DEVELOPMENT OF SMALL BREWERIES AND INNOVATION IN THE BREWING INDUSTRY IN THE REPUBLIC OF SLOVAKIA

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ABSTRACT

The aim and purpose of this paper was to evaluate the current market situation based on respondents’ answers and to present the current situation on the market, to find out about the opinion of users about beer, but also about the development of beer tourism, which is gaining in importance. The brewing industry was deemed to be a relatively stable and attractive industry. Brewery strategies have been influenced by several factors. The brewing industry had the opportunity for a new beginning in 1990. The production and distribution were locally oriented, with customers usually drinking local beer. It was important to find out and evaluate their general attitudes about beer, brewery and beer tourism. The problem of analyzing customers opinion is very important and significant but also complex. Innovation is an important factor in all economies. The Republic of Slovakia has a long tradition in brewing. The results are presented in the form of descriptive statistics and strong conclusion and recommendations made regarding the brewing industry of the Slovak Republic.

Keywords: beer, beer industry, investments, market

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Introduction

Customer demands are different from country to country; this is not conditioned by economic development, but also by social, sociological, cultural... However, one fact is common to all customers, and their demands become more sophisticated, and the characteristic of innovation changes. Changes are not only characteristic of young and newly opened companies, they are also happening in companies with long-standing business history. More and more important are new creative ideas, new technologies, knowledge. In these conditions, when Knowledge-Based Economy is in focus, when businesses want to achieve as much financial gain as possible and penetrate the market, they have to offer their customers the best, have to innovate more quickly than others, they have to be different from the others. Successful companies, who at the present time are not capable of innovating innovations, are forced to disappear from the market because the demands that come from these markets are day by day menus. Maintaining continuity of business, survival on the market requires constant innovation of the novels as well as implementation of innovative activities in all phases of its business.

The Slovak Republic is recognizable not only for good wines characteristic for this region, but also for the small brewery and beer industry. After the breakup with the Czech Republic, this brewing industry is experiencing transformation, incentives and investments in the brewing industry are evident in both countries. Privatization, which is characteristic for the period after, changes the way business, but also the challenges that come from the market stimulate the change of business and market performance. New ways of price formation, demand for new types of beer, higher quality, more sophisticated demands from customers, market competition, sharp marketing are just some of the effects that have brought huge changes within this industry. Marketing involves the creation of valuable, relevant and consistent content to acquire and retain customers (Poráziková, Vojtechovský 2016). Inadequate management, the decision-making process without prior market research and customers resulted in the deterioration and closure of certain breweries. Before the 1990s Bulgaria, ex-Czechoslovakia and Hungary were the only countries from the Central and Eastern Europe - CEE region that were members of the European Brewing Union. In the 1990s and early 2000s, the beer markets of CEE have followed different development paths. While some markets have been mostly stable (e.g. the Czech and Slovakian markets), others have followed a downward trend in production and consumption patterns (e.g. the Hungarian market) (Larimo, Marinov, Marinova, 2006).

Materials, methodology and research questions

That the innovation is very important confirms the strategic goal set by the European Commission (EC) in Lisbon in 2000. The main goal of the Lisbon Strategy was to make the European Union the most competitive economy in the world by 2010, to create new jobs, provide good social support, and increase investment for research and development. EC emphasized the development and improvement of knowledge, which resulted in higher investments in education and professional development, scientific and technological research and innovation. In March 2005, the European Commission adapted the set goals of the initial strategy and focused on the employment, stimulation and development of the
The most cited definition in innovation literature and innovative activities is from the OECD Handbook. This manual defines innovation as a new or significantly enhanced product, service or process, marketing method or new organizational methods in business, organization of work, or relationships of an entity with the environment (OECD, 2005). While innovative activities are all activities that include all the scientific, technological, organizational and commercial steps that lead, or intend to lead to the realization of innovation. Innovative activities also include research and development that are not directly related to the development of concrete innovation (OECD, 2005).

The European Union’s innovation index represents a new mechanism for assessing and comparative analysis of the innovation performance of EU member states and associated countries, as well as defining the strengths and weaknesses of their research and innovation systems. This instrument should enable monitoring of the implementation of innovations, which are one of the seven most important factors of the Europe 2020 strategy for successful business and efficient economy. The European Union Innovation Index (IUS) is largely based on the methodology of its previous instrument of the European Innovation Scoreboard (EIS). In the period from 2010 to 2015, this EC report on state innovation was published under the name IUS, while under the name EIS, this report was published between 2001 and 2009, and from 2016 to 2018. Although it is not the only instrument for monitoring the innovation of the economy, it is most represented in the studies, because other than the EU Member States, states other countries of the world. It distinguishes three main types of indicators and eight innovative dimensions, covering a total of 25 different indicators. Based on the value of innovation indicators and trend analysis, within the EIS instrument, there is a division into four groups in which the analyzed countries can be classified (EIS 2018 Figure 1):

1) Innovative leaders (seven countries, Switzerland is the highest ranking)
2) Innovative followers (eight countries)
3) Moderate innovators (16 countries, in this group of countries there are the Republic of Slovakia, but also the Republic of Serbia)
4) Modest innovators (four countries: Ukraine, Macedonia, Romania, Bulgaria).

Figure 1. EIS 2018 - Performance of European and non EU countries’ systems of innovation

Source: European Commision, 2018
On this figure 1, coloured columns show countries’ performance in 2017, using the most recent data for 27 indicators, relative to that of the EU in 2010. The horizontal hyphens show performance in 2016, using the next most recent data for 27 indicators, relative to that of the EU in 2010. Grey columns show countries’ performance in 2010 relative to that of the EU in 2010. For all years, the same measurement methodology has been used. The dashed lines show the threshold values between the performance groups in 2017, comparing countries’ performance in 2017 relative to that of the EU in 2017. Switzerland is the overall Innovation Leader in Europe, outperforming all EU Member States and Iceland, Israel, and Norway are Strong Innovators. For Slovakia, performance increased by 4.8 percentage points, with performance increasing strongly until 2013, and at more moderate rates in 2015 and 2016. Serbia is Moderate Innovator for country performance relative to the EU has increased strongly by 13.3%. (European Commision, 2018).

The qualitative approach was incorporated in the form of historical research, which is considered to be the most useful form for acquiring knowledge of the industry’s development (Andrew et al., 2011). Statistical data was collected from the websites of the Slovak Statistical Office, the Slovak Union of Breweries, the Brewers of Europe and by our own research. The problem with the statistical data was that it was incomplete for the whole period. The respondents were interviewed as the primary source for validating our findings and they were selected based on the authors’ and their acquaintances’ contacts. The form of each interview was a combination of a narrative and a semi-structured interview.

Two research questions were formulated:

1: The emergence of the brewing industry throughout history and is beer the most popular drink on the market of the Slovak Republic?
2: What types of beer do customers consume the most?

History of beer in the Slovak Republic

Beer as a beverage dates long before the new era, probably by accidental discovery while cooking bread (the oldest proof of mentioning beer is preserved today in the Louvre Museum in Paris). The Old Babylonians produced beer in the household for 7000 years before the new era. They had several breeds of beer, and they used barley sugar and wheat for fermentation. By expanding and growing consumption, beer production in other parts of the world was transferred, first in ancient Egypt, Persia, Greece, and after other countries. The Egyptians knew how to make beer 2000 years before the new era, while the Greeks wanted to be like them, learned the beer production skills. Later, the Romans, after them, the Germans, and then other European countries began to be interested in beer production (Večerníček, 2015). At this time, beer was made of sugar, but without hops, so the resulting product was very acidic, and various grasses, such as pellets, saffron and others, were added to the beer. Innovation and application of hop in brewery is an important discovery and it forms the basis of modern beer technology. The emergence of new technologies has a favorable effect...
on the development of brewing (Ciutacu & Chivu, 2015). The discovery of brewer’s yeast and the spreading of the church, mainly by the monks, also extended the use of beer, since the monks were those who focused on cooking beer. In Slovakia, the golden age of brewing is considered to be the first half of the 17th century, although in recent years the expansion of small breweries on the ground of the Slovak Republic again appears. The economic environment is made up of factors that affect purchasing power and consumer buying habits (Kotler, 2007). The development of customer and market behaviour reflected in the breweries’ strategies. Knowledge of customers, competitors, and other stakeholders is vital to strategy formulation (Freeman, 2010). The position of regional breweries came under threat from pressure from the large breweries, which with their ability to realise economies of scale, were able to invest in technology due to their strong distribution position (Tripes, 2017).

During the period, the production process changed depending on the emergence of new technologies, innovations and the implementation of innovative activities in the process of production itself, the production spread to all continents of the world. After World War II, 12 breweries were renovated in the Republic of Slovakia. Beer is becoming more and more attractive, because so far the Slovak Republic is famous for winemakers not so much for beer. Wine tours as a tourist event replace beer. An alliance was established to conserve brewery, and until 2000 there were 15 major breweries in the Republic of Slovakia. Different approaches to selling beer, which incorporated low-cost or generic differentiation strategies were used (Porter, 2008).

**Large and small breweries in the Republic of Slovakia**

Beer is an alcoholic drink (now there are non-alcoholic types), which contains 4 basic ingredients: water, brewer’s yeast, malt and hops. Depending on the type of beer, the alcoholic strength of the alcohol can be different, there are non-alcoholic beers and beers with a higher alcohol percentage, for example, from 2% upwards. Lager beers contain up to 0.5% carbon dioxide, which gives it a freshness, which affects the beer’s blubberiness. Small breweries produce various types of beer are mostly non-commercial beers, based on natural ingredients without additional preservatives, artificial additives, non-fertilized, and unfiltered the shelf life is short. Small breweries with help and ideas coming from buyers create new types of beers, of different tastes. The breweries can be divided into (according to the realized profit): the big breweries fall - Heineken breweries as well as Topvar because they produce more than 200000hl of beer a year, while in small and independent breweries and medium-sized they belong to a group that produces up to 200000hl of brewery Steiger and Urpiner. Large breweries operating on the territory of the Slovak Republic include Heineken, headquartered in the Netherlands. It is the largest group that operates in the brewing industry in Europe, while it is the third largest in the world. Heineken Slovakia is therefore the largest brewery operating in the territory of R. Slovakia with its headquarters in Hurbanovo. The brewery in Hurban was founded in 1969 and part of the Heineken group became 1995. The largest is the consumption of cans in Eastern Europe. Heineken, apart from
the well-known brands Heineken and Amstel produces beer under other names, more than 200 brands. Among the famous Slovak brands are: Zlatý Bažant, Corgoň, Maurus, Kelt, Martiner. The second big brewery operating in this territory is Topvar brewery, which was created by the merger of two breweries Saris and Topvar, when it was bought by South African company SABMiller, now it is headquartered in Slovakia in the Saris brewer in the town of Veliki Šariš. From 2016, the owner of the Topvar brewery is the Japanese group Asahi Group, Slovak brands that are known on the market: Šariš, Smädný Mních. Foreign investment and international owners proved to be good for beer exports [Hergetová, 2015b; Janda & Mikolasek, 2011; Pulec, 2016].

Some small breweries were created by the owners going home with beer brewing, and this has now become a lifestyle and satisfied customers are increasingly visiting such places. The advantage of these breweries is that users receive information about the product, that it is natural, it does not contain chemical additives, is cooked only in small quantities and in small batches. There are three methods of beer production, the most complex process is made of basic ingredients, but which requires knowledge of the whole production process and requires adequate space. In the last five years, around 30 small breweries have been established on the Slovak market, so now there are a total of over 70 that operate in the territory of the Republic of Slovakia. Most microbrewery owners started to brew beer as a hobby and later upgraded their production. Some owners use the differentiation strategy while others state differentiation whereas, in reality, the production is based on a low-cost strategy (Klepetko, 2015). The term “craft beer” has been increasingly used to cover the beers produced by small-scale breweries but it is unclear if this term is definable in terms of beer styles (Elzinga et al., 2015) or whether it has more focus on consumer orientated impressions of novelty (Cardello et al., 2016; Donadini, Porretta, 2017) and association with experience (Gómez-Corona et al., 2016). The advantage of small breweries is that they can achieve faster contact with customers, get product information, have more experimenting, develop new types of beer, and have the capability for greater flexibility and adaptability to customers. Brewery Lanius is one of the small breweries on the territory of the Republic of Slovakia, which opened on April 25th, 2014 in Trenčín, there are about 250 employees and the preparation of beer goes in large quantities of 20 vessels, each about 250 liters. In this brewery there are 8 types of straight beer: 6 is daily and 2 are changed. Depending on the season, beer has a long intensity (flying with less alcohol, refreshing). Beer is cooked every day, users can visit the production process whenever they want, there is also a possibility of bottled packaging. Another well-known small brewery is the brewery in Bansko Štiavnic which dates back to 1473 when Steiger brewery was founded. Brewery Erb (Eduard Rada Breweries) is a small craft brewery founded in this city in 2010. This brewery offers besides refreshment and cultural experience, because within the brewery there is a space where the theater for 111 guests. Also, as part of its business, the hotel, wellness center, restaurant, offers space for various gatherings. The Sessler brewery in Trnava (14th century) was rebuilt in 2008, which also has a restaurant and produces 10 beers in its business. Kaltenecker brewery in Rožňava was
founded in 1997 as a small brewery with a restaurant, now it produces 40 types of beer with a capacity of 15000hl/year.

**Figure 2.** Breweries in Republic Slovakia in 2018

![Map of Slovakia showing the locations of breweries](image1)

*Source: Pivdiky, 2018*

As shown in Figure 2 in the Republic of Slovakia currently there are 71 small breweries and 4 large ones. By regions it is: Banskobystricky - 10 breweries, Bratislavsky - 18 breweries, Košicky - 8 breweries, Nitriansky - 5 breweries, Prešovsky - 8 breweries, Trenčiansky - 6 breweries, Trnavsky - 9 breweries, Žilinsky - 11 breweries.

**Figure 3.** Key facts and figures about production, consumption and exports beer in Republic Slovakia for 2016

![Graphs showing production, consumption, exports, on-trade vs off-trade, consumption per capita, direct employment, excise duty revenue, and number of active breweries](image2)

*Source: The Brewers of Europe, 2018*
As Figure 3 shows, the production in 2016 decreased compared to 2012 from 3206000 l to 2312000 l, as well as the number of jobs in this brewing industry, while consumption increased in comparison to 2015. Compared to 2016, another 5 small breweries were opened in 2018.

Tassiopoulos (2010) explains that festivals are celebrations with a public theme where the social and symbolic meaning of the event is closely related to a series of overt values that the local community recognises as part of their heritage. Beer tourism, as a segment of gastronomic or food tourism, is considered by some scholars as a young form of special interest tourism, or as a form of tourism where participants are motivated by a gastronomic experience of drinking different types of beer in a typical atmosphere of brewing restaurants, or learning about current technology and the history of beer manufacturing (Rogerson & Collins, 2015a). Consequently, beer tourism is an integral part of tourists experiencing and consuming local heritage, local history and cultures as mirrored in the local food and drink. Tourists partake in the craft beer culture as it is regarded as authentic and unique as opposed to commercialised mass-produced beer (Munar, 2012). By spreading beer production, every year there are various manifestations, beer brewing competitions and festivals dedicated to beer and brewery. The most famous international competition is “Biela Vrana”, organized by Košická domovaričská divízia, KaltBier Klub and Asociácia malých nezávislých pivovrov (Association of small independent breweries) in the town of Košice since 2012, also known as Domovaričská pivománia, which is being organized since 2011. Every May it has festival “Švejkové pivné dni” in the town of Humenno, while in August in the town of Partizánsko, Častej, Novo Meste nad Váhom, Donovali, and every September Banskobystrickka brewery Urpiner opens its doors to visitors. Beer Fest was founded in 2013 with the aim of supporting small and craft breweries. Millennials and Generation Z consumers may therefore be considered the demand element of such a festival. Millennials are considered consumers who enjoy collaborative experiences. These consumers are known to want to share their experiences with others and they are keen to utilise new technologies to achieve this, perhaps through social media and online review platforms (Hobson, 2017). Also, every year in the premises of the market in Bratislava and Košice there is a manifestation where small breweries are presented, and the workers can see the novels that have been designed during the year. Here comes the exchange of ideas, which contributes to the exchange of experience and thus stimulates and contributes to improving the quality of beer. There are also breweries from Slovakia, the Czech Republic, Austria, Hungary, Belgium and England. Details of each next event can be found at https://www.salonpiva.beer/Sk/20. Modern technology increasingly provides users with various information - there is a specially created application that gives users information about breweries in R. Slovakia (https://pivni.info/pivovary/slovensko/) as well as an application that shows users where they can drink good beer on the territory of the Republic of Slovakia (http://opive.sk/mapa-slovenskych-pivovarov-kde-vsade-varia-pivo/).
Results

The aim of this study was to evaluate the current market situation based on respondents’ answers. It was important to find out and evaluate their general attitudes about beer, brewery and beer tourism. The Slovak brewing industry has begun to develop in recent years, and besides this is an interesting offer of beer events, which have created a market for beer tourism in the market. This kind of tourism not only makes Slovakia more visible, it can also help economically strengthen this branch of economy. In this survey conducted in March 2018, 120 respondents, 65 women and 55 men, with average age from 25 to 60 years, participated in the territory of the Republic of Slovakia. The highest number of respondents was up to 30 years of age, up to 75%. The research showed that more than half of the respondents drink beer in the Slovak Republic, while one third declared that the wine is a priority. When asked if they were drinking beer, the majority of respondents said they like to drink beer, which is 53% (see the response given in Table 1).

Table 1. User responses about beer consumption

<table>
<thead>
<tr>
<th>Drink beer?</th>
<th>Percentage of respondents’ answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>53%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>37%</td>
</tr>
<tr>
<td>No</td>
<td>6%</td>
</tr>
<tr>
<td>I do not drink alcohol at all</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: Authors research

The next question shows which beer (depending on the color and taste) the participants consume and whether they prefer the large or small breweries. Most respondents, 63% of them decided to give preference to light beer beer, probably because it is the most widespread in the market with an affordable price. Beers with a variety of fruit tastes prefer only 15% of the respondents, and these are mainly those who drink beer rarely and mostly non-alcoholic. Only 4% of the examinees drink a dark beer beer, while 7% of the respondents say it is dark sweet. Half the preference is given to 6% of the respondents, while wheat only 5%. The next question was aimed at determining the reason most people consumed beer, 69% of respondents said they like beer because of its taste and smell, and 7% of respondents because it threshes. Classical beer (beer of large breweries) is decided by 29% of respondents, 33% of respondents declared that they do not care, and 38% of respondents decide to consume beer of small breweries. Also, two-thirds of the respondents were at least once in one of the breweries operating in the territory of the R. Slovakia, while three quarters responded to regular visits to events such as days of beer. More than 85% of respondents said they like innovations and new types of beer. Two thirds of respondents during the working week decide on non-alcoholic beer as refreshments or breaks.
After the 1950s, however, American and Asian countries gradually begun to catch up with the European levels of production, what together with other factors contributed to the rise of world beer trade. Despite growing international beer trade, only around 15% (in 2017) of the global beer production is traded (Bieleková, Pokrivčák, 2020). In Europe, the most prevalent alcoholic beverages are beer, wine and spirits in different proportions and beer represents, in several European countries, the most prevalent source of alcohol consumption (>50%) (Spaggiari, Cignarelli, Sansone, Baldi, Santi, 2020). But, many countries use protectionist policies (e.g. tariffs, government standards and laws, certifications, testing of consignments, excise duties), which create additional restrictions to trade with alcoholic beverages (Bjelić, 2016).

**Conclusion and recommendations**

The development of technology and increasingly sophisticated customer demands require companies and entrepreneurs to introduce innovations and innovative activities into their business, in each branch of business as well as in the brewing industry. Every year, new small breweries, new types of beers and various events appear on the market, which aim to promote beer and thus attract more and more visitors. Large breweries operating on the market for many years did not have strong competitors, but in recent years with the emergence of small craft shops, which offer various types of beer and accompanying content in their offer, they are increasingly winning consumers / customers. The strong sides that the Republic of Slovakia has are: the popularity of beer in the population, good price and quality ratio, quality ingredients, modern technology and application of innovations, good geographical position, an increasing number of small breweries, traditional and high quality domestic products, encouraging tourism and promoting the country through festivals.

**Conflict of interests**

The authors declare no conflict of interest.

**References**


