

Analysis of the Romanian Beer Sector and Romania's Position within European Beer Trends

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Abstract. *The aim of this paper consists in presenting the dynamic evolution of the Romanian beer sector at both national and European levels during the period 2018-2022. From an economic standpoint, the beer industry stands out as one of the biggest and most significant revenue contributors worldwide, with beer representing the most widely consumed alcoholic beverage globally. The need to carry out this paper emerges from the beginning of the COVID-19 pandemic, following the effects it had on the active population and implicitly the changes in consumption behaviors. Moreover, considering recent times, the war in Ukraine is a factor that can seriously affect the imports and exports of surrounding countries of grain necessary for the production of beer, this aspect being really important in observing economical changes. This paper relies heavily on a thorough examination of the demand and supply dynamics within the Romanian beer sector, assisted by a comparative analysis of its standing among European beer trends. Notably, Romania holds a prominent position as one of the highest per capita beer consumers. The main hypothesis of this study consists in the fact that the demand and supply of beer did not increase during the pandemic, and that the expenses for this product suffered considerable increases. This is proven through a quantitative analysis in which indicators such as beer production and consumption, average expenses, imports and exports were analyzed. For this achievement, national, European and international databases were accessed.*

Keywords: beer, beer trends, beer value, consumers, statistical analysis

Introduction

Beer is one of the most significant beverages throughout history and still has a strong impact on people's lives. The motivation for choosing this topic for the current work consisted in the interest in the study of the beer market, both through the lens of marketing aspects and the curiosity of an occasional consumer of this product, especially under special circumstances such as the COVID-19 pandemic and more recently the war in Ukraine, which is on Romania's border.

Alcohol consumption is an aspect that represents us as human beings and that has been with us, arguably, since our beginnings on this earth as social beings. Therefore, investigating the changing consumption patterns of beer is crucial as it directly intersects with two very important factors shaping our lives: social dynamics and economic conditions. From a social point of view, beer represented and still represents an extremely common and effective means of creating social relationships between individuals and different social events that influence our social status. From an economic point of view, this product was and still is used as a trade product at all levels, thus becoming one of the largest income-generating consumer goods worldwide. Therefore, intersecting the two sides, social and economic, consumption patterns from the population emerge and can be

studied for a more detailed understanding in relation to social categories under different circumstances, and not only that.

As a consequence of the importance of beer consumption in our lives, under the presence of an era of digitalization, more and more studies about beer have been researched in recent years. For instance, this can be proven by documenting and carrying out any bibliometric study, whether we are talking about beer as a single subject of study, or whether we are talking about beer in relation to other subjects, such as competitiveness, engineering, chemistry and so on.

The purpose of this paper is to document and analyze the particularities of beer in general, but also its appearance on the European territory and how it came to register such a high value as a sector from an economic point of view. The main hypothesis of this work consists in the fact that the beer sector at both national and European level experienced statistical decreases regarding the production and consumption of beer, especially during the pandemic period, despite common belief. Implicitly, the main indicators researched in this paper are the ones regarding the demand and supply of beer at the European and Romanian level. Beer consumption patterns are studied through the lens of average spending on this product, both by residential area and by social category.

Finally, beer imports and exports are analyzed to provide a broader perspective on foreign trade with this product. All the previous mentioned indicators will be studied in detail, on the basis of which relative differences will be made and concrete conclusions will be drawn regarding their dynamics.

Literature review

Beer origin on European grounds

Beer represents one of the oldest and most consumed alcoholic beverages ever known by humankind. In general terms, beer represents the alcoholic drink produced by the fermentation of the following components: hops, barley malt, yeast and water. Other derivatives of these components have been used throughout history and may be used today for creating different types and styles of beer (Wojciech, 2021). Beer's esteemed reputation arises from its enjoyable sensory characteristics, its superior nutritional content, and the multitude of potential health advantages it offers (Salanță et al., 2020).

The place and time when beer, or better said, its primitive form first appeared is uncertain to pinpoint. Clues in determining these aspects had led to various distant places, such as China, Europe and even North-Africa. Also, the technique used to produce what would resemble today's beer from those times remains equally uncertain, and whether it was spread from one place to another or it was invented independently (Colen and Swinnen, 2010).

It is believed that the origin of beer took place approximately 7000-8000 years ago in the surrounding territories of ancient Sumeria, respectively in the area of today's Iraq. In any case, any such traces that have been detected represent only primitive forms of beer and could hardly be under any circumstance similar to today's beer as we know it. Thus, the appearance of actual beer from a historical point of view is closely related to the places where there was an active technological line of production of this drink with the intention of being used for mass distribution and consumption. As a result, there is raw evidence of beer brewing and consumption in Ancient Egypt (Wojciech, 2021). This evidence consists of various methods and techniques used back then that have been identified in the presence of primitive forms of wheat and ancient traces of malted

barley around 3000 years ago. Despite this fact, it is strongly believed that the Egyptians took over the manufacturing processes from the Sumerians and Babylonians in one way or another and implemented them for their own benefit (Bamforth, 2023).

When it comes down to tracking the first appearances of beer on today's European territory, those aspects are often reported and pinpointed towards the period related to the Middle Ages, back when, generally speaking, beer consisted of being a product prepared and enclosed by the church, implicitly fermented by monasteries and their staff. Therefore, it was the monks who ended up being the ones responsible for improving the technological process of brewing beer by using different varieties of yeasts in the crucial role in preserving the beverage for that period. Fast forward after many years, during the time period of the industrial revolution, the technological processes of beer regarding its manufacturing and distribution came to be heavily industrialized, implicitly mechanized. This huge leap represents to this day a great and important historical step, as well as a great achievement that opened up new opportunities in the beer sector as we know it today (Dobre-Baron, 2012).

The modern beer market from an economic point of view

With the beginning of the industrialization of beer as a sector and the mechanization of the production and distribution processes of a specialized factory, it became one of the most appreciated and consumed alcoholic beverages worldwide. Following this huge step, beer becomes very accessible throughout the world as a product of common consumption. Thus, according to the periods of 2010-2020, Asia represented the largest region that recorded the largest net consumption of beer. For reference, in 2018 China was the biggest country with the largest total beer consumption in the world, covering more than 20% of the total global beer demand (Capitello and Maehle, 2020).

When it comes to the annual beer consumption per capita in the whole world, the most representative countries are the European ones. Among the first countries that stand out and are classified in the top 5 states the most when it comes to the annual consumption of beer per capita in the European territory during the years 2000-2023 is Czech Republic, which is the most common because it's on the 1st place in all statistical years, being followed by Germany, Austria, Poland and Romania (Capitello and Maehle, 2020; The Brewers of Europe, 2023)

In an ironic and fascinating manner, analyzing the historical evolution of the global beer market and its changes, it is observed that those states or better said the geographical regions that in antiquity were closely associated with beer consumption are no longer listed among the big beer consumers today. This finding underlines the complex and dynamic changes in the preferences and consumption habits of modern society since the beginnings of beer trade and implicitly in the context of globalization. Accordingly, in determining whether a country can be considered a beer drinking country or not, it is essential to consider not only beer consumption per capita, but also total beer consumption as a whole in comparison to other alcoholic beverages (Colen and Swinnen, 2010; Capitello and Maehle, 2020).

An important aspect that has influenced the evolution of the value of beer over time is the ratio of its price and its comparison to other alcoholic beverages such as (and especially) wine. Given that most other alcoholic beverages, including wine, have had and still have higher prices than beer, the value of the world beer sector has grown steadily and significantly over the years. For example, compared to the value of the world wine sector in 2005, the value of the beer market has more than doubled, thus reflecting major changes in consumer preferences as well as global consumption (Colen and Swinnen, 2010).

Globally, the evolution of beer consumption has registered a rapid and steady incline since the 1990s, with the global beer market being worth a whopping \$250 billion in 2010, reflecting the beer industry's significant impact on the global economy. Following these increasing economic trends in the value of beer production and consumption highlights the importance and appreciation of this drink by consumers all over the world and implicitly their consumption habits. According to Figure 1, the value of the global beer market has increased rapidly since 1990 and, at the moment, the world beer market is worth 250 billion dollars and is 2.5 times that of wine (Swinnen, 2017).

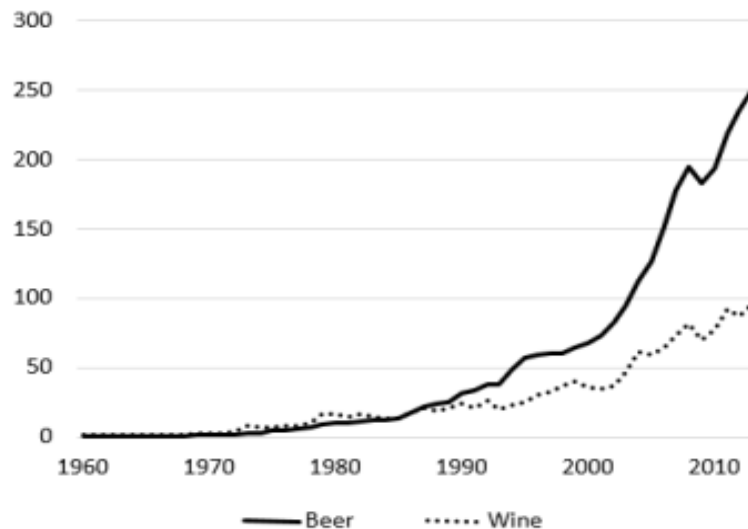


Figure 1. Evolution of the beer market value (billion dollars), 1960-2010

Source: *Beer consumption and trade in an era of economic growth and globalization*, 2017.

Craft beer sector

During the last decades, more and more types of drinks similar to classic beer have been created and introduced to the public using different new technological processes regarding beer manufacturing, as well as different methods and the use of extra main ingredients (Veljovic et al., 2015). Following the huge growth of the beer sector worldwide in the context of globalization, as a consequence craft beer was born and ended up becoming more and more recognized. Thus, in a new era of knowledge, the concept of craft beer, which are unusual beers, with different tastes, aromas and ingredients, are becoming more and more widespread (Wojtyra, 2020).

When it comes to consumers, increased consumption of craft beer shows a certain connection between those who drink and enjoy it, making them feel that they are part of a specific group who share a certain bond (Pokrivčák et al., 2019). Moreover, craft beer consumers prefer this type of beer because they perceive it as a much higher quality product, but also as a means of self-satisfaction, style and even identification with one's own person in society (Da Costa et al., 2018).

Therefore, in recent times, one can observe and appreciate the constant growth of the world beer sector due to the emergence and development of the craft beer sector. This is achieved by innovating manufacturing processes, as well as by implementing complex beer recipes, which add value through high-quality ingredients (Violino et al., 2020). The craft beer sector manages to penetrate the beer market and create a niche market. This is very important from an economic point of view because the craft beer market manages to give different styles and approaches to beer

products, compared to the classic formula of industrial beer until now. Consequently, the beer sector manages to include an increasingly wide target audience (Mastanjević et al., 2019).

Methodology

Since the topic of beer consumption is a fascinating one, either from the perspective of customs and cultures, or from the economic perspective or that of the average consumer, numerous statistics have been researched and displayed within public and private institutions.

A reliable support framework on which the data of this study is based is the database of The Brewers of Europe, which offers a clear situation at the European level and the Brewers of Romania for specific details at the national level. For additional information on the national beer sector, public data from the TOPFIRME platform and the database of the National Institute of Statistics (INS) were used.

For the analysis of beer imports and exports values, the data was retrieved from the International Trade Centre (ITC) database. The data was analyzed, commented and transposed into tables/figures through Microsoft Excel 2021.

Results and discussions

Although throughout history the beer sector has experienced significant increases in all parts of the world regarding both production and consumption, the history of recent years shows a downward trend regarding the two at the European level.

According to the European non-profit association *The Brewers of Europe*, beer consumption at European level registered a decrease of 2.84% in the period 2018-2022, falling from the value of 377,667 thousand hectoliters in 2018 and reaching a value of over 366,932 thousand hectoliters in the year 2022. In first place in terms of total beer consumption is Germany, with a considerably high value among European countries of over 79,000,000 hl, representing almost 22% of the total European consumption recorded. In second place is the United Kingdom, with a value of over 45 million hectoliters, and in third place is Spain, with a value of over 42 million hectoliters in 2022 (Table 1).

According to the *European Beer Trends 2023* publication, Romania is in 10th place in 2022 among European countries in terms of total beer consumption, with a value more than five times lower than that of Germany, namely 15,600,000 hectoliters. Also, according to the *Brewers of Romania 2023 annual report*, at the national level, over 80% of the total beer consumption is achieved through retail sales, the rest being made through the HoReCa field.

Table 1. Total European beer consumption (thousands of hectoliters) and the top 5 beer consuming countries

Country	2018	2019	2020	2021	2022
Germany	84649	82933	78706	76265	79094
United Kingdom	47772	47119	40883	46068	45870
Spain	39953	41289	36465	40005	42312
Poland	38360	37949	34689	33442	34733
France	23500	23600	22000	22200	22800
Total Europe	377667	377501	345922	354101	366932

Source: Data based on the European Beer Trends Statistics Report, 2023 edition.

According to the European association *The Brewers of Europe*, at the European level, in 2018 the total beer production reached values of over 411 million hectoliters, which decreased until 2022, reaching the value of over 401 million hectoliters (according to Table 2). Thus, there is a decrease of approximately 2.41% from 2018 to 2022, the same trend being present as in the case of total European beer consumption. Among European countries, in first place in terms of total beer production is Germany (the same situation as in the case of total consumption), having a considerable advantage compared to the other countries with the value of 87,652,000 hectoliters in 2022. In second place is Spain, with a value of 41,136,000 hectoliters, and in third place is Poland, with a value of 37,797,000 hectoliters, followed by the United Kingdom and Belgium.

Romania is in ninth place, with a total beer production of 16,690,000 hectoliters. As a comparison, this value is over 5 times lower than that of Germany's.

**Table 2. Total European beer production (thousands of hectoliters)
and the top 5 beer producing countries**

Country	2018	2019	2020	2021	2022
Germany	93652	91610	87027	85443	87832
Spain	38143	39516	34666	38126	41136
Poland	41482	40411	39066	38277	37797
United Kingdom	40885	39247	32217	38382	37385
Belgium	N/A	N/A	N/A	N/A	23350
Total Europe	411875	409232	380550	387870	401945

Source: Data based on the European Beer Trends Statistics Report, 2023 edition.

It should be noted that in both cases, namely production and total beer consumption, the highest values are recorded in 2018 and 2019, which represented the year in which the Covid-19 pandemic was already spreading rapidly throughout Europe. Contrary to common belief that people would consume more alcohol while staying at home, a huge decline can be observed immediately in 2020-2021, at least when it comes to total consumption.

Of course, this must also be approached from the perspective of per capita consumption. Therefore, in the case of many beer-consuming countries, the same trend is found, in which consumption per capita recorded the lowest values during the pandemic, such as the Czech Republic, Germany, Austria and Poland. Ironically, even though it is in the top 5 beer consuming countries per capita, Romania recorded its highest values during the analyzed period, more precisely in the years 2020-2021 (The Brewers of Europe, 2023).

Currently, the Romanian beer industry includes the presence of a total of 107 active economic entities operating at the national level, collectively employing around 1600 people and registering a total profit of approximately 160 million RON. This aspect underlines the sector's significant contribution to the economy. More precisely, in the beer production sector, the total market's worth is approximately 4.6 billion RON, equivalent to approximately 1 billion euros. This value represents approximately 0.19% of the total market value for all sectors of activity in Romania, according to the database from TOPFIRME.

Analyzing the statistical data provided by the National Institute of Statistics for the period 2018-2022, it can be observed a constant increase in spending on beer in Romania, both in urban and rural areas (as shown in Figure 2). As for the urban environment, there is a significant increase of 47.09% in spending on beer between 2018 and 2022, reaching a value of 8.62 RON per person. In parallel, the rural environment registered an even stronger increase, of 51.75%, reaching a value of 8.24 RON per inhabitant for beer expenses.

Comparing the two areas of residence, we can see that during the analyzed period of five years, the average spending per inhabitant on beer was 7.04 RON in the urban area and 6.73 RON in the rural area. Therefore, although there is a slight discrepancy of 0.31 RON between the two environments, it is obvious that the general trend of increasing spending on beer is similar in both.

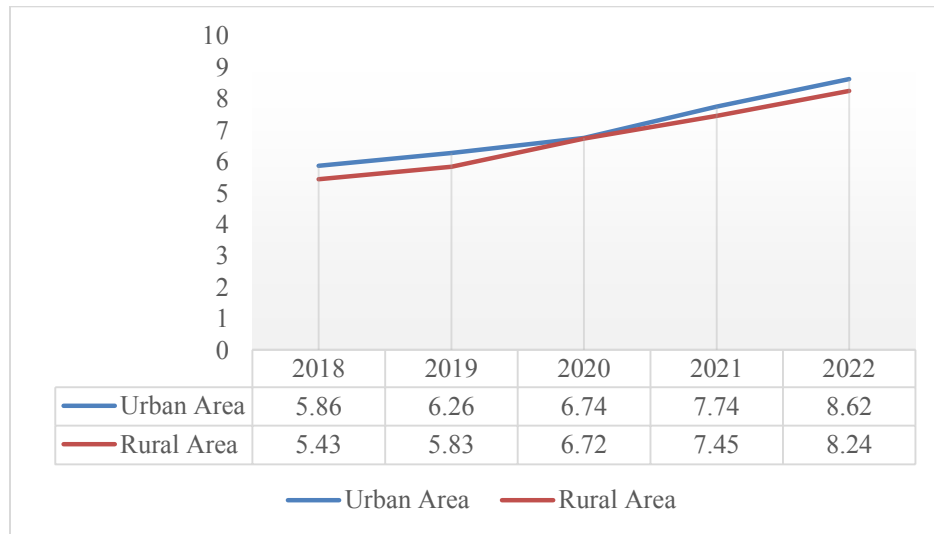


Figure 2. Average monthly costs of buying beer (RON) per person, by residential environment, 2018-2022

Source: National Institute of Statistics, 2023.

Carefully analyzing the average monthly expenses related to the purchase of beer per capita in Romania, we observe significant increases in the period 2018-2022, both at the level of the entire population and within the various social categories. These trends may provide a clear picture of consumption behaviours and changes in the dynamics of beer purchases in different segments of society.

According to the data presented in Table 3, at the level of the general population, the average monthly expenses for the purchase of beer increased by 48.85% during the mentioned period, reaching the value of 8.44 RON per inhabitant. This increase may reflect changes in drinking preferences at a national level.

Looking at the social categories, different increases can be observed. Hence, an increase of 45.92% is recorded for the category of employees, for self-employed workers in non-agricultural activities an increase of 57.23%, for farmers an increase of 42.04%, for the unemployed an increase of 60.73%, and for pensioners an increase of 46.2%. Among all social categories analyzed, employees represent the social category that presents the highest level of monthly expenses for the purchase of beer in 2022, with an increase of 14.45% compared to the entire population, generating a difference of 1.22 lei. In contrast, the unemployed are at the opposite pole, registering the lowest

average spending on purchasing beer per month in 2022, with a decrease of 29.15% compared to the entire population, representing a discrepancy of 2.46 RON between the two groups.

Table 3. The average monthly expenses on beer (RON) per person, by social category, 2018-2022

Social category	Year				
	2018	2019	2020	2021	2022
Total	5.67	6.07	6.73	7.61	8.44
Employed	6.62	7.08	7.65	8.69	9.66
Self-employed in non-agricultural activities	4.77	5.03	5.03	6.57	7.5
Farmers	5.09	5	5.65	6.86	7.23
Unemployed	3.72	4.82	4.57	5.29	5.98
Retired	4.87	5.14	6.09	6.5	7.12

Source: National Institute of Statistics, 2023.

According to statistical data provided by the International Trade Centre, beer imports in Romania recorded higher quantitative values compared to exports in each of the five years analyzed for the period 2018-2022. During 2018 and 2019, export values were really close to the ones of imports, reflecting a balanced trade. However, starting in 2020, the value of imports began to increase significantly compared to that of exports, hence generating a passive trade balance characterized by a deficit.

The difference between beer imports and exports increased gradually every year, this situation being the clearest in the years 2020, 2021 and 2022 (as shown in Figure 3). Beer imports in Romania registered an increase of 31.34% in the mentioned period, reaching values of over 722 million hectoliters in 2022, while exports fell by 5.25%, more precisely to a value of about 520 million hectoliters in the same year. For the year 2022, the total beer exports value was approximately 29% lower than the total value of imports from Romania.

Regarding the countries that import the most beer products in Romania in 2022, the five largest importers were: Germany, which covered approximately 24% of total imports, Poland, which covered approximately 20%, and Greece, which covered approximately 14%. In terms of exports, the largest quantities of beer exported from Romania in 2022 were destined for the following countries: Republic of Moldova, where approximately 19% of the total beer exports were made, as well as Italy and Hungary, where for each it was exported approximately 15% of total exports (ITC, 2023).

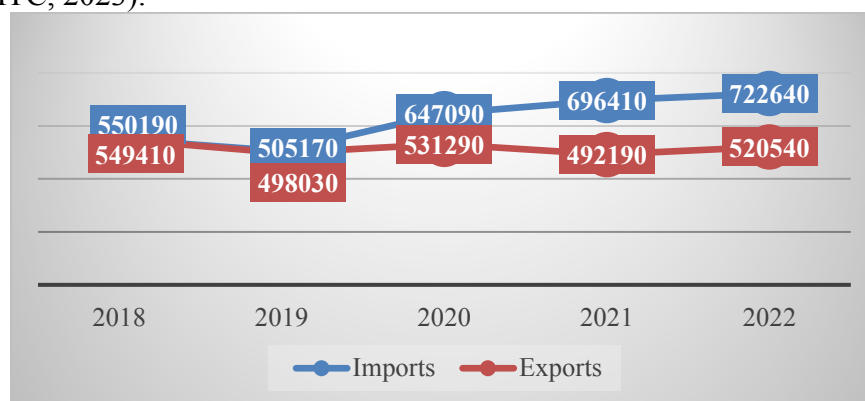


Figure 3. Romania's related imports and exports (thousands of hectoliters), 2018-2022

Source: International Trade Centre, 2023.

Conclusion

The main contribution of this article consists in highlighting the importance of the beer sector from an economic point of view, a sector that affects the well-being of everyday people. This paper can provide a solid basis for future research, such as much more complex works regarding the importance of beer studies and their effect in both national and international economy. Following the development of this article, the evolution of the beer market can be easily observed and analyzed in the context of the COVID-19 pandemic, at both national and European level.

Starting from the initial hypothesis, more precisely that the beer sector at the European level suffers statistical decreases, this is confirmed, at least regarding the total production and total consumption of beer. The beginning of the pandemic represented the point where the total beer production and consumption values recorded the highest in recent years for most countries. At the same time, the beginning of the pandemic marked the point which generated significant disruptions, causing a slight decrease in both the supply and demand for beer. Despite this, it can be stated that the initial hypothesis is not completely proven right when it comes to beer consumption per capita. In the top 5 of the largest beer consuming countries, all states recorded lower values for this indicator compared to previous years, with the notable exception of Romania, which recorded the highest values for its population. Moreover, the general situation of the average spending on beer per inhabitant experienced significant increases. This remains valid whether we are talking about the distribution of the population by residential area, where there is a very small difference between their monthly costs, or whether we are talking about the distribution by social category, where employees record the highest expenses on beer at the level of the entire population. Taking a wider perspective to understand the Romanian beer trade, the country's import and export situation reveals a trade deficit, with a growing discrepancy in recent years. Therefore, it is safe to say that the amount of beer imported surpasses beer exports by a significant margin. Despite the challenges, it can be anticipated that the beer market will recover and continue to grow, both nationally and at European level, as it always did throughout times.

It should be noted that various limitations were encountered during the realization of the present work. After reviewing the specialized literature, much information regarding the origin of ancient beer and how it came to be in the form we know today remains unclear, these aspects may differ from author to author. Also, statistics on specific indicators of the beer sector starting with the last decade can be hard to find and can differ from one another. And from the perspective of extracting current data, there are constraints. For example, a limitation may consist in the fact that there are slight differences regarding the raw values of the indicators presented from one database to another. For instance, this aspect may be crucial in determining a ranking for countries with high beer consumption per capita. Another limitation is the fact that some data for certain countries are not available for various reasons, and another is the problem of classifying beer-like drinks as beer or not.

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