Factors influencing consumer behaviour in the beer market in the Czech Republic

Veronika Svatošová1*, Petra Kosová2, Zuzana Svobodová3

1Department of Regional and Business Economics, Faculty of Regional Development and International Studies, Mendel University in Brno, Brno, Czech Republic
2Institute of Solid Mechanics, Mechatronics and Biomechanics, Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic
3Department of Regional and Business Economics, Faculty of Regional Development and International Studies, Mendel University in Brno, Brno, Czech Republic

*Corresponding author: veronika.svatosova@mendelu.cz


Abstract: The aim of the paper is to identify the factors influencing consumers when beer consumption and when choosing restaurants for beer consumption in the Czech Republic (CR). A partial goal was to compare preferences and factors influencing beer consumers from the Vysočina Region and the South-Moravian Region. The survey included a questionnaire survey, which 408 respondents took part in. The results showed that the most influential factors in the selection of beer for consumers are taste, a high-quality brand, and Czech production. Surprisingly, price was not found to be an influential factor in beer selection but is rather neutral. Factors that influence consumers most when choosing a restaurant for beer consumption were also identified. Consumers are most influenced by the quality of the beer on offer and the environment in which it is consumed.

Keywords: personal interviewing; beer; purchasing decisions; brewing; methods of statistical induction

The brewing sector in the Czech Republic (CR) has a significant impact on the employment and the economy of the state. It creates jobs for approximately 65,000 people, pays nearly CZK 30 billion a year (i.e. EUR 1.175 billion) to the state budget, and is an essential consumer of raw materials from Czech farmers (Ministry of Agriculture 2015; CABM 2019a). In recent years, there has been a significant reduction in the number of customers of restaurant facilities, which has negative effects on the Czech economy, brewing, and employment, which cannot be offset by ever-increasing exports abroad. To understand the causes of this problem, it is necessary to understand how consumers behave in the beer market in the CR. Every consumer is affected by a number of factors, which can be of a different nature. To understand these factors, it is necessary to identify current trends in the beer market and to identify consumer preferences. This paper addresses these issues.

Consumers are influenced by several factors, which are classified in different ways (Turčínková et al. 2007, 2010). Schiffman et al. (2010) divided influencing factors into personal, psychological, and social, to which...
Kofler (2001) added a category of cultural influences. Stâvâska (2006) presents another category of factors, situational influences. Hes (2008) and Turciková et al. (2010) determined the following factors based on research: product quality, price, country of origin, brand, recommendation, habit. As part of consumer satisfaction, it is important to monitor their loyalty to a brand, which is closely linked to their trust in the brand (Sirdeshmukh et al. 2002). Vineren (2014) argues that acquiring a new customer can be up to five times more expensive for a given company than satisfying the needs of a loyal customer. Factors that influence shopping behaviour are as follows (Novotný and Duspiva 2014: Chad 2017): packaging, visual impression, promotion, type of establishment, and purchasing conditions. It was found that men are more interested in the price of goods, while women prefer a pleasant shopping environment, friendly staff, and the presentation of the goods offered (Hes 2008).

Trang (2013) found that Vietnamese women who consume beer are mostly consumers aged 18–29 years with a monthly income of baht (THB) 7 001 to THB 14 000 (approximately EUR 215 to EUR 430), a bachelor’s degree and who live in a household together with their parents. The majority of women (52%) prefer to drink beer over any other alcoholic beverage. McMillan and Conner (2003) reached similar results. Gjonbalaj et al. (2013) confirmed that most consumers consider beer to be one of the main factors when buying beer. Marshal and Chassain (2000) found that adolescents are strongly influenced in their alcohol consumption by their alcohol-consuming peers. Trang (2013) examined factors influencing the consumption of alcoholic beverages. A similar theory was investigated by Jung (1995), who examined the relationship of students and their parents to alcohol in general. Wilks and Callan (1984) found that sons in most cases had a similar relationship to alcohol as their parents, with greater differences between their daughters. Callan (1984) found that sons in most cases had a similar relationship to alcohol as their parents, with greater differences between their daughters.

Spáčil and Teichmanová (2016) compared consumer behaviour on the beer market in the CR and the United Kingdom and found that almost a majority of the respondents emphasized the importance of choosing a beer brand. Price is not one of the critical factors for them. Banfels et al. (2013) add that there is a certain relationship between loyalty and frequency of purchase. Sugová et al. (2018) conducted a study in the CR and Slovakia and divided consumers of beer into the following categories: by reason of choice, by frequency of consumption, financial, geographical, by reason of consumption. Calvo-Porral et al. (2018) conducted research in which they divided consumers into groups according to their relationship to beer consumption: beer lovers, prudent seniors, social consumers, housewives, and beer in silence. Aqulian et al. (2015) confirmed that beer lovers consider the quality of beer to be a key feature and, unlike commercial brands, prefer craft beers from small breweries. These consumers are also characterised by a desire to discover new tastes and beer-related experiences (Chrysoucho 2014; Gómez-Corona 2016). Yang et al. (2002) found the feeling of relaxation is probably the most important feeling associated with beer consumption. Young consumers are strongly influenced by modern technology, and the Internet, and breweries should take note of this fact and address it in this way (Palfrey and Gasser 2008).

In recent years, there has been a change in the trend in beer sales. Consumers are buying more bottled beer in a glass, PET bottle or can (off-trade) at the expense of draft beer in restaurants (on-trade). The highest share of on-trade sales was recorded in 2003, i.e. 55% of the total beer consumption. The lowest share of on-trade sales was recorded in 2018, when this share was only 36%. The CARB (2019b) states the reason for the transfer of beer consumption from restaurants to consumers’ households may be a possible preference for cheaper prices, a lack of time to sit with friends, the introduction of the anti-smoking law, an increase in the excise duty on beer in 2010 or more demanding consumer preferences.

**MATERIAL AND METHODS**

The main goal of the research is to identify the factors that affect consumers aged 18–65 years on the beer market in the CR. The partial goal was to compare the preferences and influencing factors of consumers from the Vysočina and South-Moravian Regions. The reason for selecting these regions is to evaluate the impacts of the examined factors in the regions that belong to the economically strongest (South-Moravian) and on contrary the weakest Vysočina region of the CR. The data are then compared with the results of secondary research for the CR.

The collection of primary data was carried out through a questionnaire survey in 2019 in electronic and printed form. The aim was to obtain 385 fully completed questionnaires. A total of 409 questionnaires were obtained during the collection; however, 21 were discarded because they were filled in by consumers from other regions. The required number of completed questionnaires was calculated based on a 95% confidence interval with an error rate of 5%. The sum of the inhabitants of the Vysočina Region and the South-Moravian Region aged 18–65 years is 1 070 061 and was calculated with a 50% return on questionnaires. The required number of respondents was chosen as the quota selection. As the South-Moravian Region has more inhabitants than the Vysočina Region, it was necessary to address more consumers in direct proportion.

<table>
<thead>
<tr>
<th>Age</th>
<th>Region</th>
<th>Expected number of respondents</th>
<th>Percentage of respondents</th>
<th>Actual number of respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–25 years</td>
<td>South-Moravian Region</td>
<td>32</td>
<td>8</td>
<td>52</td>
<td>13</td>
</tr>
<tr>
<td>26–45 years</td>
<td>South-Moravian Region</td>
<td>122</td>
<td>34</td>
<td>102</td>
<td>27</td>
</tr>
<tr>
<td>45–65 years</td>
<td>South-Moravian Region</td>
<td>109</td>
<td>2</td>
<td>86</td>
<td>22</td>
</tr>
<tr>
<td>Summary</td>
<td></td>
<td>385</td>
<td>100</td>
<td>388</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: CSO (2019), own processing

Almost a third of consumers consume beer several times a week (32%). In the second place, we can see the consumers who consume beer once a week (17%). The third largest representation was given by a group of consumers who consume beer several times a month (15%). Of the respondents contacted, 12% of consumers did not consume beer, i.e. 8 men and 40 women. Beer is consumed by 96% of men and 80% of women (Figure 1). The results of the research (CARB 2018) state 86% of adult men and 49% of adult women drink beer. This discrepancy may be due to the fact that this research is focused only on consumers aged 18–65 years living in the Vysočina Region and the South-Moravian Region, while the research of the CARB was focused on the whole CR and on respondents older than 65 years.

Most consumers consume alcohol because they like it (59%). The second most common reason is relaxation (28%). Some respondents (12%) state the main reason for consuming beer is to quench their thirst. The remaining 6% of respondents gave another reason. For some, the main reason for consuming beer is sitting...
with friends, during which time they consume beer, but in other circumstances they would not consume beer. Lager beer has become the most preferred type of beer. In the research, 63% of respondents prefer this type of beer. The second most preferred type of beer is draft beer, i.e. 10% original gravity (OG) beer (14%). Strong beers are preferred by 11% of consumers and an almost equally large group prefers a beer mix, e.g. beer-mix beverages. Non-alcoholic beer is preferred by only 2% of consumers.

The CARM (2019b) mentions increasingly Czech consumers prefer lager beer and that its share of total beer consumption in 2018 was more than 50%. Sugrová et al. (2018) reached practically the same result.

The CARM (2019b) stated that the number of customers to restaurant facilities is declining and people prefer to consume beer at home. However, this survey found 72% of consumers prefer the consumption of beer in a restaurant. Of these restaurant facilities, consumers prefer beer consumption in pubs (45%), restaurants (15%), and brasseries (12%). Almost a quarter of consumers (22%) prefer to drink beer in their home. The remaining part (6%) prefers to consume beer on a visit, holiday or concert (Figure 2). The discrepancy between these results and the results of the CARM (2019b) may be due to the fact that consumers from the Vysočina Region and the South-Moravian Region have different preferences than other consumers from the CR of the research.

Consumers most often visit restaurants to consume beer once a week (26%). Approximately 4% of consumers do not visit restaurants to consume beer at all. The remaining four categories are almost evenly distributed (Figure 2).

Consumers prefer draft beer (68%). The second most preferred group represents bottled beer (20%) and the third most popular form of beer is canned beer (11%). Only 1% of the respondents prefer beer from a PET bottle. CARM (2019b) states that in 2018, 11% of all canned beer was consumed in the CR, which corresponds to the results of this survey. The values for the remaining forms of beer are different, probably due to the varying preferences of consumers from other regions of the CR. It is evident that consumers from the mentioned regions prefer draft beer more than the Czech average, i.e. 69% of the addressed respondents from the South-Moravian Region prefer draft beer and 65% of respondents from the Vysočina Region prefer this draft beer.

The results revealed that consumers most often consume beer together with their friends (67%). The second most frequently chosen option is consumption with a partner chosen by a quarter of respondents (25%). Some consumers prefer to drink beer with their family (4%) and the least represented part (4%) of consumers prefer to drink beer alone. More than a quarter of the respondents (26%) said they prefer mini breweries that produce artisanal beer. The preference of large breweries is slightly lower than that of craft breweries (19%). More than half of the consumers do not prefer a type of brewery (5%).

The aim of the research is to identify the factors that influence consumers in the beer market, and which are important to the least influencing.

Respondents in the questionnaire scored each factor on a scale: 1 – does not influence, 2 – rather does not influence, 3 – neutral, 4 – rather influence, 5 – influence consumers when choosing beer. The factors Czech production and brand can be described as factors that rather influence consumers when choosing beer. The factors Regional beer and brand are listed in Table 2 in descending order from the most important to the least influencing. The results are in line with the results of the research by Špačil and Teichmannová (2016) who found that most consumers are influenced by the brand of beer rather than its price. However, the authors claim that Czech consumers prefer to consume beer in their homes rather than in restaurants, as evidenced by data from the CARM (2019b); however, this fact was not confirmed in this research. Based on the identified consumer preferences, Czech consumers can be classified according to the segmentation performed by Calvo-Porral et al. (2018), into a combination of two segments. The first segment is beer lovers, who especially appreciate the quality of beer and are highly loyal to this product, as they consume it up to several times a week. The second segment is social consumers, who consume beer occasionally and mostly outside their homes. Figure 4 shows the different preferences of consumers living in the Vysočina Region and the South-Moravian Region. The left part of the graph deals with a higher share of consumers in the South-Moravian Region who prefer strong beer for consumption (14%) compared to consumers from the Vysočina Region, where only 6% of respondents prefer this type of beer. The right part of the graph shows the differences in the

The least influencing factor in the selection of beer was the promotion of beer, which rather does not influence consumers in their selection. The packaging design of the beer was evaluated similarly. It is interesting that 50% of respondents in the survey stated the low consumption of beer in restaurants is caused by the ever higher price of beer; however, the discount action factor and price factor were not assessed by the respondents as influencing factors. Research has shown that the factors recommendation and habit are also not among the main factors that would influence consumers when choosing beer. The factors Czech production and brand can be described as factors that rather influence consumers when choosing beer. The highest value was measured for the factors quality and taste, which were identified as the most important factors. Table 3 is compiled in the same way. The research results show that consumers in choosing a restaurant for beer consumption are listed in descending order. The accompanying program in restaurant facilities was chosen as the least influencing factor when choosing a restaurant facility. Another factor that did not affect consumers was the number of beers on tap. The price of the offered beer has surprisingly become a rather unimportant, even neutral factor. This finding again contradicts the opinion of 50% of respondents, who stated that the price of beer is the main reason why beer consumption in restaurants is declining. The low consumption of beer in these facilities is not due to the price of beer. Even the offer of regional beer in each restaurant is not a decisive factor.

A substantial part of these factors was identified by Hes (2008). He chooses product quality as the most influential factor, as did Novotný and Duspira (2014) and Sugrová et al. (2018). In this research, quality was rated as the second most important factor. Starbuck and Lehtinen (2002) stated the general key factors that lead to customer satisfaction, i.e. product quality, reasonable price, friendly staff service, easy customer access, and brand reputation. These factors are consistent with those identified in this research, in addition to price.

The results are in line with the results of the research by Lehtinen (2008) and the results of the research by Lehtinen (2008).
frequency of visits to restaurant facilities for beer consumption in both regions. While in the Vysočina Region, approximately one-third of consumers (35%) visit this facility at least once a week, in the South-Moravian Region it is almost half of the consumers (46%). Other differences in consumer preferences between the two regions are shown in Figure 5. The left part of this graph shows the percentage of consumers who prefer consuming lager beer. In the South-Moravian Region, 58% of consumers prefer this type of beer, while in the Vysočina Region, lager is preferred by almost three-quarters of consumers (72%).

The last identified difference in the preference of consumers in both regions is visible in the question of the preference of the type of breweries that consumers are looking for. Mini-breweries that produce artisanal beer are more preferred in the South-Moravian Region (29%) than in the Vysočina Region (22%). Large breweries are sought after in the Vysočina Region more (26%) than in the South-Moravian Region (16%) (Figure 6). Not only consumer preferences, but also factors influencing their behaviour on the beer market are different in both monitored regions.

The following stacked bar graph (Figures 7 and 8) compares the individual frequencies of respondents’ answers and their percentage composition. Evaluation factors influence consumers when choosing beer according to the selected regions – the South-Moravian Region and the Vysočina Region. It is evident that the results in the monitored regions do not differ significantly.

Using the 2-sample test for the equality of proportions without continuity correction, it was determined whether the results differ in the South-Moravian Region and the Vysočina Region. The detailed results of this test are given in Table S1 [see electronic supplementary material (ESM)]. The difference between the South-Moravian Region and the Vysočina Region is statistically significant at the level of significance of 5% only for the factors: recommendation, habits and taste.

Using the Kendall’s rank correlation tau-b test, the correlation of categorical data of factors influencing consumers when choosing beer, in which a considerable number of the same values are present, was examined. Detailed results are illustrated in Table S2 (see ESM). For the South-Moravian Region, the boundary tau (strong correlation coefficient) was chosen as 0.4, for the Vysočina Region 0.5. The boundary tau differs in the monitored regions, as we have a different number of respondents from each region. For these ‘strong’ correlations [marked in yellow in Table S2 (see ESM)], heat maps were created (Figures S1 and S2; see ESM), which illustrate the observed dependencies. The scoring scale for individual graphs is as follows: 1 – does not influence, 5 – influences.

Using the Kendall’s rank correlation tau-b test, the correlation in categorical data was examined for factors influencing consumers when choosing a restaurant to consume beer, in which there is a considerable amount of the same values. The results of this test are illustrated in Table S4 (see ESM). For the South-Moravian Region, the boundary tau (strong correlation coefficient) was chosen as 0.4, for the Vysočina Region 0.5. The boundary tau differs in the monitored regions, as we have a different number of respondents from each region. Heat maps (marked in yellow in Table S4; see ESM) were created for these ‘strong’ correlations, which illustrate the observed dependencies (Figures S3 and S4; see ESM). The scoring scale for individual graphs is as follows: 1 – does not influence, 5 – influences.
while consumers from the South-Moravian Region prefer beer from craft breweries as well as strong beers. This research did not reveal consumers would prefer to consume beer more in their homes than in restaurants. Data on the reduction of beer consumption in restaurants are available only for the CR as a whole, and not for individual regions. Therefore, there is also a reason that the beer consumption in restaurant facilities in the Vysočina Region and the South-Moravian Region is not decreasing, and the decline thus occurs in other regions of the CR. Based on the implemented statistical methods, it was found that the results do not differ significantly in principle for the Vysočina Region and the South-Moravian Region. Differences in the monitored factors influencing consumers when choosing beer in the monitored regions were recorded for the following factors: recommendations, habit, and taste. Furthermore, differences in factors influencing consumers in the choice of restaurant facilities for beer consumption were traced in the given regions for the following factors: the popular beer brand, the constant offer of beers, and quality food. The research revealed the biggest difference between the monitored regions that is following: consumers from economically weak Vysočina region prefer beer from big brewers (cheap beer) and consumers from the economically strong South Moravia region prefer beers from craft microbreweries (expensive beer). The main contribution of the paper is the identification of factors that influence consumers in choosing beer and restaurant facilities for beer consumption in the Vysočina and South-Moravian Region and comparison with the results obtained in other regions which are then usable for the food industry, brewing and providers of catering services. The paper also aimed to evaluate whether the results differ at the regional level. These results will be further compared with the results achieved by other regions.

REFERENCES


Figure 9: Factors influencing consumers when choosing a restaurant facility to consume beer – South-Moravian Region

CONCLUSION

The results showed the most influential factors when choosing beer for consumers are taste, brand quality, and Czech production. Surprisingly, price is not an influencing factor when choosing a beer, but rather a neutral one. Consumers are most affected by the quality of the beer being offered and the environment in which it is consumed. Emphasis is also placed on the staff in the restaurant and the consumer decides whether the company offers beer of their favourite brand. Consumers are also affected by the offer of quality food and the distance of the company from their homes. The price of the offered beer is perceived by consumers as a rather a neutral factor.

Most consumers consume beer because they like it and prefer to consume it with friends. When comparing the preferences of consumers from the monitored regions, it was found that consumers from the Vysočina Region prefer beer from large breweries, whereas consumers from the South-Moravian Region prefer beer from craft breweries as well as strong beers.

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