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GLOBAL TRENDS AND INNOVATIONS IN THE CRAFT BREWING MARKET

Cherevychna Nataliia

PhD, Associate Professor,

Department of Hotel, Restaurant Business and Kraft Technologies

Simon Kuznets Kharkiv National University of Economics

ORCID ID: 0000-0002-6660-5366

Oksana Haponceva

PhD, Associate Professor, Department of Water and Environmental Analysis,

LADR Central Laboratory, Hamburg, Germany

ORCID: 0000-0003-3959-4689

Abstract. The article examines global trends and innovations in the development of the craft brewing market under contemporary conditions. The main directions of transformation in craft brewing are analyzed, and the factors influencing its dynamics are identified. The study employs methods of analysis, synthesis, comparison, and generalization. The features of craft brewing development in the United States, Germany, and the Czech Republic are characterized as leading countries with well-established brewing traditions and a high level of innovative activity. Modern approaches to craft beer production are analyzed, including the use of non-traditional ingredients, the implementation of environmentally oriented technologies, process automation, and the application of digital marketing tools. Key trends in consumer demand and their impact on the formation of assortment policies of craft breweries are identified. The prospects for further development of the global craft brewing market are outlined, taking into account international experience.

Keywords: craft brewing, global market, innovations, development trends, United States, Germany, Czech Republic.

Introduction. Craft (artisan) brewing (from English craft brewery) refers to the production of beer by small, usually privately owned breweries that use traditional recipes and place emphasis on flavor and product quality [1]. The term “craft beer” has gained widespread use in both academic and professional contexts and is employed to denote an alternative to mass-produced, standardized products aimed at a broad consumer audience.

Craft beer is distinguished by its uniqueness. It is characterized by small production volumes, independence from large corporations, and a creative approach to brewing styles and categories. Producers place strong emphasis on locality: they use locally sourced ingredients, cooperate with farmers, and support regional traditions [2].

In recent decades, the craft brewing market has demonstrated dynamic growth and has become a significant segment of the global brewing industry. Shifts in consumer preferences toward unique flavor profiles, product authenticity, and local identity have contributed to the active development of small and independent breweries in various regions of the world. Craft beer is increasingly viewed not only as a beverage but also as an element of culture, innovation, and entrepreneurial creativity.

Literature analysis. The history of craft production has deep roots dating back to the period when products were manufactured by hand, taking into account local traditions and regional specificities. The first craft brewery in the United States and the iconic producer of “steam beer” (Anchor Steam Beer) is considered to be the Anchor Brewing Company, founded in San Francisco in 1896. Fritz Maytag is regarded as the first craft brewer; in 1965, he purchased Anchor Brewing, saving it from closure and reviving interest in traditional brewing methods and the diversity of

beer flavors. He introduced new technologies and recipes and used unconventional ingredients. Maytag became a symbol of a new era of American craft beer. Within just 30 years, more than 1,500 craft breweries emerged in the United States, transforming consumers' attitudes toward beer by endowing it with a distinctive style and character [2].

This production continued until 2023. After its closure and liquidation, the company's assets were acquired in 2024 by the influential Turkish-American entrepreneur Hamdi Ulukaya (founder and owner of Chobani), who planned to revive and preserve the historic production in San Francisco.

The oldest operating brewery in Europe is considered to be Weihenstephan (Germany, founded in 1040). It originated as a monastic brewery and is now state-owned, preserving traditional brewing methods.

The strong interest from consumers and producers led to the systematization of original beer styles. Worldwide, there are two most widespread approaches, conventionally referred to as the "European" and the "American" models. Brewing associations have established specific criteria for craft beer.

According to the rules approved by the Brewers Association (USA), a brewery may be considered craft if three conditions are met:

- the brewery must be small, producing no more than 6 million barrels of beer per year;

- the brewery must be independently owned, with no more than 25% of its shares held by a non-craft brewery. It is believed that if a craft brewer is largely dependent on external investment and outside resources, creative freedom is lost;

- the beer must be brewed in a traditional manner from malt, water, and hops. However, the brewer may use spices and other ingredients, not to reduce production costs but to enhance the beer's flavor qualities.

In Europe, the criteria for craft status are more conditional and can be summarized as follows:

- a craft brewery should be small;
- beer production should be a creative rather than a purely commercial process;
- brewers should listen to their consumers and enthusiasts.

It is evident that the second criterion has largely exhausted itself under modern economic conditions, as it is difficult to imagine the beer market without a commercial component. Nevertheless, in Europe, craft beer tastings are often held that completely exclude financial interest. Such events are organized in order to obtain feedback and comments from consumers [1].

Methodology. The methodological framework of the study is based on the application of a set of analytical, statistical, logical, and systemic-structural methods. The research employs a systems approach, according to which all market processes and phenomena in the field of craft brewing are analyzed in their integrity and interdependence. The following scientific methods were used to obtain the main theoretical results: the abstract-logical method, as well as the methods of analogy, comparison, induction, and deduction.

In analyzing the current state of the global craft brewing market, the statistical method was applied; the comparative method (critical assessment of methodological approaches, concepts, innovative developments, models, and proposals of leading scholars addressing the growth of consumer awareness and the intensification of competition in the craft production sector); and the systems-analytical method (analysis of legislative acts and other regulatory documents). All these research methods complement one another and collectively make it possible to comprehensively examine the subject of the study.

Main part. The global craft beer market is characterized by innovativeness, growing consumer awareness, and intensifying competition. Modern breweries do not merely brew beer; they implement new concepts focused on sustainability, authenticity, and regional identity. Dominant trends include unique beer styles (Sour, Barrel-Aged, Fruit Beers, New England IPA), the use of local ingredients (including

exotic products), and integration with gastronomy (gastrotours, festivals, workshops, tastings, etc.). Demand for non-alcoholic and low-alcohol craft varieties is increasing in response to healthy lifestyle trends [3]. Hybrid models are also emerging. In particular, market saturation leads to heightened competition and production consolidation, as large corporations attempt to integrate craft brands. New challenges arise for small breweries related to scaling up while preserving their identity. Thus, craft brewing is becoming an integral part of the global beverage market, expanding far beyond the United States and Europe.

Today, craft beer has become part of global culture, which has significantly expanded on an international scale. The largest breweries in the United States have united into associations seeking to support and protect the principles of craft brewing [3]. European leaders in terms of quality and tradition are considered to be the Czech Republic (especially Prague) and Germany (Bavaria, Munich), as well as Belgium (Brussels) with its unique beer styles, Ireland, and Japan.

The United States remains the global leader in the number of craft breweries, significantly outperforming other regions, including the European Union. As of April 2025, there were 9,922 operating craft breweries in the United States. Craft beer holds a strong position in the global market, accounting for approximately 13.3% of total beer production.

Since 2024, the industry has been undergoing transformation (beer production in the United States declined by 5%). Changes in consumer preferences and behavior have affected the beer market. A healthy lifestyle has become fashionable, promoting non-alcoholic and low-alcohol beer varieties. The craft company Athletic Brewing has become the sales leader in the non-alcoholic beer segment in the Whole Foods and Trader Joe's retail chains.

Consumers are also increasingly choosing premium beer varieties with unique flavors and high quality. The super-premium beer segment grew by 4% in 2025,

particularly in states such as California, Texas, and Florida. Producers are actively experimenting with new ingredients and flavors, including exotic fruits, spices, and tea (Sour Ale, Hazy IPA, Wild Ale, Berliner Weisse, Gose). In addition, non-alcoholic alternatives are developing. Younger consumers are switching to low-alcohol cocktails, and the popularity of beverages containing THC (the psychoactive substance in cannabis), such as THC seltzers, is increasing. These beverages combine characteristics of beer and cannabis (Wynk, Cycling Frog, BREZ, Anytime, Summit) and have become popular in breweries across 24 U.S. states where cannabis use has been legalized. Breweries actively engage consumers to visit their taprooms (restaurants and bars located at breweries) by organizing events, special promotions, tastings, and similar activities.

The Czech Republic is the birthplace of beer, with a rich history and traditions, well known for its craft beers and affordable prices. In terms of per capita beer consumption, the country consistently ranks at the top of annual ratings. Large producers hold leading positions in most of the market and are difficult, though not impossible, to displace. In addition to major players with broad portfolios of well-known brands, nearly 500 regional microbreweries promote their own products on the Czech beer market.

Regarding the total number of microbreweries, the Czech Republic lags behind Western Europe, which in turn falls behind the United States, where the number of small brewing enterprises is the highest. However, among Eastern European countries, the Czech Republic is the absolute leader [4].

Microbreweries are emerging not only on the sites of former breweries but also, for example, in mountainous areas near popular tourist routes. The number of Czech craft breweries with production volumes of up to 10,000 hectoliters of beer per year is steadily increasing. On average, one new brewery opens every week. Last year alone, their number increased by approximately 50, with each offering something unique [5].

For instance, in Brno, one craft brewery is located right in the middle of a residential area. Another has been operating for three years in the premises of a former slaughterhouse built more than a hundred years ago.

Fruit and flavored beers are becoming an increasingly important part of innovation in Czech brewing. They not only expand the product range but also help attract new categories of consumers. According to observations, 10–15% of the Czech population currently shows interest in special craft beer varieties.

At a recent gastronomic festival in Brno, visitors were able to fully appreciate how craft production allows brewers to unleash their creativity and taste dozens of unique beers, including beer aged in cognac barrels, beer with added spices, and beer brewed according to ancient Celtic recipes. Beer mixed with mead (“korma”) is brewed in the small village of Podlesí, near the town of Příbram in Central Bohemia. This is an ancient Celtic drink prepared by mixing beer with mead. Its taste is not overly sweet and features notes of aromatic herbs. Naturally fermented mead is used in its production.

One of the most popular beer restaurants in Prague, “Pivovarský dům” with its own brewery, is renowned for fresh, live beer of unusual styles and varieties. Local fruit beer varieties reflect Belgian beer traditions, which have become famous worldwide for their smoothness and fruity profile (such as coffee beer, nettle beer, and similar beer mixes). Nettle beer is particularly popular in the country during the period before Easter. It acquires its color due to a natural nettle extract.

The Pivovarský dům microbrewery brews so-called “beer champagne” a standard beer with an alcohol content of 10%. This beer was first created 20 years ago specifically for women and remains popular to this day.

The production of an entire range of fruit beers with different flavors and aromas, which began in the Czech Republic about 22 years ago, was targeted at women who had previously been indifferent to beer. This strategy proved successful: fruit beer found its audience and became especially popular among women, leading

to an expansion of the assortment. Today, the local beer Aurosa is referred to as the “first beer for women”.

A particular source of pride for the brewery is banana beer. Some visitors are skeptical about the combination of the words “banana” and “beer” This beer indeed smells like banana rather than beer, as it is brewed using wheat malt and Bavarian wheat yeast, which release a light banana aroma [6].

Beer fashion trends change approximately every five years. Initially, stronger bottom-fermented beers were particularly popular in the Czech Republic. In the 2000s, ales, wheat beers, and various flavorings became popular. Ales and dark stouts came into fashion 10–12 years ago. In recent years, beers with a more pronounced sour or fruity taste have gained popularity. Seasonal preferences are also evident among beer enthusiasts, while non-alcoholic beer is especially popular among drivers [7].

The President of the Union of Microbreweries predicts that craft breweries will remain numerous for at least another ten years. The Union is working toward simplifying administrative requirements for the business so that microbreweries will no longer have to annually confirm their economic stability. The Union plans to issue quality certificates to its members, enabling consumers to better navigate the diverse products of small enterprises. In addition, there is still a shortage of professional brewers in the country. Many people in the field lack formal specialized education, which, however, does not mean they are unable to brew high-quality beer.

Although it is difficult to compete with brewing giants and craft (micro-)brewing accounts for only about 2.5% of the Czech market, the essence lies not in quantity but in quality and originality [4].

Analyzing the situation on the German craft brewing market, it can be noted that its size was estimated at USD 8.16 billion in 2024 and increased to USD 9.35 billion in 2025. According to forecasts by Market Research Future, the craft beer

market is expected to reach USD 36.68 billion by 2035, demonstrating a compound annual growth rate of 14.6% over the forecast period [8].

The main trends in the German craft beer market include the growth of local and premium varieties distinguished by diverse flavors and unique recipes. This trend is driven by the desire for authentic products with a clear regional identity. Craft brewers are also actively experimenting with ingredients and styles, adding fruits, herbs, spices, berries, and unique malt profiles, which creates new market segments and attracts younger consumers.

Fruit Berliner Weisse mit Frucht is a traditional Berlin style that craft breweries actively modernize (BRLO Berliner Weisse Himbeere – raspberry; Schneeeule Weisse Marille – apricot; Berliner Kindl Weisse mit Waldmeister – woodruff). It is a light, sour beer with pronounced fruity acidity. Sour ales, including Gose, represent a historic German style that is now often enriched with fruits and spices (Rügener Insel-Brauerei Gose – with sea salt and coriander; Fuerst Wiacek Fruited Gose – with mango, passion fruit, or raspberry).

Herb / Spiced Beer / Kräuterbier refers to a style that traces its origins to the medieval tradition of hopless gruit beer (e.g., Brauerei Kemker Kultur Kräuter Gruit—with herbal blends of sage, juniper, yarrow, and rosemary; Heidenpeters Grut Ale—using herbs instead of hops).

Spiced Ale / Experimental Ale is a modern, youth-oriented experimental style without strict canons, featuring additions such as cinnamon, vanilla, pepper, cocoa, and coffee (e.g., Crew Republic Drunken Sailor Spice Edition—with spices; ÜberQuell Imperial Stout Chili—with chili pepper).

German craft brewers also create Rauchbier styles with unique malt profiles (smoke, bacon, caramel, toasted bread), achieved through the use of smoked malt (e.g., Schlenkerla Rauchbier Märzen; Crew Republic Smoked IPA), as well as Imperial Stout / Baltic Porter with unconventional malts and adjuncts (e.g., Sudden

Death Brewing – Imperial Stout Series—with coffee, vanilla, coconut; Freigeist Bierkultur Baltic Porter—with chocolate and roasted profiles).

At the same time, the popularity of non-alcoholic craft beer varieties is growing in Germany, in line with global healthy lifestyle trends and changing consumer behavior—young people and part of the adult population increasingly choose alternatives with reduced alcohol content. This segment is becoming not only a health-related trend but also an important component of many breweries' portfolios.

An important trend in the German craft beer market is the emphasis on environmental friendliness and production sustainability.

A study of the Ukrainian craft beer market for 2021–2025 shows that in 2024–2025 there was a recovery in beer production following a significant decline in 2022 caused by Russia's full-scale invasion of Ukraine. Exports of Ukrainian craft beer in 2023 slightly decreased in value terms compared to 2021, while physical volumes remained almost unchanged, due to a reduction in the average export price and currency fluctuations. At the same time, imports of craft beer increased in value terms despite a decline in physical volumes, which is associated with rising supplier prices and higher logistics costs [9, 10]. The study found that the key criterion for Ukrainian consumers when choosing craft beer is not price, but taste and style.

In general, the modern assortment of craft beer produced using non-traditional raw materials can be divided into the following segments:

Beer made with fruit and berry raw materials. This segment accounts for the largest share of beer innovations worldwide.

Beer made with vegetable raw materials. In Japan, this includes Tomato Bibere made with tomatoes; in the United States, Cave Creek Chili Beer with chili pepper. A significant share of the global market is occupied by beer made with pumpkin extracts (Pumpkin Ale), which is a seasonal trend in many European countries and the United States.

Beer based on dairy products. In Japan, Bilk beer is produced, consisting of 30% milk; in France, Lactiwel consists of 75% milk and kefir starter culture and contains 2% alcohol. Such beer is not produced in Ukraine.

Beer made with spices. In Japan, this category includes Wasabi Dry beer with wasabi spices, coriander, cloves, ginger, mustard, and others.

Gluten-free beer. One of the main global trends in the craft beer industry is the production of gluten-free beer, as gluten intolerance is increasingly common. Therefore, brewers use rice, corn, millet, buckwheat, sorghum, amaranth, teff, quinoa, and other gluten-free crops instead of barley. Nigeria has the most extensive practical experience in producing gluten-free beer. Drawing on this experience, the American brewing company Anheuser-Busch introduced Redbridge beer made from sorghum with molasses to the North American market. Among major gluten-free beer producers is Bard's Tale Beer, an American company that produces Dragon's Gold using 100% sorghum malt and hops with buckwheat, honey, and corn. Another American company, Ramapo Valley Brewery, developed Honey Passover beer made from honey with the addition of molasses to enhance aroma and enrich the beverage with beneficial elements. The Canadian brewing company New France Beers released La Messarange beer made from rice and buckwheat. The British company Green's produces several gluten-free beers: Discovery Beer, Pioneer Lager, Endeavour Double Dark Beer, Trailblazer Lager, Herald Ale, and the seasonal Pilgrim Cherry Beer with traditional spice and cherry aromas. These beers contain vitamins and minerals and are close to traditional beer in their sensory characteristics, which explains their strong demand among consumers in America, Canada, and Europe. The Belgian company Mongozo produces beer based on quinoa with the addition of exotic ingredients such as coconut, banana, and mango. The Italian brewery Bi-Aglut produces Birra-76 and BiAglut beers based on buckwheat, using hops, corn syrup, and vitamin B1.

Low-alcohol beer-based beverages. The promotion of a healthy lifestyle leads to reduced alcohol consumption, prompting craft producers to actively manufacture beverages with lower sugar and alcohol content. This also applies to the beer market, where beers with an alcohol content of 2–4% occupy a significant share. Production of low-alcohol beverages by well-known brands based on beer is increasing. Among the most popular drinks in European countries are Dutch apple, raspberry, and cherry Kriek beer; the German Radler cocktail made from beer and lemonade; and the Scottish ale Kelpie Seaweed with seaweed.

Beer styles oriented toward women. In the Netherlands, the Karla line of functional beer for women is produced, containing fruit juice, soy lecithin, folic acid, and vitamins. In Japan, Imperial Chocolate Stout with a stable chocolate flavor and vanilla aroma is produced, as well as Okhotsk Blue beer containing seaweed and melted iceberg water. German scientists have developed “rejuvenating” Anti-Aging Bier, which includes traditional beer components—barley, yeast, hops—as well as water from hot mineral springs, vitamins, and antioxidants that can slow aging processes and improve well-being. In the United Kingdom, new products in the non-traditional raw materials beer segment include the Cobra Bite brand, with varieties such as Fresh Ginger, Cobra Bite & Sweet Lime, and Blood Orange & Lemongrass, primarily targeting a female audience, with an alcohol content of 1.4% [1].

The Ukrainian craft beer market follows global trends, demonstrating growth in the number of small breweries, high product quality comparable to imported beer, and active development of local production, while facing challenges related to excise taxation and competition from the mass market.

Conclusions. Growth of the craft brewing segment is observed worldwide due to changes in consumer preferences toward individualized taste profiles, the use of local ingredients and production, premium quality, and product uniqueness.

Innovations in beer styles and recipes enable small and medium-sized breweries to differentiate their products and increase profitability. Technological and

flavor experimentation has become a key competitive factor, allowing craft breweries to compete effectively with mass-market brands.

Regional and cultural characteristics shape market development strategies. The United States leads in large-scale innovation, Germany combines tradition with cautious experimentation, while the Czech Republic remains more conservative.

The economic impact of innovation is reflected in the growth of premium consumer value, integration with gastronomy and tourism, and the formation of strong and sustainable brands in both local and international markets.

Future market prospects are associated with the continued integration of technological innovation, cultural authenticity, and alignment with sustainable production trends.

Discussion. It can be noted that opportunities for craft brewers today are virtually limitless. Craft beer is not merely a beverage but an art form in a bottle that continues to inspire people around the world. Each flavor represents a story of experimentation, and each brewery embodies a unique tradition shaped by creative ideas and craftsmanship. Although craft brewing is entering a new era, its spirit remains unchanged: when something is created with passion and dedication, it will inevitably find its connoisseur.

References

1. Cherevychna, N., Radchenko, L., Gaponceva, O., & Radchenko, A. (2021). Vse pro alkohol'ni napoi: Navchal'nyi posibnyk [All about alcoholic beverages: Textbook]. Kharkiv: KhTEK KNTEU.
2. Istoriya kraftovoho pivovarinnya: Vid monakhiv do smaku XXI stolittia. (n.d.). MBrew. Retrieved February 9, 2026, from [<https://mbrew.com.ua/istoriya-kraftovogo-pyvovarinnya-vid-monahiv-do-smaku-xxi-stolittya/>](<https://>

mbrew.com.ua/istoriya-kraftovogo-pyvovarinnya-vid-monahiv-do-smaku-xxi-stolittya/)

3. Kraftove pyvo v SShA: Revoliutsiia, shcho zminyla svit smakiv. (n.d.). MBrew. Retrieved February 9, 2026, from <https://mbrew.com.ua/kraftove-pyvo-v-ssha-revolyucziya-shho-zminyla-svito-smakiv/>

4. Ohliad ches'koho pyva: Naikrashi sorty ta populiarni brendy. (n.d.). HopHey. Retrieved February 9, 2026, from <https://hophey.ua/info/oglyad-cheskogo-pyva-najkrashi-sorty-ta-populyarni-brendy/>

5. Katalog mini-pivzavodiv i pivovaren'. (n.d.). DSG Group. Retrieved February 9, 2026, from <https://dsg-group.com.ua/catalog64/ukr/mini-pivzavodi-pivovarni.html>

6. Pivovarsky dum. (n.d.). Pivo-dum.cz. Retrieved February 9, 2026, from <https://www.pivo-dum.cz/pivni-nabidka>

7. Krashchi pyvni mistsia Chekhii i ches'ke pyvo. (n.d.). Migrant. Retrieved February 9, 2026, from <https://migrant.biz.ua/chexiya/zhittya-cz/krashchi-pyvni-mistsia-chekhii.html/amp>

8. Nimets'kyi rynek kraftovoho pyva. (n.d.). Market Research Future. Retrieved February 9, 2026, from <https://www.marketresearchfuture.com/reports/germany-craft-beer-market-46609?utm>

9. Doslidzhennia rynku pyva v Ukraini. (2023). Pro-Consulting. Retrieved February 9, 2026, from [<https://pro-consulting.ua/ua/issledovanie-rynka/analiz-rynka->

piva-v-ukraine-2023-god](https://pro-consulting.ua/ua/issledovanie-rynka/analiz-rynka-piva-v-ukraine-2023-god)

10. Analiz rynku kraftovoho pyva v Ukraini ta krainakh YeS. (2024). Pro-Consulting. Retrieved February 9, 2026, from https://pro-consulting.ua/ua/issledovanie-rynka/analiz-rynka-kraftovogo-piva-v-ukraine-2024-god