consumption (l per capita)
1998	18292	61	300	1749	160.7
1999	17863	56	319	1401	160.1
2000	17924	57	314	1589	159.0
2001	17881	56	319	1855	156.0
2002	18178	54	337	1975	158.8
2003	18548	54	350	2130	160.9
2004	18753	53	354	2638	157.9
2005	19069	53	360	3099	156.5
2006	19787	53	373	3536	158.1
2007	19897	53	375	3592	158.8

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

Between 1999 and 2001 total beer production in the Czech Republic little decreased but in upcoming years until now the production has increasing trend. It is not expected that Czech citizens will consume more beer. The barrelage includes production that is determined for both export and inland. And export is the reason for increasing breweries' output. In the following graph is indicated the trend of total amount of beer produced between 1998 and 2007.

Graph 10 - Barrelage in the Czech Republic 1998 - 2007

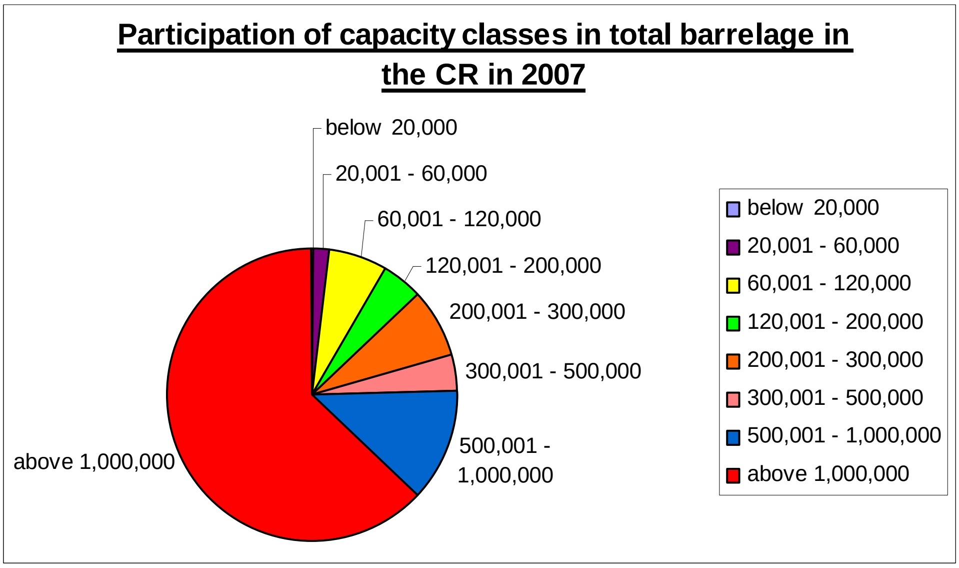


Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

4.4.2 Capacity of breweries

The Czech beer market consists of many units. These are either large breweries that are part of international companies as InBev (Pivovary Staropramen), SAB/Miller (Plzeňský Prazdroj) or Heineken (Starobrno), breweries that have only Czech owners or are partially owned by smaller foreign companies (e.g. Budějovický Budvar, PMS Přerov, Pivovar Svijany and family company Bernard) or local breweries who have large consumer base in regions (e.g. Chodovar, MP Havlíčkův Brod and Pivovar Pardubice) or small or even mini breweries that are connected to restaurants or hotels (e.g. U Fleků, U Medvídků and U Bezoušků). Czech Beer and Malt Association divides all breweries into capacity classes by means of their total barrelage in hectolitres.

Graph 11 – Capacity classes in total barrelage in the Czech Republic in 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

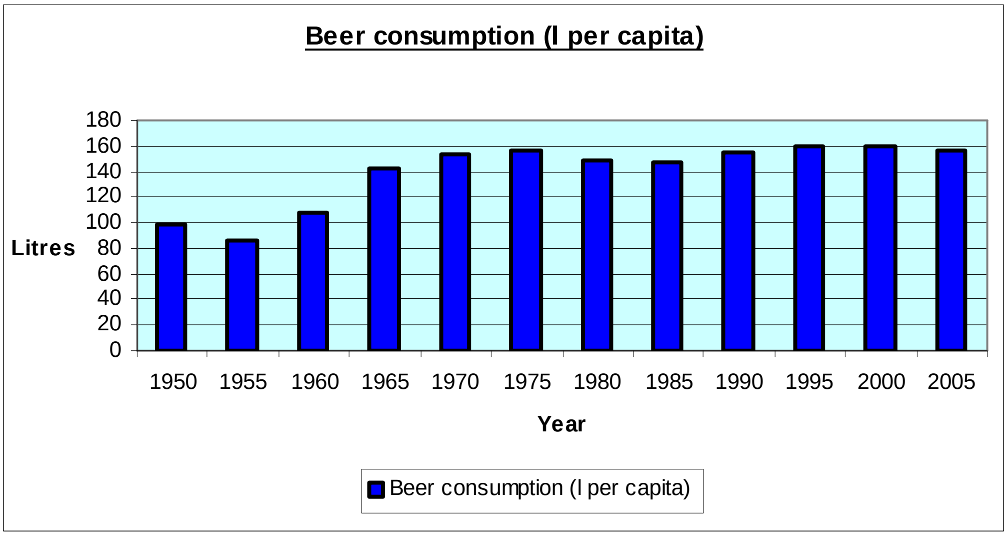
The barrelage capacity over million hectolitres of beer have only three breweries - Prazdroj, Pivovary Staropramen and Budvar. Those three breweries cover over 60 % of the beer production on the market. The largest is Plzeňský Prazdroj brewery with almost 9 million hectolitres, Pivovary Staropramen cover over 3 million hectolitres and Budvar little over one million hectolitres of beer. Obviously a huge share of this capacity class belongs to Plzeňský Prazdroj Company. Second capacity class from 500 to 1,000 thousands of beer hectolitres cover 12 % of the market. To this capacity group belong Starobrno, PMS Přerov, Drinks Union and the Royal Brewery of Krušovice. All these breweries except PMS Přerov are part of Heineken Company. If those breweries performed together under one name their total barrelage would be around 2.7 million hectolitres of beer. Other categories are from 300,001 – 500,000 hectolitres (4 % share of the market), 200,001 – 300,000 hectolitres (8 % share of the market), 120,001 – 200,000 hectolitres (5 % share of the market), 60,001 – 120,000 hectolitres (6 % share of the market), 20,001 – 60,000 hectolitres (2% of the market share) and below 20,000 hectolitres category has less than one percent of Czech barrelage share.

4.4.3 Beer consumption per capita

So why did Forbes magazine called Czech Republic beer crazy country? It might be for the enormous consumption of beer per capita. Traditions of brewing beer were mentioned in the history of beer chapter but is it the tradition of beer making and drinking? First explanation would be the tradition and the taste. People go to a restaurant or a pub almost every evening as they go to have “one beer”. People socialize in pubs and restaurants and this became their habit. Another explanation aims at the beer prices. Prices of beer in restaurants and pubs are lower or at the same level as prices of non-alcoholic beverages. It is no surprise when a half litre of beer costs 20-30 CZK while non-alcoholic drink costs between 30 to 40 CZK. When customers want even cheaper drink there is bottled beer that can be bought in supermarket for a half price of tapped beer. Also Czech cuisine helps the consumption. In the table below is the overview of Czech beer consumption.

Beer consumption as well as the beer consumption per capita is increasing in the Czech Republic. Big increase of 30 % in the consumption per capita is in 1960 – 1965. In last ten years (in table no. 10) the consumption per capita per year did not change. The numbers are little under the 160 litres frontier or as in 1998, 1999 and 2003 on the line. The numbers show high consumption and in comparison with other countries (second largest world consumer country Ireland has the consumption bellow 130 litres per year per capita) liking of beer as a beverage in the Czech Republic. Every Czech citizen including children and others who do not drink beer as abstinent and those who prefer other alcoholic beverages yearly consume 160 litres of beer. Or in other words, all those drink almost every day a glass of beer (half litre glass). But the consumption per capita does not take into account the consumption of foreigners since there is no tool how to count this foreigners’ beer consumption in the Czech Republic. Yes, Czechs do like beer and a lot but still it is a symbol of this country so when a foreign tourist is visiting the Czech Republic he will probably taste the beer. Special are tourists who are forbidden to drink alcoholic beverages in their home country because of a higher age border (USA).

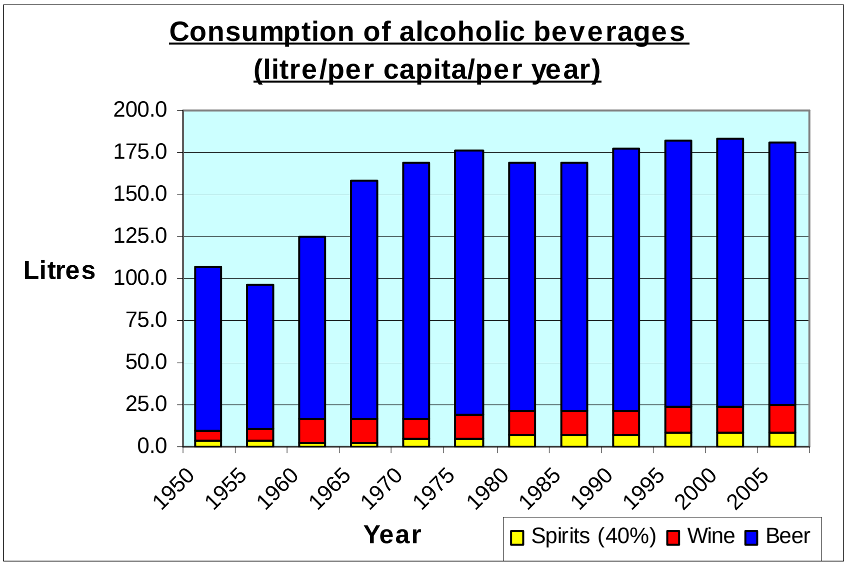
Graph 12 – Beer consumption per capita in the Czech Republic 1950 - 2005



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2001 – 2007.

The graph of the consumption per capita describes the trend better. In the 70s the yearly consumption per capita increased to 160 and at that level stayed until now. Other alcoholic beverages are "in shadow" of beer. The consumption of spirits (40 % of alcohol in volume) and wine can also be called as non-changing in last 20 years, in the case of wine even fifty years. Moravia is famous for its wine-vaults but wine holds not that large popularity, as does beer. The yearly wine consumption per capita was in 2005 16.8 litres. These numbers include both domestic brands and imported brands. Spirits consumption is of course much lower (in 2005 the yearly consumption was 7.8 litres per capita). The numbers of beer consumption, wine consumption and spirit consumption cannot be compared together because of different alcohol content but create a picture of total alcohol consumption in the Czech Republic.

Graph 13 – Consumption of alcoholic beverages in the Czech Republic 1950 - 2005



Source:
(<http://www.czso.cz/csu/2008edicniplan.nsf/t/95003319B2/$File/301408_02c.xls> [cit. 2008-10-28];
<http://www.czso.cz/csu/2008edicniplan.nsf/t/9500354C5B/$File/301408_02d.xls > [cit. 2008-10-28])

In the world (for example USA or Australia) is no surprise seeing brewery and winery performing under the same name as one enterprise. In the Czech Republic is this not very common. More common are breweries producing non-alcoholic beverages (sodas or lemonades) as Starobrno brewery producing Zulu drinks or breweries with spirits distillery as Drinks Union – both breweries owned by Heineken Group.

4.4.4 Czech Republic in comparison

As mentioned the Czech Republic is the world's biggest beer consumer per capita. Other countries that are also famous for their beer are Ireland and Germany. These countries are really the second and third largest consumers counted on the inhabitants. What might be surprising is Austria as fourth largest consumer and Estonia right after that with almost 100 litres consumption per capita. In the following chart are counted top ten consumer countries per capita in the order of highest consumption in 2006. The numbers are completed with difference of the consumption between years 2003 – 2006. Countries as Estonia, which was in 2003 in the second ten of consumers, climbed within four years with more than 20 % increase to number five. Similar case is Lithuania. The biggest fall in beer consumption has with over 13 % Denmark. The fact that world largest beer producers as USA, China or Mexico do not take part in this table shows the ability to produce high volume (because of the size of the country) but these countries do not consume as much beer per capita.

Table 11 – Highest world beer consumption per capita countries 2003 - 2006

No.	Country	Consumption litre/inhabitant 2003	2004	2005	2006	Difference 2003 - 2006 ± hl	± %
1	Czech Rep.	160.9	159.0	158.7	161.0	0.1	0.06
2	Ireland	118.0	139.0	132.9	129.0	11.0	8.53
3	Germany	117.7	117.0	115.1	114.0	-3.7	-3.25
4	Austria	110.6	112.0	110.9	111.0	0.4	0.36
5	Estonia	77.2	83.0	93.5	97.0	19.8	20.41
6	UK	101.5	99.0	95.7	94.0	-7.5	-7.98
7	Lithuania	75.0	83.0	90.5	91.0	16.0	17.58
8	Belgium	96.0	94.0	90.9	90.0	-6.0	-6.67
9	Finland	80.2	87.0	87.5	88.0	7.8	8.86
10	Denmark	96.2	91.0	86.8	85.0	-11.2	-13.18

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007; own computations.

Another large beer producer and consumer the United Kingdom has also decreasing consumption (from 101.5 litres to 94 litres a year per capita).

The world beer production is enormous and in 2006 was made 1,699 million hectolitres of beer. Top ten beer producers make over 67 % of the world's beer. In the table of largest beer producers can be find countries with large country areas and population as China, Russia, USA, Brazil or Mexico but also countries as Japan, Germany or Spain.

Table 12 - Highest world beer producing countries 2003 - 2006

No.	Country	Barrelage in mil. hl 2003	2004	2005	2006	Difference 2003 - 2006 ± hl	± %
1	China	254.0	291.0	308.0	351.5	97.5	27.74
2	USA	232.2	233.3	232.7	231.8	-0.4	-0.17
3	Germany	106.3	106.2	105.8	107.2	0.9	0.84
4	Russia	73.2	85.2	85.0	99.9	26.7	26.73
5	Brazil	85.2	85.6	88.4	93.6	8.4	8.97
6	Mexico	66.4	68.5	63.0	78.2	11.8	15.09
7	Japan	65.0	65.5	64.2	63.0	-2.0	-3.17
8	UK	58.0	58.9	58.9	54.1	-3.9	-7.21
9	Spain	30.7	30.7	30.2	33.6	2.9	8.63
10	Poland	27.3	27.7	28.5	32.5	5.2	16.00
	Total	**998.3**	**1052.6**	**1064.7**	**1145.4**	**147.1**	**12.84**
	World	**1478.5**	**1552.1**	**1598.1**	**1699.0**	**220.5**	**12.98**

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007; own computations.

At number ten is Poland with fast increasing beer production. For comparison the total barrelage of the Czech Republic makes 19.8 million litres (data from 2007). The world is speeding up the production. While in 2004/2005 was the world increase in beer production almost 3 % in 2005/2006 was that 6.3 %. The largest share on those numbers has China. Chinese breweries increased from 2003 to 2006 their production almost by 100 million hectolitres. Another alike country is Russia which production increase is not as obvious in absolute numbers as from the 26.73 % increase in four years period.

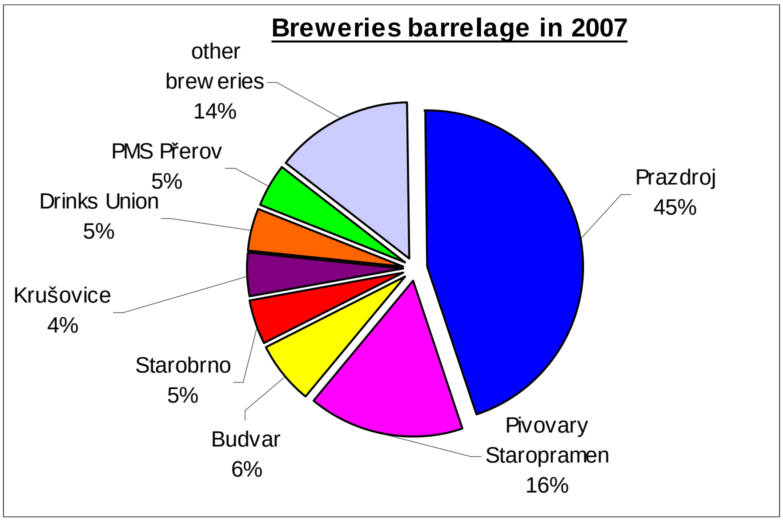
In the table of world largest importers and exporters again appeared the same countries as in the table of beer production and beer consumption. The largest exporter is the sixth largest producer Mexico with 19,239,000 hl of beer exported in 2006. Right after Mexico are Netherlands (17,741,000 hl), Germany (14.896,000 hl), Belgium (10,112,000 hl), the United Kingdom (5,277,000 hl), Denmark (4,389,000 hl) and Ireland (4,123,000 hl). Out of all countries has Great Britain the largest percentage increase of beer export. Within four years their export almost doubled. Other countries' export has also increasing trend with more than 20 % for each country. The Czech Republic is in world export at number nine with 3,536,000 hl of beer exported in 2006. The country's increase of export is fasting up with 38.93 % increase between 2003 and 2006.

The numbers for the whole world export are made of 80 % of the top ten countries while world import is made of 60 % of top ten countries. In 2006 was exported total of 107,718,000 hl of beer. United States of America (34,376,000 hl) that are one of the biggest beer producers are also importing leaders on the world market. Beer holds high popularity in the US but because of high population it does not show as high consumption per capita even though the export is not high either. Other importers but with much lower numbers are Great Britain (7,986,000 hl), Germany (6,429,000 hl) that increased beer import over year 2004/2005 by 40 %, France (5,954,000 hl), Italy (5,838,000 hl) and Netherlands (3,817,000 hl). Other heavy beer importing countries are Russia, Canada, Ireland or Belgium. The Czech Republic does not import as much as those countries because Czech beer brands are much more favoured within the country than imported brands. Also some Czech breweries have licence to produce foreign brands as Zlatý Bažant, Stella Artois or Hoegaarden.

4.4.5 Beer market shares

Czech beer market is as mentioned ruled by few larger breweries. Those are Plzeňský Prazdroj, Pivovary Staropramen, Budějovický Budvar, Starobrno, Krušovice, Drinks Union and PMS Přerov. The largest Czech beer producer is Plzeňský Prazdroj with total barrelage of 8,915,091 hl in 2007. Other breweries do not have as such capacity to brew this high amount. Plzeňský Prazdroj is holding almost 50 % share of the domestic market. Second largest beer producer is Pivovary Staropramen that are now owned by AB InBev (acquisition of America’s top beer producer Anheuser Busch by Belgium giant InBev) with barrelage of 3,207,440 hectolitres of beer. Third largest producer is Budějovický Budvar that is well known for long lawsuit with Anheuser Busch for Budweiser brand. The total barrelage made in 2007 1,235,048 hectolitres of beer. Those three breweries cover together 60 % of the market. Fourth largest brewery is Starobrno with 954,313 hectolitres in 2007 followed by PMS Přerov which barrelage is just 20,000 hl lower. Krušovice and Drinks Union follow. The look at the listing can be done from other view. Starobrno, Krušovice and Drinks Union are operating under Heineken Company. This is not a very common thing to not put the breweries under a common name. But the merge under Heineken Group name is expected soon. Together produced Heineken breweries in 2007 2,704,649 hectolitres of beer. This puts the breweries on notional third position right behind Pivovary Staropramen. The graph with detailed structure of the beer market follows.

Graph 14 – Czech breweries with the highest barrelage in 2007

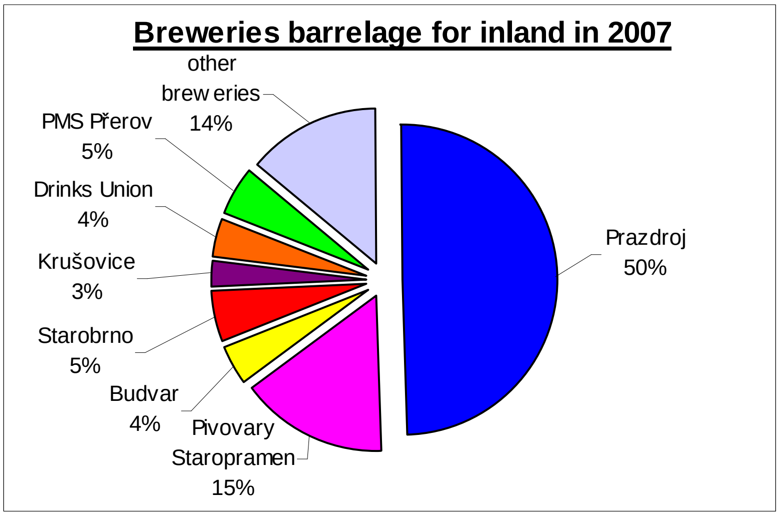


Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007.

Other Czech breweries (except seven mentioned) have just 14 % share on the total beer output. That is around the same amount that Heineken breweries produce. Over the last seven years the share of breweries (their share on the total barrelage) on the market did not change markedly. Only some breweries joined together as Prazdroj with Radegast and Velké Popovice or Starobrno with Hostan.

The share of barrelage sold in domestic market and not abroad has to be considered as the essential Czech beer market. There as mentioned some breweries are loosing their high status from the total barrelage list. Those are Budějovický Budvar and the Royal Brewery of Krušovice that distribute almost 50 % of their beer output abroad. Other breweries keep their export numbers from 30 % of total production (Drinks Union) to very low export around 8 % of barrelage (Starobrno, PMS Přerov). Very interesting is a fact that the world well known brand Pilsner Urquell owned by Plzeňský Prazdroj puts only 9.56 % of the barrelage to export. Still the absolute number of export (852,076 hectolitres) is the highest of all export numbers in the Czech Republic.

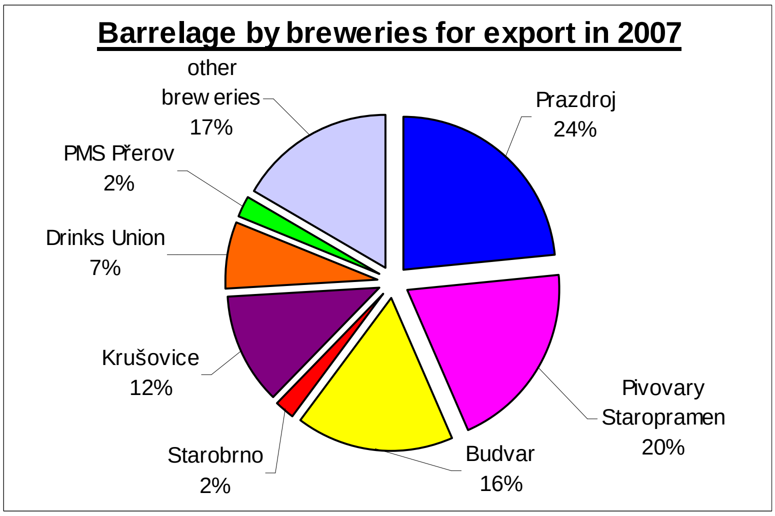
Graph 15 – Czech breweries with the highest barrelage for inland in 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007.

Czech beer export concentrates mainly to adjoining states of the Czech Republic. Those are Germany, Slovakia, Poland, Austria and other countries as Great Britain, United States of America, Hungary, Sweden or Russia. Breweries owned by foreign enterprises as Plzeňský Prazdroj, Pivovary Staropramen or Starobrno can export through those multinationals. Others as Budějovický Budvar that is a national enterprise or only Czechs owned PMS Přerov have to build their brand image abroad by themselves.

Graph 16 – Czech breweries with the highest barrelage for export in 2007



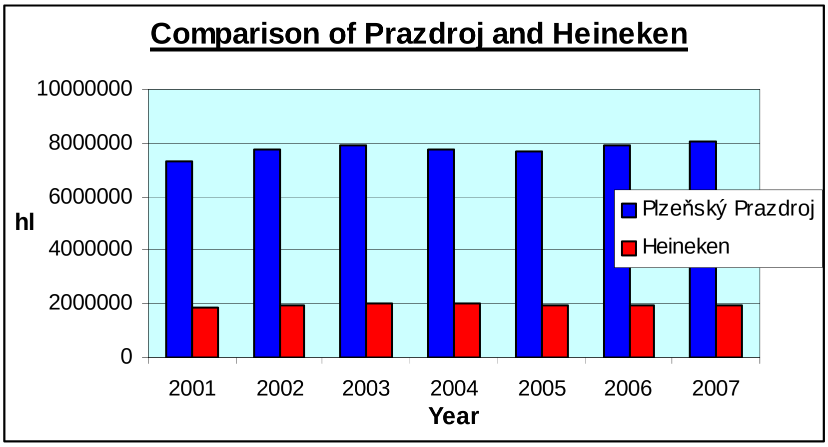
Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007.

Heineken breweries thanks to high export of the Royal Brewery of Krušovice and Drinks Union hold second exporting position out of all breweries. On the other hand it is obvious that Starobrno drag behind in export.

4.4.5.1 Plzeňský Prazdroj and Heineken

Plzeňský Prazdroj exports to more than 55 countries the total amount of 10.9 million hectolitres (almost nine million is produced in the Czech Republic). In 2007 the company earned 15.68 million CZK. The comparison with Heineken Group always comes up better for Prazdroj that holds number one position in all categories on the market. The comparison of inland share where Prazdroj owns 49.45 % (with over 8 million hectolitres of beer) and Heineken 11.9 % (1.95 million hectolitres of beer) is indicated below.

Graph 17 – Comparison of Plzeňský Prazdroj and Heineken breweries' inland barrelage in 2001 - 2007



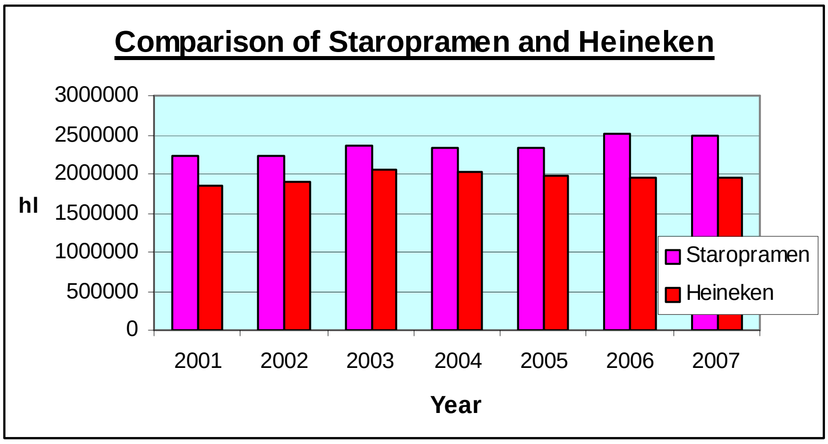
Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 – 2007; own computations.

Key brand for Prazdroj within the country is Gambrinus. This brand is distributed all over the country and holds great popularity among consumers. The Gambrinus brand makes 47.5 % of total barrelage of Prazdroj. Another well selling brand is Pilsner Urquell that has 20 per cent share of total Plzeňský Prazdroj output. Pilsner Urquell brand is more intended for export where is a flagship of SABMiller Company.

4.4.5.2 *Pivovary Staropramen and Heineken*

Much more meaningful is to compare Heineken breweries (or Starobrno) with Pivovary Staropramen. AB InBev as the largest beverage enterprise in the world owns second largest Czech brewing company which brewed in 2007 2,491,234 hectolitres just for inland. Pivovary Staropramen puts quite large share of total barrelage for export, approximately 22 %. With these numbers is Staropramen Company probably the biggest competitor of Heineken on the beer market. Even though the Czech beer market is stable the only brewing company that was changing proportions in last few years was Heineken. (In 2007 acquisition of Krušovice and in 2008 acquisition of Drinks Union, which means numbers of Heineken from 2007 should be lowered by Drinks Union performance and just a year before would Starobrno stand alone. For better review it is counted with Heineken Group together since 2001.) Lately because of juncture of Anheuser Busch and InBev controversy shows possible sale of Pivovary Staropramen by AB InBev. It would probably be a good step for Heineken if the company still wants to enlarge its share on the Czech beer market.

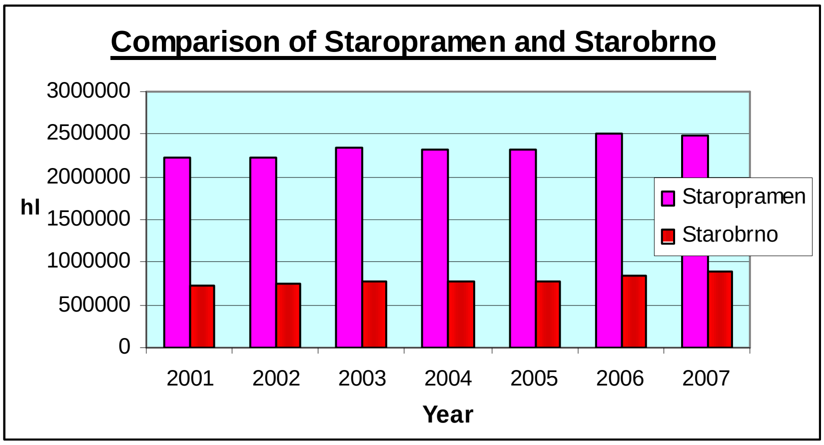
Graph 18 – Comparison of Pivovary Staropramen and Heineken breweries' inland barrelage in 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 – 2007; own computations.

Both breweries have quite stable beer production. While Pivovary Staropramen holds (in 2007) 15.28 % of the domestic market Heineken breweries hold almost 12 %. Pivovary Staropramen keeps increasing trend in production in all observed years. Key brand is Staropramen (52 % of barrelage) and with almost 30 % Braník brand. Heineken lowered its production between 2004 and 2005. This fact is caused by fast increase of Krušovice's export since 2004 and little decreasing trend of beer production by Drinks Union. On the other hand in 2004 Starobrno was the only Czech brewery owned by Heineken so the numbers are abstract. When excluding Krušovice and Drinks Union and comparing just Starobrno with Pivovary Staropramen the graph looks differently. Starobrno's share on the domestic market still makes third position as the whole Heineken but with substantially lower percentage (5.39 % of the domestic market).

Graph 19 – Comparison of Pivovary Staropramen and Starobrno inland barrelage in 2001 - 2007



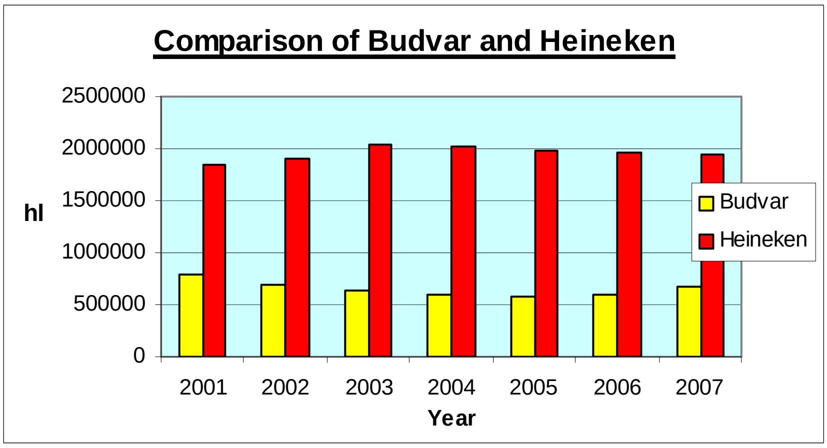
Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

The graph shows that the inland production of Pivovary Staropramen is three times higher than the inland production of Starobrno. From a different point of view we can say Pivovary Staropramen and Starobrno are very similar. Staropramen is situated in Prague and has similar position as Starobrno has in the city of Brno. Starobrno's lagers are much favoured in the surroundings of Brno as lagers of Staropramen are favoured in Prague. Difference between those, when not taking into account the amount of barrelage, are beer specials and premium beers. Starobrno produces premium beers as Baron Trenck and Červený Drak (Red Dragon) that contain herbs that give this beer special colour. Also on feasts Starobrno makes special green beer (Easter beer). Staropramen specializes on lager beer and practically all premium beers are made under a licence or are imported (Hoegaarden, Leffe and Belle Vue Kriek).

4.4.5.3 Budějovický Budvar and Heineken

Third largest beer producer is Budějovický Budvar whose inland production makes only 53 % of the whole output. The beer has a great name in the Czech Republic but usually is not seen in pubs and restaurants as tapped beer. On the other hand it is easy to find it bottled in supermarkets in other European countries. Comparison with all Heineken breweries in last seven years is in the graph below.

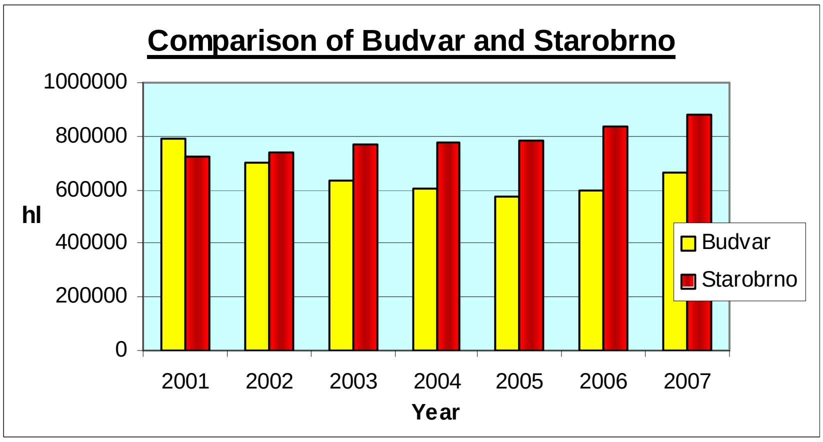
Graph 20 – Comparison of Budějovický Budvar and Heineken breweries' inland barrelage in 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 – 2007; own computations.

In 2001 was the inland production of Budějovický Budvar close to 800,000 hectolitres (60 % of total company's production). Then Budvar increased the export numbers and also dropped the total production from 1.3 million to million hectolitres in 2005. Since 2005 has the total beer barrelage of Budvar increased as well as the production targeted to the Czech Republic. Budějovický Budvar even reported that in 2008 increased its beer output by 4.5 % to 1,312,580 hectolitres and inland consumption of Budějovický Budvar reportedly increased by 9.7 % (with only 1 per cent decrease in export). Starobrno is from 2001 continually increasing its barrelage with only one stop in 2005. In that year the consumption per capita in the Czech Republic decreased by almost 3 litres. But the barrelage for inland stays growing with almost 6 % increase of inland consumption of Starobrno brands in last two years.

Graph 21 – Comparison of Budějovický Budvar and Starobrno inland barrelage in 2001 - 2007



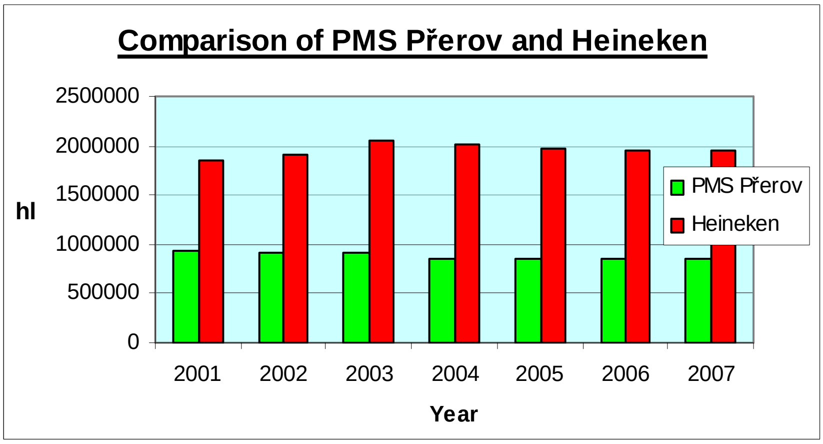
Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

The graph confirms third position in inland consumption for Budějovický Budvar in 2001. A year later the difference between Starobrno and Budějovický Budvar makes only 40,000 hectolitres. Even though Budvar lost in 2002 its position on the home market it kept the total barrelage higher (significantly higher export) until these days.

4.4.5.4 PMS Přerov and Heineken

The last key competitor of Starobrno is PMS Přerov. PMS Přerov has three breweries close to each other producing brands as Zubr (brewery in Přerov), Holba (brewery in Hanušovice – produces highest amount of beer of all PMS breweries) and Litovel (in Litovel). Not only competing for consumers, those rivals compete in Moravian region and its position on Moravian market. The barrelage of PMS Přerov moves between 916 and 965 thousands of hectolitres. There is no particular trend either in inland consumption or export of PMS brands. The comparison of inland production in last seven years of Heineken breweries and PMS Přerov is in the graph.

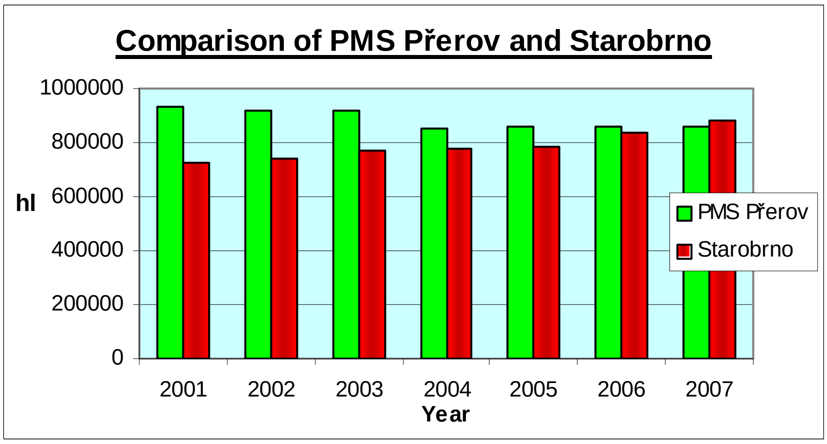
Graph 22 – Comparison of PMS Přerov and Heineken breweries' inland barrelage in 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 – 2007; own computations.

The inland numbers of PMS Přerov are half of Heineken's. Heineken Group has only two rivals on the domestic market (Plzeňský Prazdroj and Pivovary Staropramen) that are both from Bohemia. In Moravia are two leading breweries PMS Přerov and Starobrno. Those two breweries are very similar in both beer production and the amount of export. For a long time had PMS Přerov larger output. Because of slight decrease (mainly in 2005 and 2006) and increase in production of Starobrno the last view came up better for Starobrno.

Graph 23 – Comparison of PMS Přerov and Starobrno inland barrelage in 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

With decrease of beer consumption in 2008 in the Czech Republic is probable that Starobrno will produce the same or even higher amount of beer in upcoming years but PMS Přerov's output will more likely decrease.

As already mentioned PMS Přerov and Starobrno export about the same amount of beer abroad. In graph 16 both breweries take 2 % share of the total Czech export. In absolute numbers are obviously both breweries very similar and that's why is PMS Přerov the chief competitor of Starobrno when not talking about Heineken Group).

4.4.6 Classification of beer

Beer market can be divided not only by breweries, their size, their barrelage or export but also by assortment classification. The simplest classification is according to colour of the beer to pale, dark or semi-dark and mixed beer. Second is according to type of the beer to lager beer, premium beer, draught beer, light beer, low-sugar beer, non-alcoholic beer, flavoured beer and top fermented beer. Third one is according to packaging in which is the beer distributed.

4.4.6.1 Packaging

Barrelage by packaging come up to trends where the beer is drank. Usually in pubs, restaurants or other places where is served draught beer – barrels or tanks. Very easy to buy in supermarkets or even in restaurants is bottled beer. Those two types of packing make almost 95 % of all packing types. In the Czech Republic is not very common to buy beer in cans (as for example in the USA where cans are very common). Bottles are returnable and can be filled again. Cans do not offer this and as an essential point canned beer is more expensive than for example bottled beer. Most often are cans used when travelling because of saving space, low weight (in comparison with bottles) and because cans are break resistant.

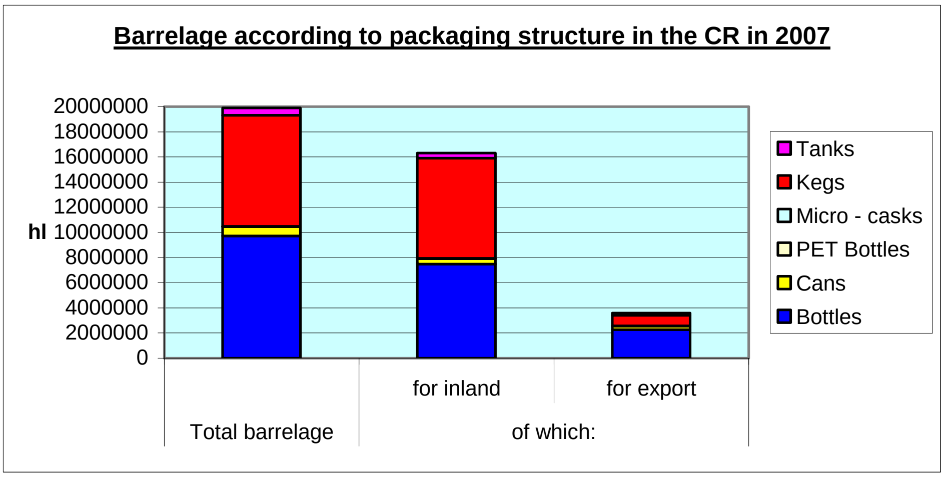
Table 13 – Assortment classification according to packing structure in CR in 2007

Packaging structure	Total barrelage		of which: for inland		for export	
	hl	% of total output in CR	hl	% of total output of CR	hl	% of total output of CR
Bottles	9732087	48.91	7478583	76.84	2253504	23.16
Cans	724547	3.64	425735	58.76	298812	41.24
PET Bottles	32858	0.17	23275	70.84	9583	29.16
Mini - barrels	2645	0.01	1935	73.16	710	26.84
Barrels	8824219	44.35	7977703	90.41	846516	9.59
Tanks	580975	2.92	398297	68.56	182678	31.44
Total	**19897331**	**100.00**	**16305528**	**81.95**	**3591803**	**18.05**

Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007; own computations.

Beer is sold in cans only from 3.6 % of the total beer output of the Czech Republic. On the other hand is canned beer the leading packing for export. Mini barrels are starting a big boom with new small cooling equipment that is sold by various producers. Those are 5 litres barrels that can be refilled again. The same situation occurs with PET bottled beer because there are just few breweries selling beer in PET bottles (e.g. Drinks Union, PMS Přerov or Pivovar Nová Paka). The share of packing of total numbers for import and export show the similar trend. Bottles and barrels are the most used packaging for Czech beer.

Graph 24 – Barrelage according to packaging in the Czech Republic in 2007



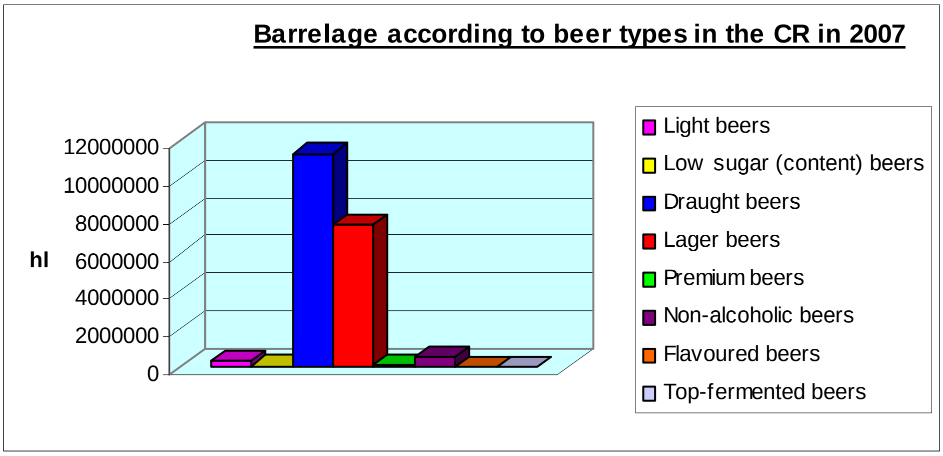
Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007.

Plzeňský Prazdroj fills 45 % (4,021,270 hl) of its barrelage into bottles and almost the same amount into kegs. Cans and tanks are used as packing only by 3 or percent. This fact evidences the total numbers of the Czech Republic. Staropramen, Budvar and Drinks Union use bottled beer for 55 % of their barrelage. The only exception is Starobrno that fill beer more into kegs (59 % of their barrelage) than into bottles. On the Czech beer market is the most favourable canned beer from Plzeňský Prazdroj, Pivovary Staropramen, Budějovický Budvar and PMS Přerov.

4.4.6.2 Original gravity

Table of assortment classification by beer types leads draught beer (57 % of total Czech barrelage) and second lager beer (38 % of total Czech barrelage). Other beer kinds do not have as long tradition and is not that common to Czech consumers.

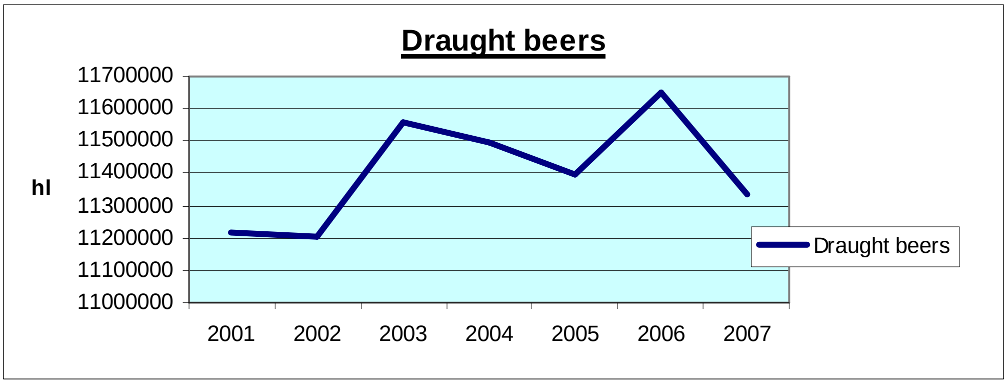
Graph 25 - Barrelage according to type structure in the Czech Republic in 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Survey 2007.

Plzeňský Prazdroj and Pivovary Staropramen have similar share of their barrelage in draught, lager and premium beers. Draught beer is produced by 63 percent (5,655,186 hectolitres) by Plzeňský Prazdroj and 66 percent (2,104,795 hectolitres) by Pivovary Staropramen. While Budějovický Budvar and Drinks Union specialize more on lager beer (62 % of their barrelage). The trend of draught beer production is not very stable. In 2006 hit the production maximum of 11,650,501 hectolitres. In 2007 dropped the production by 317 thousand hectolitres in the Czech Republic. Graph 26 shows the trend of draught beer production.

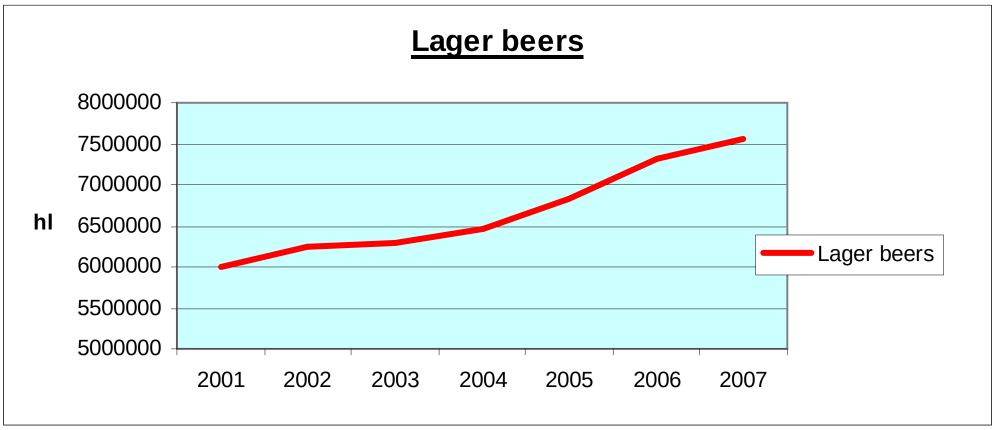
Graph 26 – Barrelage of draught beers in the Czech Republic 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

Lagers make smaller part of the Czech barrelage but with continual grow by 3 per cent over year. Budvar and Drinks Union are not the only breweries that produce more lagers than draught beer. For example Pivovar Svijany specialize three quarters of total production on lagers. Another alike brewery is brewery in Pardubice or Lobkowiczký, which lagers made up almost 95 % of its total barrelage. The only difference between draught and lager beer is the percentage share of fermentable extract in hopped wort.

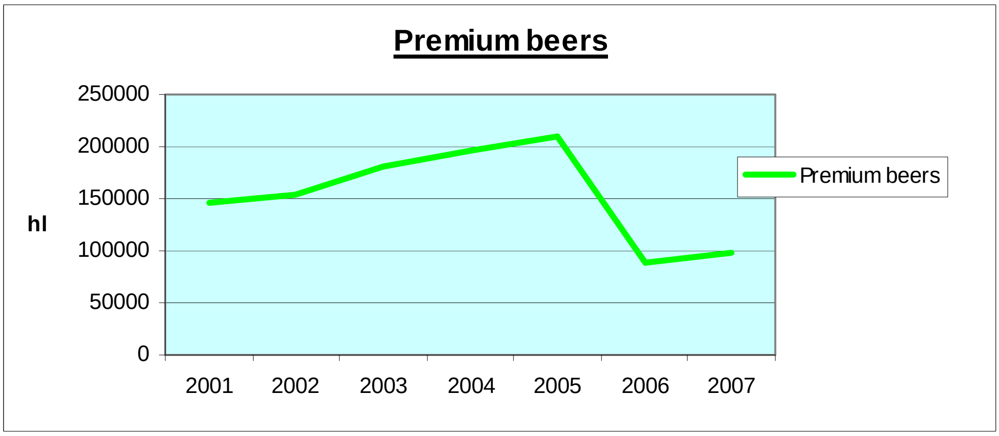
Graph 27 – Barrelage of lager beers in the Czech Republic 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

Premium beers are not very popular among consumers in the Czech Republic. Brewery with largest premium beer production is Pivovar Svijany (18,305 hectolitres) that has ninth highest amount of total beer output. From top seven breweries Starobrno is number one in premium beers production. Starobrno's premium beers make only 0.89 % (8,477 hectolitres) of their total barrelage but other breweries' premium beer production is lower than 0.2 % of their total barrelage. Premium beer market can be aimed at new customers as young people or women who are seeking for different tastes and looks of beer. It is a market that might gain focus in next few years. Almost 24 % of the total production of premium beers in exported abroad.

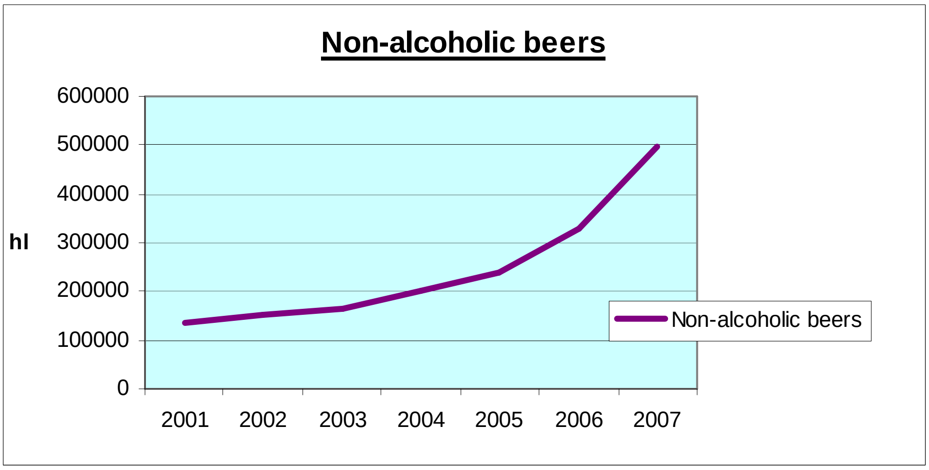
Graph 28 – Barrelage of premium beers in the Czech Republic 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

Probably the last category that is worth mentioning is non-alcoholic beer because many drivers want to have a beer after lunch or in the evening. The consumption of non-alcoholic beers increased from 2001 to 2007 more than three times. Breweries are now competing in this quite new market with beer without alcohol.

Graph 29 – Barrelage of non-alcoholic beers in the Czech Republic 2001 - 2007



Source: Research Institute of Brewing and Malting, Praha. Statistical Surveys 2001 - 2007.

Leading brewery is Plzeňský Prazdroj with over 318 thousand hectolitres of non-alcoholic beer – that makes 3.5 % of total barrelage. Plzeňský Prazdroj supplies the market with favourite brand Radegast Birell. Second brewery which beer is made free of alcohol in higher amount is Pivovary Staropramen (only 1.4 % of total beer production). Pivovary Staropramen offer Staropramen brand and Stella Artois. Starobrno does not focus on non-alcoholic beer but Heineken brands as Heineken N.A. or Slovakian Zlatý Bažant are part of the family. To keep up with demand Starobrno produces non-alcoholic Fríí beer.

5 Financial analysis of a chosen brewery

Financial analysis is a method that evaluates company's performance. It is a tool that creates a view of both financial and economic position of a company. Next to production, marketing or personal is financial aspect key indicator of each firm. Financial analysis does not only highlight strengths but also shows mistakes that might occur in business. There are two basic and one additional source of the analysis:

- ❖ Balance sheet - provides a snapshot of business activities at a point in a time, usually at the end of the trading period. It is divided into two parts: assets and liabilities and equity.
  - o Assets are listed by their liquidity (time period after which they turn into cash):
    - Fixed assets consist of tangible fixed assets as land, buildings, machinery, equipment, vehicles or investments into associations and intangible fixed assets are for example software, goodwill, intangible R&D, copyrights etc.
    - Current assets represent inventories (raw material, finished products, goods, work in progress), long-term receivables, short-term receivables, current financial assets (cash and bank accounts) and other items as prepaid expenses and other payments.
  - o Total liabilities and equity
    - Equity consist of funds owned by shareholders (subscribed capital, capital reserves, own shares and interest, profit funds or retained earnings)
    - Liabilities include provisions, short-term and long-term liabilities, bank loans and borrowings and accruals.

- ❖ Income statement (Profit and loss account) - is company's financial statement showing performance of the company (flows of revenues and expenses – profits and losses) during a time period, usually one year.

- Revenues represent sales of goods, products and services.
- Expenses are the sum of personnel expenses, direct costs, fees and taxes, long-term asset depreciation, operating and extraordinary expenses.
- Profit / loss of the operating period

- Cash flow statement reflects the movement of company's cash in a time period.
  - Cash flow from operating activities
  - Cash flow from investing activities
  - Cash flow from financing activities

5.1 Financial ratios

5.1.1 Profit measures

Profit or loss is the key indicator of business activities. Profit can be also viewed as profit before tax, profit from only operating activities, profit from financial activities or profit from extraordinary activities. Operating profit of Starobrno made in last three years great growth. Over the last year raised also financial profit mainly because of the increase of interest income by four times. Extraordinary activities do not take part in Starobrno business.

Table 14 - Profit measures in 2005 – 2007 of Starobrno, a.s. (in thousands)

	2005	2006	2007
Profit / loss from operating activities	149101	151466	182916
Profit / loss from financial activities	988	855	3640
Extraordinary profit / loss	0	0	0
Profit / loss before tax	150087	152321	186556
Profit / loss	105667	107087	138539

Source: Starobrno, a.s. Annual Report 2005 – 2007.

5.1.2 Profitability ratios

Profitability is the ability to earn income and to value company's capital. Key factors are return on equity (ROE), return on assets (ROA), return on capital employed (ROCE), return on sales (ROS) and gross margin. All profitability ratios are presented in percents and practically the higher ratio the better.

Table 15 - Profitability ratios in percents in 2005 – 2007 of Starobrno, a.s.

Profitability	2005	2006	2007
ROE	10.69	10.74	13.36
ROCE	10.44	10.53	13.15
ROA	8.31	8.06	9.76
ROS	9.06	8.53	9.90
Gross profit margin	37.03	38.34	36.11

Source: Starobrno, a.s. Annual Report 2005 – 2007; own computations.

Return on equity measures the income earned by stockholders' investments. In 2007 is the increase of ROE ratio caused by increase of profit. Return on assets measures the ability of assets to create profit. Values of Starobrno vary from 8 to almost 10 %. ROA results have preferable value between 9 – 14 %. Starobrno is since 2007 in this range. Return on sales indicates how much profit is earned by 1 CZK of sales. Gross Profit Margin indicates the relationship between net sales and the cost of goods sold. All these ratios are showing good numbers and increasing trend. Business is performing without problems and creates still higher profit.

5.1.3 Liquidity ratios

Another ratios used in financial analysis are liquidity ratios that measure the ability of assets to turn into cash. We measure immediate ratio, which is counted from short-term financial assets (cash and bank accounts) to short-term liabilities. The ratio represents the ability of enterprise to cover its immediate needs. Value should be around 0.2 – 0.6. Quick ratio or acid test compares short-term claims and financial assets to short-term liabilities. This ratio should have value between 1 – 1.5. In this case 1 CZK of liability is covered by 1.03 CZK of quick assets. Current ratio is higher than quick ratio because of using all short-term assets to cover short-term liabilities. Current ratio evidence how is the enterprise able to cover its short-term liabilities by current assets. The value should be around 2 – 2.5. Starobrno results are in this case very low.

Table 16 - Liquidity ratios in 2005 – 2007 of Starobrno, a.s.

Liquidity	2005	2006	2007
Immediate Ratio	0.45	0.58	0.63
Quick Ratio	0.96	1.07	1.03
Current Ratio	1.27	1.34	1.27

Source: Starobrno, a.s. Annual Report 2005 – 2007; own computations.

5.1.4 Leverage ratios

Leverage ratios show the usage of foreign capital in company's business activities. Debt ratio for example shows company's ability to cover its debts by assets without risking the creditors' interest. Numbers of total indebtedness are not high which indicates low insolvency according to company's assets. High values signify dependence of the enterprise on foreign assets and the enterprise is then more vulnerable. World average value is between 30 – 60 %. Starobrno is not much dependant on foreign assets. Rate of self-financing on the other hand shows how total assets cover own capital. Starobrno can cover its equity by 75 %. Debt to equity ratio creates picture of how well are creditors protected in case of business insolvency. This ratio shows slow increase and good numbers.

Table 17 - Leverage ratios in 2005 – 2007 of Starobrno, a.s.

Leverage ratios	2005	2006	2007
Debt ratio	1.00	1.00	1.00
Total Indebtedness	0.22	0.25	0.27
Rate of self financing	0.78	0.75	0.73
Debt to equity ratio	1.29	1.33	1.37

Source: Starobrno, a.s. Annual Report 2005 – 2007; own computations.

5.1.5 Activity ratios

Last important ratios that crate picture of company's financial performance are activity or efficiency ratios. Turnover ratios indicate the business' ability to generate sales through the use of specific asset. This is counted of total assets, inventory, account receivables and even account payables. For example inventory turnover is very low with 15 to 17 days and total assets turnover is close to one (showing less sales value than the average value of assets). The days' sales in specific asset ratio (receivables, payables) indicate the time that assets are outstanding. It helps to find out whether the change in account receivables is due to sales change or if it is caused by some other factor. DSO ratio should be around 35 days and Starobrno fulfil this requirement. Account payables outstanding inform how well is the company handling suppliers' obligations.

Table 18 - Activity ratios in 2005 – 2007 of Starobrno, a.s.

Activity ratios	2005	2006	2007
Assets turnover	0.92	0.94	0.99
Inventory turnover	15.60	15.97	17.37
Days inventory (DSI)	23.40	22.85	21.02
Account receivables turnover	9.31	8.67	9.73
DSO ratio (days receivables outstanding)	39.20	42.08	37.52
Account payables turnover	4.37	4.03	3.80
Days payables outstanding	83.55	90.60	96.05

Source: Starobrno, a.s. Annual Report 2005 – 2007; own computations.

5.2 Horizontal financial statement analysis

Horizontal analysis is also called comparative analysis. "It is conducted by setting consecutive balance sheet, income statement or statement of cash flow side-by-side and reviewing changes in individual categories on a year-to-year or multiyear basis. The most important item revealed by comparative financial statement analysis is trend." (<http://cbdd.wsu.edu/kewlcontent/cdoutput/tr505r/page37.htm> [cit. 2009-02-22])
Each calculated item is shown as a percentage.

Table 19 - Horizontal analysis of Starobrno assets – trends in 2004 - 2007

	Δ 2004 / 2005 (%)	Δ 2005 / 2006 (%)	Δ 2006 / 2007 (%)
TOTAL ASSETS	-2.89	4.50	6.81
Fixed assets	1.17	-2.79	1.49
Intangible assets	-19.40	-31.28	-25.47
Tangible fixed assets	1.45	-2.48	1.69
Financial assets	-100.00	0.00	0.00
Current assets	-8.58	26.36	14.12
Inventories	-17.29	5.10	2.52
Long-term receivables	-53.28	71.20	112.93
Short-term receivables	16.94	15.02	-2.13
Current financial assets	-21.56	53.25	32.22
Other assets	-8.03	-1.59	12.30

Source: Starobrno. Annual Report 2005 – 2007; own computations.

The horizontal analysis of assets represents the over year changes in assets. Total assets are increasing yearly since 2005 by 4.5 % and a year later already by 6.8 %. Intangible fixed assets have decreasing trend while financial fixed assets are stable. Current assets are of course more in cycle so the changes are more obvious. Since 2005 are all types of current assets growing. Long-term receivables even doubled between 2006 and 2007. Long-term receivables and current financial assets are the most changing items from all assets. Decrease of short-term receivables in 2007 is caused by a decrease in advance payments made for services and packaging. In the same year inventories noted little increase because of rising prices of ingredients.

Table 20 - Horizontal analysis of Starobrno liabilities – trends in 2004 - 2007

	Δ 2004 / 2005 (%)	**Δ 2005 / 2006 (%)**	**Δ 2006 / 2007 (%)**
TOTAL LIABILITIES and EQUITY	-2.89	4.50	6.81
Equity	*-0.82*	*0.86*	*4.00*
Subscribed capital	0.00	0.00	0.00
Capital funds (reserves)	0.00	0.00	0.00
Profit funds	13.82	10.53	9.66
Retained earnings	2.65	2.39	4.11
Profit of current acc. period	-13.24	1.34	29.37
Liabilities	*-9.26*	*17.22*	*15.24*
Reserves	-40.92	25.82	-29.04
Long-term liabilities	50.65	-13.06	-16.24
Short-term liabilities	-9.47	19.55	20.57
Other liabilities	*-95.15*	*-100.00*	*100.00*

Source: Starobrno. Annual Report 2005 – 2007; own computations.

Change of liabilities and equity is the same as the change of assets. Capital subscribed (759 million CZK) and capital funds (5,000 CZK) stayed during observed time period without change. Equity of Starobrno in 2007 increased because of increase in statutory reserve fund and from better performance during the accounting period. Profit of current accounting period decreased in 2004/2005 by 13.24 % but in following periods is as mentioned improving. In all results are noticeable little problems in the year 2005. It was due to changing Starobrno's management and decrease in sales. Long-term liabilities are showing decreasing trend while short-term liabilities are showing increasing trend. Calculations are in table 20.

Table 21 - Horizontal analysis of Starobrno expenditures – trends in 2004 - 2007

	Δ 2004 / 2005 (%)	**Δ 2005 / 2006 (%)**	**Δ 2006 / 2007 (%)**
TOTAL EXPENDITURES	*3.92*	*8.70*	*8.24*
Costs of goods sold	-4.35	1.67	6.62
Consumption from production	2.81	7.33	17.00
- Consumption of material and energy	-4.81	8.41	9.86
- Services	9.89	6.45	22.86
Personnel expenses	8.37	5.16	5.37
- Wages and salaries	7.78	5.85	4.56
- Social security and health insurance costs	7.85	3.20	10.01
- Other social costs	65.56	5.19	-33.21
Taxes and fees	39.89	164.60	-43.61
Depreciation and amortization	4.29	2.97	-5.23
Net book value of fixed assets and material sold	13.37	207.16	-82.21
Other operating expenses	54.34	73.25	-24.85
Other financial expenses	28.18	-40.32	47.64

Source: Starobrno. Annual Report 2005 – 2007; own computations.

Total expenditures are overall showing increasing trend. Operating expenses raised from 606 million in 2004 to 783 million in 2007. Highest growth is amounted in 2007 from 669 million to 783 million. Personnel costs are increasing yearly by at least 5 percent, which is primarily a result of salary increments. Depreciation of long-term assets showed yearly decrease but in 2007 decreased from 130 million to 123 million. That constitutes decline by 5.24 %. Very unstable results are observed in net book value of fixed assets and material sold.

Table 22 - Horizontal analysis of Starobrno revenues – trends in 2004 - 2007

	Δ 2004 / 2005 (%)	Δ 2005 / 2006 (%)	Δ 2006 / 2007 (%)
TOTAL REVENUES	*3.62*	*7.24*	*11.02*
Sales of goods	2.91	-5.22	10.98
Output	2.03	10.36	11.58
- Product and service revenues	2.55	9.52	11.52
- Difference in own produced stock	-1744.78	103.05	781.44
- Own work capitalised	0.00	100.00	-12.83
Proceeds from fixed assets and material	60.74	44.04	-35.87
Other operating revenues	109.85	-55.00	34.97
Other financial revenues	-16.10	-54.63	74.07

Source: Starobrno. Annual Report 2005 – 2007; own computations.

Horizontal analysis of total revenues describes continual rising trend. Output increase almost copies the trend of total revenues. Different is the trend of output items, particularly difference in own stock produced and own work capitalised. Both these amounts show fluctuant trend.

5.3 Vertical financial statement analysis

Vertical analysis, also called cross-sectional analysis, shows items of balance sheet, income statement or statement of cash flow as a percentage of another objects, usually superior ones.

Table 23 - Vertical analysis of Starobrno assets in 2005 - 2007

	2005	2006	2007
TOTAL ASSETS	*100.00*	*100.00*	*100.00*
Fixed assets	*59.86*	*55.69*	*52.91*
Intangible assets	0.64	0.42	0.29
Tangible fixed assets	59.22	55.26	52.62
Financial assets	0.00	0.00	0.00
Current assets	*24.36*	*29.46*	*31.47*
Inventories	5.88	5.91	5.68
Long-term receivables	0.09	0.14	0.29
Short-term receivables	9.77	10.75	9.85
Current financial assets	8.63	12.65	15.66
Other assets	*15.77*	*14.86*	*15.62*

Source: Starobrno. Annual Report 2005 – 2007; own computations.

Total assets are compound mainly of fixed assets even though the share is decreasing with growing share of current assets on total assets. Also the share of current financial assets on total assets is increasing. Those are money in cash and bank accounts.

Table 24 - Vertical analysis of Starobrno liabilities in 2005 - 2007

	2005	2006	2007
TOTAL LIABILITIES and EQUITY	*100.00*	*100.00*	*100.00*
Equity	*77.71*	*75.00*	*73.03*
Subscribed capital	59.64	57.07	53.43
Capital funds (reserves)	0.00	0.00	0.00
Profit funds	3.94	4.17	4.28
Retained earnings	5.82	5.70	5.56
Profit of current acc. period	8.31	8.06	9.76
Liabilities	*22.29*	*25.00*	*26.97*
Reserves	1.29	1.55	1.03
Long-term liabilities	1.84	1.53	1.20
Short-term liabilities	19.16	21.92	24.74
Other liabilities	*0.00*	*0.00*	*0.00*

Source: Starobrno. Annual Report 2005 – 2007; own computations.

Liabilities are represented from more than 70 % by shareholders' equity where essential share has capital subscribed (total of 785,599,000 CZK). Growing share on total liabilities have short-term liabilities that are made of trade payables, payables to partners, cooperative member and participant in association, payables to employees, payables to social security and health insurance, tax payables and subsidies, short-term advances received, estimated accrued items and other payables.

Table 25 - Vertical analysis of Starobrno expenditures in 2005 - 2007

	2005	2006	2007
TOTAL EXPENDITURES	*100.00*	*100.00*	*100.00*
Costs of goods sold	10.07	9.42	9.28
Consumption from production	59.16	58.41	63.13
- Consumption of material and energy	26.39	26.32	26.71
- Services	32.77	32.09	36.43
Personnel expenses	15.52	15.02	14.62
- Wages and salaries	11.28	10.99	10.61
- Social security and health insurance costs	4.01	3.80	3.87
- Other social costs	0.24	0.23	0.14
Taxes and fees	0.22	0.55	0.28
Depreciation and amortization	11.94	11.31	9.90
Net book value of fixed assets and materials	0.72	2.03	0.33
Other operating costs	1.88	3.00	2.09
Other financial costs	0.49	0.27	0.36

Source: Starobrno. Annual Report 2005 – 2007; own computations

Percentage share of total expenditures is drawn out in table. Direct costs (consumption of production) cover highest share of expenditures in the profit and loss statement. Wages and salaries as well as depreciation and amortization of long-term tangible and intangible assets participate on total expenditures with similar share of 10 percent. When comparing values in time no changes are observed in the shares of expenditures.

Table 26 - Vertical analysis of Starobrno revenues in 2005 - 2007

	2005	2006	2007
TOTAL REVENUES	*100.00*	*100.00*	*100.00*
Sales of goods	12.50	11.04	11.04
Output	83.81	86.25	86.68
- Product and service revenues	84.27	86.06	86.44
- Difference in own produced stock	-0.45	0.01	0.10
- Own work capitalised	0.00	0.18	0.14
Proceeds from fixed assets and material	1.26	1.69	0.97
Other operating revenues	2.05	0.86	1.04
Other financial revenues	0.39	0.16	0.26

Source: Starobrno. Annual Report 2005 – 2007; own computations

Vertical analysis of total revenues indicates no turns in composition of revenues between 2005 and 2007. Total revenues are formed of sales of goods, products and services. Product and service revenues in 2007 were estimated to 1,241,110,000 CZK.

5.4 Financial performance of Starobrno

Overall Starobrno performance in 2007 improved. Long-term assets grew by 11 million to 751 million CZK. The total fixed assets had a 53 % share on total assets and the coverage of fixed assets by equity capital increased from 135 to 138 percent. At the same time stock grew from CZK 79 million to CZK 81 million (by 2.5 %). This increase is caused primarily by rise of ingredients’ prises. Trade receivables including advance payments decreased by 1.4 % as a result of a decrease in advance payments for services and packing. The shareholders’ equity increased by 40 million CZK as a result of an increase of statutory reserve fund and improving Starobrno performance. Starobrno does not have any bank loans during monitored period.

Domestic beer sales improved over the year by 5.5 %. Highest percentage increase in sales has Heineken brand from 11,000 to 18,000 hl (over 60 %). Starobrno brand stays the key brand with highest sales. There is a slight decrease in the sales of Hostan brand on the domestic market.

Table 27 - Sales of Starobrno brands in 2002 - 2007 in thousand hl

	2002	2003	2004	2005	2006	2007
Starobrno - domestic market	530	552	529	517	543	580
Starobrno - export	36	47	50	39	54	74
Hostan - domestic market	203	208	202	193	190	185
Hostan - export	5	2	3	2	1	1
Zlatý Bažant - domestic market	0	0	79	93	103	113
Heineken - domestic market	0	0	1	7	11	18
Beer - other	12	12	14	13	12	10
Zulu	0	0	0	7	27	37
Non-alcoholic and other beverages	116	123	103	92	99	95
Total	**902**	**944**	**981**	**963**	**1,040**	**1,113**

Source: Starobrno, a.s. Annual Report 2005 – 2007; own computations

On the other hand Zulu drinks that are sold in kegs and being tapped in restaurant and pubs have improving upward trend. The increase makes 36 % from 2006. In 2007 in comparison with 2006 proceeds from all beverage sales in the domestic market rose by 9.6 % to 1,411 billion CZK. In over year comparison export grew by 36 % (proceeds by 16 million CZK).

6 Conclusion

Czech brewing industry has a long tradition and the taste of beer represent a worldwide phenomenon. However Czech Republic holds world primacy in beer consumption per capita the consumption of Czechs has a decreasing trend. Beer consumption per capita (158.8 hl) is quite stable but that is a result of increasing number of foreign visiting consumers. It is believed more than 10 % of domestic beer consumption is consumed by foreigners.

The very present numbers of 2008 show the total output of Czech breweries slightly decreased to 19,806,107 hl and cover 99.5 % of production in 2007. Still this result is second best in Czech brewing history. Domestic consumption declined by 2 percent and export raised by 3 percent.

Seven essential players control about 85 percent of the Czech beer market. Those are Plzeňský Prazdroj, Pivovary Staropramen, Budějovický Budvar, Starobrno, PMS Přerov, Drinks Union and Krušovice. Foreign multinational corporations SABMiller, AB InBev and Heineken own three of those brewery groups. Plzeňský Prazdroj is the leader owning almost half of the market share. Pivovary Staropramen participates with 15 %, Heineken with 12 %, PMS Přerov with 5 % and Budějovický Budvar with 4 % share of the domestic market. Heineken with seven breweries interconnected since 2008 (Starobrno, Krušovice and Drinks Union) holds third position on the market. Brand leader is Starobrno with 580 thousands of hectolitres sold in 2007 on the home market. Czech Heineken brands are also successful on foreign markets with over 22 % of production exported abroad. These numbers are supported by large export (almost 50 % of output) of The Royal Brewery of Krušovice. The truth is Heineken Company (third largest world brewing company) has a policy to be number one or two on the country market. Right now holding third position are Czech brands not fulfilling those expectations. On the other hand speculations about AB InBev selling Pivovary Staropramen and Heineken being the key company interested leaves the market situation opened for the future. In 2008 appeared on the market new group of investors called K Brewery Group. This group purchasing smaller breweries as Lobkowitczký Pivovar, MP Platan, Pivovar Svijany, Pivovar Černá Hora, Pivovar Jihlava or Pivovar

Klášter is together producing over million hectolitres of beer, which gives the group an opportunity to perform on the beer market as a key player.

In 2008 most of the breweries did not change rapidly the amount of beer produced. Plzeňský Prazdroj is probably the only exception that is lowering beer production by 150,000 hl. Heineken breweries during 2008 did not gain neither lose any advantage on competitors.

Starobrno brewery is concentrating on Moravian market while other Heineken brands are more seen in Bohemia. From a city brewery in the beginning of 2000 Starobrno increased its barrelage and attracted customers both in Moravia where the brewery overtook PMS Přerov and in Bohemia. Export is primarily intended to Sweden, Germany, Austria and Great Britain. Slovakian market was always the key export market for Starobrno and after 2004 was replaced by licence production at Heineken Slovakia. Starobrno presents per contra Slovakian Zlatý Bažant brand on the Czech market. Even though Starobrno is one of the less exporting Czech breweries.

The Starobrno financial performance in 2005 - 2007 period improved. Absolute indices (horizontal and vertical analysis) as well as rate indices (profitability, liquidity, leverage ratios and activity ratios) were calculated. Horizontal and vertical analysis reflects similar outcomes. Total assets are by more than 50 % covered by fixed assets while the share of current assets on total assets is increasing. Starobrno's key source of finances is subscribed capital. The highest shares on revenues have sales of goods, products and services. In 2007 were product and service revenues estimated to 1,200 million CZK. Operating expenses have progressive trend (783 million CZK in 2007). Highest share on expenses have consumption from production and personnel expenses. Personnel costs are increasing yearly by at least 5 percent, which is primarily a result of salary enhancements. Increase of profit and improving profitability ratios are proving positive progress of Starobrno, a.s. Activity ratios indicate the firm's ability to manage its possessions. These values are moderate as well as liquidity and leverage ratios. Total indebtedness ratio is low because of no credit requirements.

Starobrno brand reinforced after junction with Krušovice and Drinks Union under Heineken brand. This fact is displayed by increasing sales both within the Czech Republic and abroad.

7 Bibliography

1. BAMFORTH, CH. W. *Standards of brewing: A practical approach to consistency and excellence*. Brewers Publications, U.S, 2002. ISBN 9780937381793.
2. BAMFORTH, CH. W. *Beer: Tap into the art and science of brewing*. 2nd edition. Oxford: Oxford University Press, 2003. ISBN 9780195154795.
3. BASAŘOVÁ, G a HLAVÁČEK, I.. *České pivo*. 1. vydání. Pacov: Nuga, 1998. ISBN 80-85903-08-3.
4. CICHÁ, I. *Pivovary Moravy a Slezska*. 1. vydání. Český Těšín: Region Silesia, 2002. ISBN 80-238-9776-4.
5. HORNSEY, I. *Brewing*. Royal Society of Chemistry, 1999. ISBN 9780854045686.
6. CHLÁDEK, L. *Pivovarnictví*. 1. vydání. Praha: Grada Publishing, 2007. ISBN 80-247-1616-9.
7. KRATOCHVÍLE, A. *Pivovarství českých zemí v proměnách 20. století*. 1. vydání. Praha: Výzkumný ústav pivovarský a sladařský, 2005. ISBN 80-86576-16-7.
8. JACSON, M. *Encyklopedie piva*. Praha-Karlín: VOLVOX GLOBATOR, 1994. ISBN 80-85769-37-9.
9. JÁKL, P. *Encyklopedie pivovarů Čech, Moravy a Slezska*. 1. vydání. Praha: Libri, 2004. ISBN 80-7277-226-0.
10. POLÁK, M. *Pražské Pivovary a Pivovárky*. Praha: Libri, 2003. 1. vydání. ISBN 80-7277-193-0
11. SYNEK, M. a kol. *Nauka o podniku: učební texty pro bakalářské studium*. 1. vydání. Praha: VŠE, 1994. ISBN 80-7079-892-0.
12. SYNEK, M. *Ekonomická analýza: pro inženýrské studium na VŠE Praha*. 1. vydání. Praha: Oeconomica, 2003. ISBN 80-245-0603-3.
13. TICHÁ, I. *Strategic management*. Praha: Česká zemědělská univerzita v Praze, 2005. ISBN 80-213-1312-9.
14. VALACH, J. a kol. *Finanční řízení a rozhodování podniku*. Praha: Nad Zlato, 1997. ISBN 80-85626-14-4.

15. VEČERKOVÁ, H. a KISS, J. *Abeceda piva*. 1. vydání. Praha: Česká televize, 2007. ISBN: 978-80-85005-86-8
16. VERHOEF, B. *The complete encyclopedia of beer: A comprehensive directory of the beers of the world*. 1st edition. Barnes & Noble Books, 2002. ISBN 978-0785818663.
17. STAROBRNO, a.s. Annual Report 2005. Brno, 2006.
18. STAROBRNO, a.s. Annual Report 2006. Brno, 2007.
19. STAROBRNO, a.s. Annual Report 2007. Brno, 2008.
20. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2001. Praha: Czech Beer and Malt Association, 2002.
21. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2002. Praha: Czech Beer and Malt Association, 2003.
22. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2003. Praha: Czech Beer and Malt Association, 2004.
23. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2004. Praha: Czech Beer and Malt Association, 2005.
24. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2005. Praha: Czech Beer and Malt Association, 2006.
25. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2006. Praha: Czech Beer and Malt Association, 2007.
26. RESEARCH INSTITUTE OF BREWING AND MALTING, PRAGUE. Statistical Surveys 2007. Praha: Czech Beer and Malt Association, 2008.
27. Budějovický Budvar, n.p. online
    Source: < http://www.budvar.cz/en/index.html >
28. Czech Beer and Malt Association online
    Source: < http://www.cspas.cz/ >
29. Czech Statistical Office online
    Source: < http://www.czso.cz/ >
30. Division of Governmental Studies and Services – Washington State University online
    Source: < http://dgss.wsu.edu/di/ >

31. Drinking Beer online

Source: < http://www.drinkingbeer.net/BeerArticles/Beer_History.php5 >

32. Drinks Union, a.s. online

Source: < http://www.drinksunion.cz/miranda2/opencms/index-main.html >

33. Heineken online

Source: < http://www.heineken.com/global/ >

34. Pivovary Staropramen, a.s. online

Source: < http://www.pivovary-staropramen.cz/web/en/ >

35. Plzeňský Prazdroj, a.s. online

Source: < http://www.prazdroj.cz/en/ >

36. PMS Přerov, a.s. online

Source: < http://www.pivovary.cz/ >

37. Starobrno, a.s. online

Source: < http://www.starobrno.cz/ >

38. Statutární město Brno online

Source: < http://www.brno.cz/ >

39. The Royal Brewery of Krušovice, a.s. online

Source: < http://www.krusovice.cz/ >