Original scientific paper

COMPETITION, PROMOTION, AND ACTIVITIES OF MICROBREWERIES DURING THE COVID-19 PANDEMIC

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Abstract

The microbrewery market in the Czech Republic has experienced a tremendous boom, especially in the last 15 years. Recently, people have liked to try new things, and there is a growing demand for non-traditional types of beer offered by these companies. However, due to the COVID-19 pandemic, microbreweries have had to reduce activities or even close facilities. The paper aims to examine microbreweries' perception of competition threat, promotion, and activities during the COVID-19 pandemic in the Czech Republic. We examined the differences related to four microbreweries' characteristics: the location of the facilities, the scale of the operations, the annual volume of beer production, and the number of years in business. The questionnaire survey was carried out in 105 microbreweries. We used statistical methods of Kruskal-Wallis ANOVA, Mann-Whitney test, and Pearson's Chi-square test to prove research working hypotheses. The results show that microbreweries do not consider the threat of competition high. The beer production volume factor influences this perception of competition. We found that enterprises make the most use of websites and customer referrals in their promotions. We proved that the use of the web depends on the range of business activities. Finally, we analyzed the direct impacts of the COVID-19 pandemic on microbreweries. The vast majority of the enterprises partially kept the operation running. Interestingly, some enterprises have taken advantage of the current situation to diversify their activities and look for new opportunities. The main factors that varied between enterprises, in this case, were the range of activities and years in business. The paper's originality is related to the first attempt to analyze the COVID-19 impact on the breweries during the lockdowns and government restrictions.

Keywords: microbrewery, craft beer, competition threat, promotion, COVID-19, Czech Republic

INTRODUCTION

In recent years, the service sector, like other industries, has been gripped by a flurry of rapid, discontinuous change. According to UNWTO (2021), last year, we experienced the worst year in the history of international tourism due to the COVID-19 pandemic. Remarkably, international tourist arrivals (overnight visitors) fell by 73% in 2020 worldwide. To compare, Novotny & Pellesova (2021) point out that it is an almost 75% reduction in visitors from abroad in the Czech Republic and a roughly 51% decrease in tourists staying in hotels. Baum & Hai (2020) discuss how the pandemic denied people the right to travel due to border closures, lack

of international flights, curtailment of travel, closure of attractions and tourism facilities. Duro, Perez-Laborda, Turrion-Prats, & Fernandez-Fernandez (2021) determined several factors influencing tourism vulnerability to COVID -19 (territorial tourism dependence, market structure and demand, seasonality, accommodation, and pandemic health incidence). It is undeniable that the pandemic severely impacts tourism, travel, hospitality, and leisure activities. These effects have garnered worldwide attention in the contemporary time due to uncertain future.

As a result of restrictions, interventions, and issues in tourism, the activity of breweries has been reduced. COVID -19 has significantly impacted the restaurant industry, as nearly all states have enforced regulations minimizing personal contact and mitigating the spread of the virus (Yang, Liu, & Chen, 2020). The sale of draft beer has come to a complete shutdown as the government has closed bars, restaurants, and taps (Pitts & Witrick, 2021). Before the coronavirus crisis, the number of microbreweries in the Czech Republic overgrew (Němec, 2017). Hence, the coronavirus crisis has affected the entire beer market. It is difficult to predict which microbreweries will withstand this pressure and which ones will have to close their business (Vrána, 2020).

The main challenges that exacerbate the effects of the pandemic are changes in customers' behaviors and the increasing competitive pressure in the market. According to Gordon-Wilson (2021), consumers substitute drinking in restaurants or pubs with social drinking on the Internet or completely different initiatives that do not involve alcohol consumption. Breweries and distilleries are struggling to stay on the market and are changing their strategies and marketing methods (Nissen, Bangerter, Tran, Bobke, & Awwad, 2020). Unavailable communication channels and routes to the customer are being replaced by more modern ways of distributing (Brewer & Sebby, 2021) and promoting products (Enz & Škodová-Parmová, 2020).

Recent market changes caused by the COVID -19 pandemic are analyzed in our paper. At present, many publications on the research subject are published only in magazines or as part of brewery association reports. Most publications dealing with the impact of the COVID-19 pandemic generally focus more on tourism or services. Therefore, we investigate the current opaque situation in the brewing market from the perspective of microbreweries. Since this can have serious consequences, it is imperative to understand current brewery industry trends. The paper's main objective is to examine microbreweries' perception of competition threat, promotion, and activities during the COVID-19 pandemic in the Czech Republic.

THEORETICAL BACKGROUND

Definition of Microbrewery

Microbreweries are businesses or entrepreneurs with small beer production volumes not exceeding 10 000 hectolitres per year (Vrána, 2020). Abroad, these breweries may also be referred to as “craft breweries”. However, this term is different and is not based solely on size criterion. For example, in the United States, the Brewers Association set three characteristics: annual production of up to 6 million beer barrels (1 US beer barrel corresponds to about 117.35 liters); no more than 25% of the business owner by another brewery industry member; possessing the Alcohol and Tobacco Tax and Trade Bureau Brewers Notice (Brewers Association, 2018). In addition, subgroup “microbreweries” have produced less than 15,000 barrels per year sold for at least 75% offsite (Brewers Association, 2020). In Germany, the classification of microbreweries includes less than 5,000 hectoliters production volume (Heyder & Theuvsen, 2008). Compared to the Czech concept of microbreweries, there is a noticeable difference in the beer production volume among countries. However, the condition of independence (no affiliation with other brewing organizations) can also be considered an essential feature of microbreweries. To define microbrewery, we can use the criteria set by Morgan, Lane, & Styles (2020). They described microbreweries based on customers' perceived attributes of the craft breweries. These criteria include a value chain based on the local embeddedness, smaller brewery size, process control and production methods, high gravity dilution, independent ownership, unique flavors and ingredients, creativity, and innovation related to the diversity of customers. The main competitive advantages of microbreweries are uniqueness and localness (Toro-Gonzáles, 2014).

Most microbreweries run refreshments (restaurant, pub, snack bar, etc.) in addition to the brewing facility. From microbreweries, the restaurant breweries account for the largest share. These breweries are restaurants or pubs that brew their beer and offer it primarily in their taprooms. Another type is breweries that do not have their “tap” and only sell beer in bottles and kegs. These businesses may have a partial problem with competition because they do not have a direct outlet for their products. In addition to catering services, microbreweries can also provide accommodation (Kozák, Bartók, & Honzková, 2017). The last type is the so-called “flying breweries”, of which there are about one-tenth of the total. These flying breweries are enterprises without their operations and which rent equipment and premises from competitors to produce beer (Němec, 2017).

Competitive Threat Level and Rivalry in the Brewing Market

Competition in an industry is rooted in its economic structure and defines the attractiveness and potential profitability of the industry. Threats from competitors (rivalry between existing enterprises) are fundamental forces determining competition in an industry. Porter (2008) shows that the competitive threat level depends on many factors. For example, the number of competitors, slow industry growth, high fixed or storage costs, lack of differentiation, increasing capacity in large batches, diverse competitors, high strategic stakes, and high strategic stakes high exit barriers.

In 2019, the number of breweries in the Czech Republic reached 617 enterprises, including 98 large producers (Czech Association of Breweries and Maltsters, 2020). At present, our country has approximately as many breweries as it had in the 1930s. The market of microbreweries in the Czech Republic has been booming, especially in the last 15 years. Although some enterprises have disappeared in this period, many have been established, and the total number is constantly growing. Most businesses were founded between 2013 and 2019, with 40 to 60 microbreweries starting annually. This "boom" is since there is now a growing demand for the non-traditional types of beer that these businesses offer. In addition, people like to support more minor and predominantly local companies.

Torok, Szerletics, & Jantyik (2020) analyzed the competitiveness and market structure of the beer industry on the international level and concluded that global beer production is highly concentrated. The situation is similar in the Czech market. In terms of numbers, the smallest breweries (without employees or units of employees) represent three-quarters of the sector, although large industrial breweries made three-quarters of total sales. The craft beer industry includes several regulatory hurdles and barriers that hinder the growth of this segment, such as excise taxes, zoning laws, and distribution restrictions (Malone & Lusk, 2016). According to Pokrivcak et al. (2019), the barriers to craft breweries expansion are the lack of qualified employees, taxation policy, and the increasing consumption of substitutes. The advantage of microbreweries is their little competition with each other.

During the COVID-19 pandemic, microbreweries became more aware of the perceived threat from competitors. In light of the implemented regulations, breweries struggle more intensively for customers. Nevertheless, we expect differences in perceptions of competition threats between microbreweries considering their characteristics. Moreover, some of these characteristics may provide microbreweries with a competitive advantage. These characteristics

(criteria) are brewery location, range of activities, beer production volume, and years in the brewery business. We formulated the following hypothesis:

Working hypothesis H1: The perception of the threat of competition varies among microbreweries during the COVID-19 pandemic according to their characteristics.

The Ways of Products Promotion

Integrated marketing communications is the coordination and integration of all marketing communication tools, avenues, and sources into a seamless program designed to maximize customer impact (Clow & Baack, 2018). The promotion mix is advertising, direct marketing, personal selling, sales promotion, public relations, and sponsoring. Mangold & Faulds (2009) include into promotion mix social media, which encompasses a wide range of online and mobile discussion forums (including blogs and chat rooms), consumer-to-consumer emails, product or service review websites, and social networking websites.

According to Kotler (2017), the Internet brought connectivity and transparency to our lives and shifted from individual preferences to social collaboration. Traditional marketing based on segmentation and targeting is replaced by customer community confirmation because communities are new segments. Diamandis & Kotler (2020) predict that the way advertising will change: social media marketing, e-commerce platforms, and mobile devices, spatial web with augmented reality add-ons, hyper-personalization based on collected user data, or artificial intelligence very soon. In the digital economy, co-creation is the new product development strategy involving customers to customize, personalize products, and improve the success rate of the market (Kotler, 2017).

The promotion of alcoholic beverages faces restrictions from the government (limitations on underage consumption), negative campaigns based on the health threat and diseases caused by the use of the products, and higher prices due to the various taxes applicable to the product type. According to Llopis, O'Donnell, and Anderson (2021), products with little or no alcohol (e.g., ciders) are not as price-dependent as beer and beer drinks. Among the components of the promotional mix, public relations stood out and gained considerable importance during COVID-19 (Altay, Okumus, & Mercangoz, 2021).

Microbreweries have a competitive advantage over large breweries in that they operate using low-volume brands in niche markets instead of high-volume mainstream brands on global markets. Murray & O'Neill (2012) believe that food and beverage operations can satisfy the desire for differentiation through menu variety, faster service, and marketing activities such as tastings, brewery dinners, and other events. They suggest that restaurants create a competitive

advantage by committing to craft beers on menus through promotions and employee and customer education. Microbreweries collaborate with local communities mainly due to their interest in local products. It is linked to fashionable phenomena such as building community-social terroir (taste of place) through connecting people and locality. Some microbreweries have focused exclusively on them (Sjolander-Lindqvist, Skoglund, & Laven, 2019).

Promotion through websites or the Internet, social media, and networking are considered modern. Although this question has been the subject of research by other authors, our purpose was to determine whether the situation had changed during the COVID-19 pandemic. In our view, promotion methods will vary from business to business. The characteristics (criteria) of differences among microbreweries are brewery location, range of activities, beer production volume, and years in the brewery business. Then, we formulated a hypothesis:

Working hypothesis H2: Microbreweries differ in their use of promotion methods during the COVID-19 pandemic concerning their characteristics.

The Impact of COVID-19 Pandemic on Microbreweries Activities

Europe Economics (2021) reported the significant impacts of the COVID-19 pandemic on hospitality and tourism, beer production, consumption and sales, jobs losses, shortening value-added, decreasing government revenue, and issues in upstream supply chains (purchases problems). According to the Czech Association of Breweries and Maltsters (2021), annual beer consumption per capita in the Czech Republic reached 135 liters in 2020, the lowest since the 1960s. In Europe, it was a 42% on-trade drop (Europe Economics, 2021). Coronavirus restrictions and limitations on pub and restaurant facilities at domestic and abroad markets blame the decline of the brewery industry.

The resilient restaurants and bars that have been affected by the closure of various tourist attractions have sufficient financial reserves and can change distribution and use take-away services (Neise, Verfurth, & Franz, 2021). Vandenberg, Livingston, & O'Brien (2021) found that Australia's first and second waves of restrictions resulted in significant reductions in weekly on-premise beer consumption due to reduced availability due to full or partial store closures. Mehrolia, Alagarsamy, & Solaikutty (2021) found that online food delivery services were not used mainly by customers who reported high perceived threat levels, less product involvement, and less perceived benefit of online shopping. Consumers' trust in the restaurant and brand, fair price, solidarity with the restaurant sector, rejection of illness, and faith in health surveillance predicted intention to visit the restaurant during the COVID-19 pandemic (Hakim, Zanetta, & da Cunha, 2021).

The most significant adverse impacts are the closure of pubs themselves, restrictions in the form of reduced opening hours, a ban on alcohol consumption in public or without a meal, seated dining, physical separation barriers between tables, full lockdowns, a shutdown of all indoor hospitality spaces, night-time curfews, exclusion of alcoholic beverages from take-away allowances, interference with sporting and cultural events and other conditions (Europe Economics, 2021). As a result of this state of affairs, businesses maintained only partial operations or suspended operations altogether. Some attempted to diversify their activities or seek new business opportunities. Small enterprises implement business models to overcome many issues, such as leveraging readily available resources, transforming existing resources into new products, and mobilizing distant resources from network partnerships (Bivona & Cruz, 2021). According to Pitts & Witrick (2021), packaging has become an essential promotion tool for coping with the pandemic crisis.

We assume that enterprises choose different ways of dealing with a pandemic situation. The characteristics of the enterprises will determine their activities and strategies. We choose characteristics (criteria) as brewery location, range of activities, beer production volume, and years in the brewery business. Based on related works, we established a hypothesis about the COVID-19 pandemic impact on activities related to the enterprise characteristics for our research:

Working hypothesis H3: The impact of the COVID-19 pandemic on microbreweries activities varies according to business characteristics.

DATA AND METHODS

For the data collection, we choose the questionnaire survey method. According to the CMMA (Czech and Moravian Microbreweries Association, 2021), there were 483 microbreweries in 2021 in the Czech Republic. With approximately 110 flying breweries, the sample population consists of 583 microbreweries. The research was conducted electronically by contacting managers of 560 breweries in January 2021. Contacts to breweries were acquired from the publicly available database (Ceske pivo - ceske zlato, 2021). We retrieved a total of 104 filled questionnaires with an approximate 19% return rate. We examined the impact on the competitive rivalry in the market, promotion, and activities of microbreweries.

The main characteristics of the data sample were the number of employees and the location of the enterprise. The data sample contains the most represented group in the range of 2 to 4 employees (43.40%). Fewer employees are present in the microbrewery that do not produce too

much beer. A total of 24.53% of microbreweries had only one employee. Another group of microbreweries employs 5 to 10 workers (17.92%), and 14.15% of the respondents have more than ten employees. These enterprises generally have higher production volumes and have been on the market for more than two years. The enterprises are located all over the country. Most microbreweries lie in smaller towns, villages, or places with the great majority near a tourist destination. The selected enterprises evenly represented all regions of the Czech Republic (mostly Prague, South Moravia, South Bohemia, and the Olomouc region). For statistical comparisons, further, we divided the enterprises according to four criteria:

- Location of microbrewery facility: village (32.08%), smaller town (39.62%), large town (21.70%), brewery without place elsewhere, referred to as "flying brewery" (6.60% – we did not statistically evaluate this option)
- Range of microbrewery activities: microbrewery only (33.02%), including refreshments (36.79%), including accommodation (including 19.81%), other activities (10.38% – we did not statistically evaluate this option)
- Annual volume of beer production (exhibitions): up to 100 hl (16.98%), 100 – 500 hl (24.53%), 501 – 1000 hl (23.58%), more than 1000 hl (34.91%)
- Number of years in brewery business: up to 3 years (24.53%), 3 to 5 years (39.62%), over five years (35.85%)

The questionnaire contains questions, most of which are in the form of one or multiple-choice questions. First, the questionnaire sought to determine the perceived level of competitive threat for microbreweries (Likert Scale: 1 – competition does not affect the activity, 5 – competition influences activity a lot). Second, we investigated the way of products promotion in microbreweries (multimedia – TV and radio, trade fairs and exhibition, outdoor advertising, social networks, promotional items, customer recommendations, websites). In both of these cases, the effects of the COVID-19 pandemic were indirect. Finally, we examined the direct impact of COVID-19 pandemic (positive impact on activities – new activities, diversification, interruption of activities and partial continuity of activities) on microbreweries, and the way to maintain the services (sale of beer in pet bottles, cans, kegs, small kegs, or glass bottles).

We performed statistical evaluation using Statistica 12 software. We established two-sided statistical hypotheses, which were subsequently tested. In the results, we do not report the values of the test criteria but only the resulting p-values. We evaluated the respective p-value of the test criteria for all tests at the 5% significance level.

A non-parametric Kruskal-Wallis ANOVA was chosen to test the first hypothesis (H1) concerning relation of selected microbreweries characteristics (location, range of activities, production volume and number of years in the market) and the perception of competition. Hendl (2006) presents the equation of test criterion H:

$$H = \left[\frac{12}{n(n+1)}\sum_{i}\left(\frac{(SR_i)^2}{n_i}\right)\right] - 3(n+1) \quad (1)$$

where SR_i denotes the coefficients of the order sums from each group *i* for *n* elements

We chose the Mann-Whitney test for pairwise comparison to determine which groups of firms differed in their perceptions of competition. In this test, the procedure compares the measurements from the first group with those from the second group. The test criterion Z takes the form (Hendl, 2006):

$$z = \frac{U - n_1 n_2/2}{\sigma_T} \quad (2)$$

where *U* is the number of comparisons in favor of one of the groups and *ni* denote the ranges of the group

A different evaluation procedure was used for the other hypotheses (H2 and H3) due to the different categorical data types. We assessed the frequencies dependence between the selected multivalued responses (in categories: promotion and COVID-19 pandemic impact) and the frequencies of firm characteristics (location, range of activities, production volume, and years in the market). Multi-value responses were analyzed separately, i.e., transformed into dichotomous yes/no variables. Pearson's Chi-square (χ^2) test was used to assess dependence. We performed calculations using contingency tables of absolute and theoretical frequencies constructed according to each characteristic for each response. The Chi-square test criterion is shown below (Hendl, 2006):

$$\chi^2 = \sum_{i=1}^{k}\frac{(n_i - np_i)^2}{np_i}, \quad (3)$$

where

k = the number of possible values of the categorical variable,

n_i = observed frequency in category *i*,

np_i = the theoretical (expected) frequency in category *i* calculated assuming null hypothesis validity, where *n* denotes the sampling range and p_i indicates the theoretical probability of type *i*.

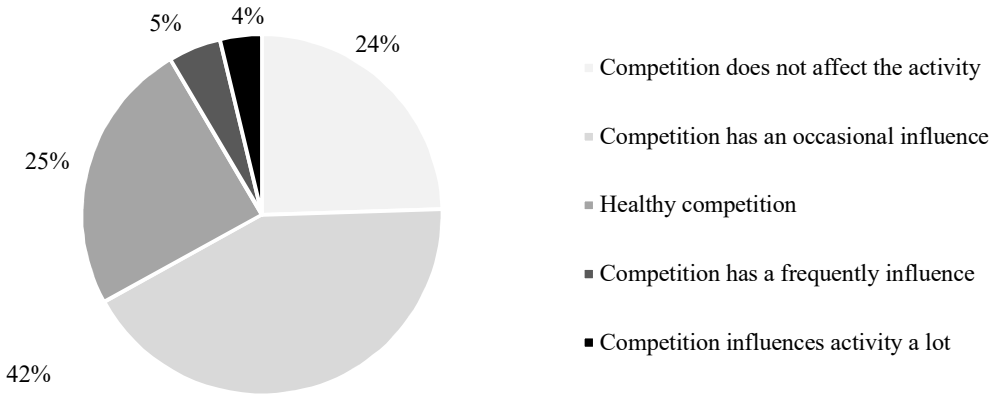
RESULTS

This section provides a quantitative analysis of the results divided into three parts according to the hypotheses. We analyze questionnaire results to determine three research areas: microbreweries' perception of competition threat, promotion, and activitites during the COVID-19 pandemic.

The Perception of the Competitive Threat Level during COVID-19 Pandemic

The rivalry between competitors is surprisingly low despite many enterprises in the market and the COVID-19 crisis. Both categories, “other microbreweries” and “large breweries” are considered the most significant competitors for microbreweries. The questionnaire survey results showed (see Fig. 1) that competition has an occasional influence on the activities of microbreweries. The majority of the participants stated that competition does not (24%) or occasionally influences their activities (42%). A total of 25% of managers said that there is healthy competition in the market, meaning that competition affects the businesses to an acceptable extent for the type of business. Only 9% of respondents said that their business is affected by competition.

Figure 1 Perception of threat from competitors during COVID-19 pandemic



Source: authors' processing

For the perception of the competitive threat (rivalry) level during COVID-19 pandemic, we assessed hypothesis (H1) according to the enterprise characteristics (see Tab. 1).

Table 1 Results of Kruskal-Wallis ANOVA p-values

Criteria	p-value
Localization of brewery facility	0.3912
Range of activities	0.5736
The volume of beer production	0.0273*
Number of years in the brewery business	0.9616

Source: authors' processing

The results showed that:

- In terms of production volume, hypothesis (H1) can be accepted. It has been shown (Tab. 1) that the perception of the threat of competition during the COVID-19 pandemic differs among enterprises concerning beer production volume (p-value = 0.0273).
- In terms of the other criteria (localization, range of activities, years in brewery business), hypothesis (H1) cannot be accepted because there was no significant difference in the perception of the threat of competition.

Further, based on the Mann-Whitney test, we found (see Tab. 2) that the perception of the competitive threat level varies for the largest firms, i.e., those with the highest production beer volume differs from the others. Significant difference was for enterprises up to 100 hl of production volume (p-value = 0.0436), 501-1000 hl (p-value = 0.0059). For 100-500 hl volume, the p-value was close to 0.05 (p-value = 0.0597). Thus, the enterprises with a beer production volume of over 1000 hl feel a greater impact of competition on their activities than the other groups. It implies that the larger enterprises offer products in-home and enter other markets. Therefore, they are more exposed to competition.

Table 2 Results of Mann-Whitney U-Test p-values for category volume of beer production

	Up to 100 hl	100 to 500 hl	500 to 1000 hl	More than 1000 hl
Up to 100 hl	-	0.5051	0.7585	0.0436*
100 to 500 hl	0.5051	-	0.4691	0.0597
501 to 1000 hl	0.7585	0.4691	-	0.0059*
More than 1000 hl	0.0436*	0.0597	0.0059*	-

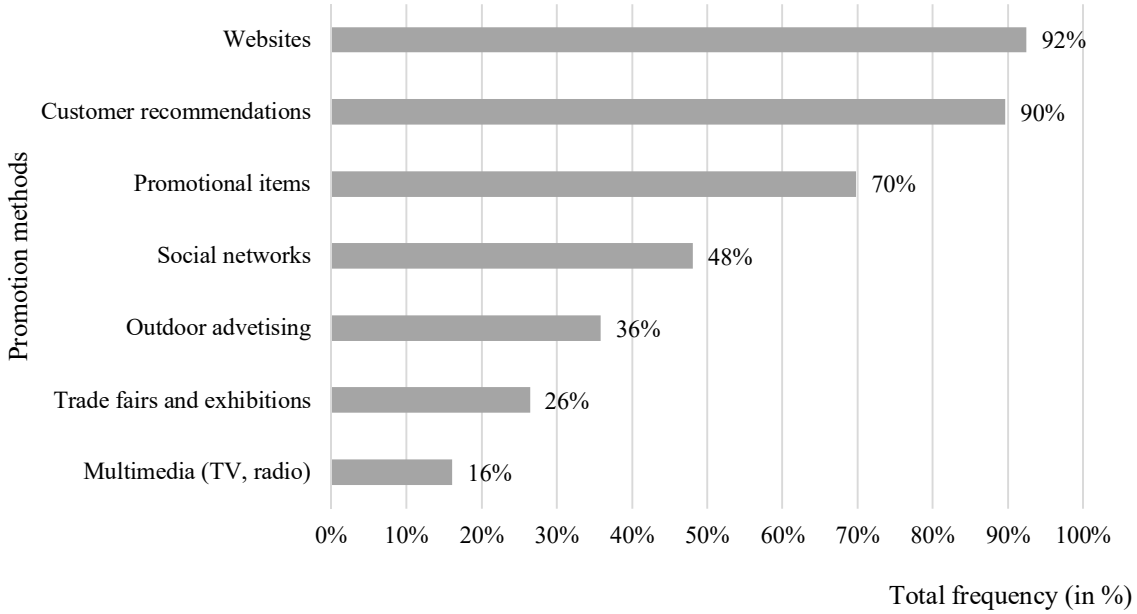
Source: authors' processing

The Ways of Products Promotion

The questionnaire survey showed (Fig. 2) that enterprises during the COVID-19 pandemic combined modern (website and social networks) and traditional ways of promotion (customer recommendations, promotional items, etc.). The most common form of advertisement is the microbrewery's website. Here, potential customers can find information about the microbrewery itself and the beer products. The website may also include an e-shop through which the business sells its products. This method of promotion enables sales despite the anti-covid restrictions in place. Promotion through referrals from existing customers is also frequent and very effective. Promotional items (such as coasters, glasses, etc.) are also popular and used by staff in restaurants offering the establishment's products. Internet advertising is also popular, especially recently, reaching customers via social networks such as Facebook, Instagram, etc.

Multimedia, such as TV or radio spots, are rarely used by microbreweries, probably because of their high cost and unnecessarily broad reach.

Figure 2 The way of products promotion during the COVID-19 pandemic



Source: authors' processing

In promotion, hypothesis (H2) examined (see Tab. 3) that microbreweries differ in modern promotion methods during the COVID-19 pandemic concerning their characteristics. From the results, it is clear that:

- Hypothesis (H2) can be partially accepted for modern promotion methods according to the range of microbreweries' activities. In other words, during COVID-19 pandemic microbreweries differ in their use of websites for promotion concerning the diversification of their activities (p-value = 0.0257). For social networks, no differentiation between the enterprises' groups was significant. In terms of brewery facility location, beer production volume and years in the brewery business, hypothesis (H2) cannot be accepted for modern promotion methods.
- If hypothesis (H2) is evaluated in traditional promotion methods, firms differ statistically significantly in trade fairs and exhibitions, outdoor advertising, and multimedia (p-value < 0.0001). All characteristics of enterprises (localization, range of activities, production volume, and years in the business) are significant in this case. However, microbreweries less use these forms of promotion during the COVID-19 pandemic. For example, outdoor advertising is used more by microbreweries with a larger production volume, located in

larger cities, which have accommodation in the scope of their activities. For traditional promotion methods such as customer referrals, advertising, and souvenirs, enterprises did not differ in their use.

Table 3 Results of Chi-square test p-values for the way of products promotion

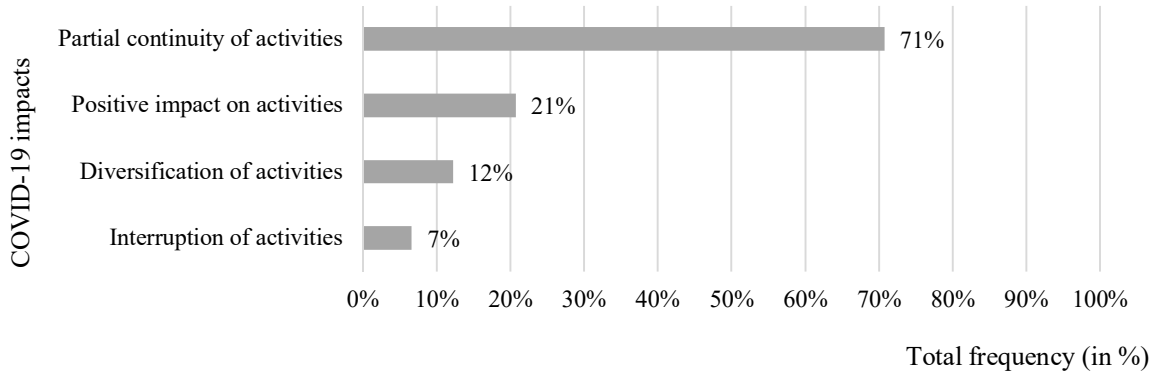
Criteria	Localization	Range	Volume	Years
Websites	0.3261	0.0257*	0.2150	0.9137
Recommendations	0.8499	0.1368	0.1438	0.3355
Promotional items	0.9599	0.6471	0.1672	0.4463
Social networks	0.0594	0.8523	0.6473	0.1060
Trade fairs and exhibitions	< 0.0001*	< 0.0001*	< 0.0001*	< 0.0001*
Outdoor advertising	< 0.0001*	< 0.0001*	< 0.0001*	< 0.0001*
Multimedia (TV, radio)	< 0.0001*	< 0.0001*	< 0.0001*	< 0.0001*

Source: authors' processing

The Impact of COVID-19 Pandemic on Microbreweries Activities

The results showed (Fig. 3) that most enterprises tried to maintain at least a partial operation, some even managed to attract new customers, and others, unfortunately, had to discontinue operations. The majority of microbreweries have been affected by the COVID-19 pandemic. They have had to adapt and find other ways of ensuring sales of their products. Among the respondents, there were some positively affected by the coronavirus epidemic. A total of 21% of microbreweries managed to gain new customers or expand their operations during this time. It is probably due to their focus on promotion and sales to reach additional customers and start or expand the sale of drinks in bottles or cans. Another option was maintaining current operations and focusing on another because the existing activity no longer brought sufficient income for the enterprise.

Figure 3 The Impact of COVID-19 pandemic on microbreweries activities



Source: authors' processing

In the case of the pandemic effect, hypothesis (H3) was examined (Tab. 4) that the impact of the COVID-19 pandemic on microbreweries varies by firm characteristics. The relevant findings are following:

- In terms of the range of activities criterion, hypothesis (H3) can only be accepted for the positive impacts of the COVID-19 pandemic. Microbreweries differ in their perception of the pandemic as a factor bringing new opportunities (p-value = 0.0209). They operate only as a beer producer, a brewery with refreshments, accommodation, or other activities. This situation was less common for enterprises focused only on beer production.
- We found differences between breweries on the criterion of the length of time in the business, with firms differing in their use of diversification (p-value < 0.0000). Particularly enterprises that have been in the market for a longer time considerably benefit from diversification.
- In terms of the other criteria, hypothesis (H3) cannot be accepted. There was no evidence that the effect of the pandemic on microbreweries differed according to production volume and localization of the brewery facility.

Table 4 Results of Chi-square test p-values for the impact of COVID-19 pandemic

Criteria	Localization	Range	Volume	Years
Partial continuity	0.1816	0.0627	0.8073	0.9480
Positive impact	0.4215	0.0209*	0.6935	0.8058
Diversification	0.3312	0.8949	0.7666	< 0.0001*
Interruption of activities	0.1266	0.3672	0.7588	0.6222

Source: authors' processing

Further, we deeply analyzed the possibilities for microbreweries to remain open when catering services are closed, and it is not possible to serve beer through pubs and restaurants. The most frequent reaction of microbreweries to the COVID-19 pandemic was selling beer in PET bottles (90.6%). The sale of these bottles is most often made directly at the brewery or adjacent pub/restaurant via a dispensing window. Despite the current situation, some stakeholders sell beer in kegs (46.2%). Sales of beer in small kegs (43.4%), which end consumers can buy for home or as gifts, also increased. Some participants have taken advantage of the possibility of bottling in cans (12.3%) or glass bottles (5.7%), either using their technology or in collaboration with another brewery or other company offering this service. In the case of the "other" option, the managers mentioned the "Save the Beer" project. This project involved 352 small breweries from all over the Czech Republic. Initially, the project was supposed to save brewed beer that had no sales. Any microbrewery that had problems due to a

sales shortfall could join. The project also served as a pro-center to inform customers about where and what beer they could buy. The website of this project offers a list of all participating breweries, including basic information, contacts, beer offers and links to order beer either through the brewery's e-shop or by contacting the company directly. Some breweries offer the possibility of picking up at the dispensing points or even delivering to nearby or more distant areas (Kopová, 2021).

DISCUSSION

We discuss the research results compared to the other related works. Most of these publications focus on the situation in the microbrewery market before the COVID-19 pandemic. Nevertheless, we tried to find possible differences and discuss them.

First research area related to microbreweries' perception of competition threat during the COVID-19 pandemic. We found that competition has no substantial impact on the perceived threat by competitors for microbreweries. Through working hypothesis H1, we further investigated whether the characteristics of microbreweries may influence this threat. Our results show that beer production volume is a significant factor causing the perceived level of competitive threats. Smaller breweries perceive the threat of competition as more minor than larger enterprises. The results obtained here may explain the relationship between microbreweries size and competitive rivalry. Němec (2017) suggests that smaller enterprises operate locally. It means that could only be threatened by another enterprise built near. According to Pícha, Navrátil, & Švec (2018), there is growing consumer interest in reclaiming their identity, local cultures, and traditional values through “localness”, a new opportunity for small businesses local producers. It also explains why smaller microbreweries perceive less competition. These results were unaffected by the COVID-19 pandemic, and the explanation and conclusions remain the same.

The second research area focuses on the microbreweries' promotion methods during the pandemic. Our research shows that microbreweries mostly use websites, customer recommendations, and promotional items. These results are consistent with other authors regardless of the COVID-19 pandemic situation. According to Březinová & Skořepa (2019), microbreweries consider their reputation, customer recommendations, and websites as the primary marketing communication tools for competitiveness. These methods are the main ways of promotion, although websites have been used the most in the current pandemic situation.

Furthermore, using working hypothesis H2, we sought to investigate whether the characteristics of microbreweries might influence this threat. We found that using trade fairs and exhibitions, outdoor advertising, and multimedia promotional activities related to enterprise features. For these types of promotion, the location of the enterprises, range of activities, production volume, and years in business were essential factors. The promotion through the website was significant only with the range of activities. Březinová & Skořepa (2019) showed in their research that restaurants' microbreweries use more websites for advertising. Managers of breweries with more diversified activities probably require more promotion via websites. The pandemic situation may accelerate this trend. This conclusion is supported by the Czech and Moravian Microbreweries Association (2020) research. They show that 46% of the surveyed microbreweries started significantly more social media during the COVID-19 pandemic. In addition, 42% of microbreweries report intensified advertising and promotional activities on websites, and 41% have initiated online beer sales.

The third research area examined the impact of the COVID-19 pandemic on the activities of microbreweries. We found that 71% of microbreweries reported partial curtailment of activities, and 7% reported more extended interruption. From these results, we can conclude that the COVID-9 pandemic negatively impacts the brewery market. This conclusion is broadly aligned with CMMA (Czech and Moravian Microbreweries Association, 2020) research findings. According to the CMMA research pandemic situation has a strong negative influence on finance for 36% of microbreweries. In addition, 39% of microbreweries report a somewhat negative effect on finance.

Then, we tried to ascertain through working hypothesis H3. The third hypothesis deals with the impact of the COVID-19 pandemic on microbreweries' activities concerning enterprises' characteristics. We confirmed differences between microbreweries in positive perception of the pandemic situation pertaining to the range of enterprise activities. Total 21% of microbreweries in 2021 reported a positive perception of the COVID-19 pandemic. Our results differed from the CMMA research (Czech and Moravian Microbreweries Association, 2020). It is much higher than 5% in 2020 reported by CMMA research. Even the CMMA research stated that 10% of microbreweries in 2010 were unable to assess the impact of the pandemic situation. The difference may be caused by a certain degree of adaptation to market conditions. Some microbreweries have been able to take advantage of the situation to develop further gradually. Therefore, their evaluation of the impact was relatively positive afterwards. In addition, the number of years in the brewery business is significantly related to the diversification strategy of microbreweries during the pandemic period. We found that microbreweries which have been

in business for a longer time are more likely to develop a diversification strategy in response to the COVID-19 pandemic. However, it could provide another possible explanation of this finding. Similarly, Esposti, Fastigi, & Viganò (2017) report that success, especially for agricultural microbreweries, is linked to a higher degree of product diversification. Thus, microbreweries lead to more vigorous market orientation and more favorable conditions for developing the requirements provided by the government.

Besides the perceptions of competition threat, promotion and microbrewery activity, other research areas are emerging concerning the impact of the COVID-19 pandemic. Using the COVID-19 induced stress model, Kang, Park, Lee, & Lee (2021) found that this stress negatively affects organizational trust, job satisfaction, and employee self-evaluation in the tourism and hospitality industry. In SWOT analysis, Kavan (2021) identifies social threats and weaknesses such as the absence of uniform rules, clear epidemiological standards, fear of spread, ignorance of hygienic measures, distrust in care, unwillingness to establish premises, and large-scale impacts on society. Another issue was the problems associated with corporate governance, which affected the people and the enterprises. According to Klimovsky, Maly, & Nemec (2021), these were problems with evidence-based policy, poor communication, COVID-19 as an object of political struggle, leadership quality, and administrative capacity.

CONCLUSION

We focused on examining microbreweries' perception of competition threat, ways of promotion, and activities during the COVID-19 pandemic in the Czech Republic. During the lockdown in the Czech Republic, the situation was very similar to neighboring countries. Enterprises have been forced to streamline their production processes, expand their product range, and change promotion. However, these new strategies require investment, as microbreweries usually do not pasteurize beer, and some do not even have filtration facilities.

Initially, the paper analyzed the perceived competition threat during the COVID-19 pandemic. We conclude that microbreweries haven't considered a higher competitive threat during the pandemic. The competitive situation on the market has not changed much during the pandemic, and companies perceive various types of restrictions as the main threat. Managers' perceptions of threat weren't different between enterprises regarding their location, scale of activities, or length of in brewery business. On the contrary, we identified production volume as the significant factor of perceived competitive rivalry. Microbreweries with higher

production volumes consider higher threat levels. However, these findings generally occur in the brewery market regardless of the COVID-19 pandemic.

Furthermore, the promotion methods of microbreweries during the COVID-19 pandemic were examined. We proved that enterprises mostly used websites, referrals from existing customers, and promotional items. These results do not differ from the situation before the pandemic. Microbreweries have strengthened local marketing by simply putting up information signs around the roads, introducing beer dispensing from windows, and starting e-shops. The deeper analysis revealed that modern promotion methods such as websites vary depending on the range of business activities. Enterprises with more activities use their websites for promotion activities more. We confirmed that different preferences in other promotions methods related to all examined characteristics such as localization, range of activities, production volume, and the number of years in business. Especially leveraging social networks, promotional items, and customer recommendations depend on these enterprise characteristics.

Finally, we looked at the impact of the COVID-19 pandemic on microbrewery activities. Our research findings show that the pandemic negatively impacts the brewery market, and microbreweries curtail their activities. Further, the impact of the COVID-19 pandemic was examined concerning the characteristics of the enterprises. Obviously, a range of activities influences the positive perception of the pandemic situation. Businesses with a diversified strategy perceive the pandemic more positively by developing more open business models. Similarly, diversification is associated with the length of time enterprises have been in the industry. Enterprises that are in business longer use this diversification to reduce business risk. Most microbreweries have tried to maintain partial operations by selling through the outlet window or the Internet despite the unpleasant situation. Most beers were sold in PET bottles, kegs, or small kegs. Some businesses managed to attract new customers despite the adverse situation. On the other hand, enterprises have been forced to refocus their activities or cease operations.

This research constitutes a contribution and practice recommendations for stakeholders of microbreweries towards the obtained results. Microbrewery managers have their place in the marketplace, primarily in the local conditions of small towns, taking advantage of the patriotism of the place. In the current situation, they should avoid high levels of debt and employ more modern methods of promotion and sales. Microbreweries should find a range of customers, fulfil their wishes, and work with one or more restaurants facilities to ensure long-term sales. If they succeed, competition will continue to have little or no effect on them. Furthermore, microbreweries should use modern ways of promotion in addition to the traditional ones. Most

enterprises have websites, but if they add an e-shop or extend their promotion to social networks, awareness of the business and its products could spread to a more comprehensive range of customers.

Theoretical benefits are seen in the extension of the view on the effects of the COVID-19 pandemic on microbreweries. Fascinating are the conclusions regarding the threat from competition, which is not very high in the microbrewery segment, even though these are small businesses. It turns out that a broader range of activities (diversification strategy) or a more prolonged presence in the industry has a positive effect on microbreweries in overcoming the current situation. Future research should focus on other areas that have been affected by the COVID-19 pandemic in microbreweries. These are, in particular, the areas of finance (Europe Economics, 2021), distribution (Mehrolia et al., 2021), or human resource issues (Kang, Park, Lee, & Lee, 2021). As a result of the closure of businesses, there are higher levels of unemployment in the tourism and service sectors.

A brief conclusion to the shortcomings related to the limitation of our study is given. One problem with the research may be the sample size, which, relative to the population, yields a margin of error of 8.5%. This value is higher than the recommended value of 5%, and it may be a source of fluctuation in the results to a greater extent when replicating the research. Another issue, particularly in terms of comparison, is the inconsistency in definitions of microbreweries, most often the varying threshold for determining the maximum volume of beer produced. Internationally, different ranges of this value are specified.

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