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Thesis Title

Beer Market Analysis:

Craft brewing impact over the beer industry in Italy

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A Dios y a mis padres, por ser los guías en mi vida.

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ABSTRACT

Even though Italian drinking culture has always focused on wine, things have recently changed: the beer market is growing, large breweries are getting bigger and more international, new breweries are being born, historic breweries are producing new types of beer, the number of pubs serving high - quality beer at reasonable prices are increasing significantly and consumer preference is turning to a better tasting and quality product. Searching for a better understanding about this phenomenon drives this dissertation whose principal objective is to explain, from a quantitative and qualitative perspective, the current state of the beer market in Italy with an especial emphasis on the performance of the craft breweries. This analysis examined many variables, such us market size, consumption and production, growth rates, trends, distribution channels, costs, customer preference, main competitors and some of their strategies for growing market share and being competitive in the sector. Furthermore, thanks to AIDA database, it was possible to obtain the financial statements from a representative sample of companies on the beer market, the results from the analysis of these information gave us an impression how healthy the industry is, in terms of revenues, profitability ratios and the effect of the economies of scale. In this new growing market, some small breweries that do benefit from the advantage in scale production will take out their competitors if they don’t change their strategies.

Keywords: Market, craft beer, Industrial beer, brewery, trend, consumer preference

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INTRODUCTION

Beer is the most popular alcoholic drink in the world, having a history of ten thousand years and it has a multitude of aromas, colors and a set of so many different characteristics which drive people to produce and consume it (Kahn, 2013).

In recent years, the industry is experiencing a historical moment from the brewer point of view. From one side the large breweries are getting bigger, more anonymous and more international on the other it is seen the birth of microbreweries that produce products of character for a limited but highly motivated public which opt for variety, looking for better quality beers, flavor, and appearance.

Also, some empirical studies have been carried out in Europe about consumer preference with the purpose of compare the ‘‘purely’’ commercial beer consumer profile with the commercial beer consumers who have already tasted craft beers. In such study was observed that aroma and perceived quality, as well as the preference for draft beer, drinking beer frequently or by oneself are all factors that explain the propensity of ‘‘purely’’ commercial beer drinkers to taste craft beer. It was also found that beer consumers’ evaluations of characteristics and brands differed depending on whether they had previously tasted craft beer or not (Aquilani, Laureti, Poponi, & Secondi, 2014). Such analysis will be included in the following sections as source for segmenting the market according to the socio-demographic characteristics.

Despite the economic crises and the general decline in F&D consumption, Italians do not seem to want to give up on beer. According to a recent research carried out by the ISPO (Institute for Public Opinion Studies), 71% of them declare themselves to be a regular consumer, but some of the consequences of the economic recession were the change in the frequency of eating and drinking at home during the week; people who declare drinking beer at home grew from 5.5 percent in 2012 to 8.3 percent, with a 50 percent increase over the previous year (Carminati, 2014).

Today, after years of recession, Italy has begun to show signs of an economic upswing, in fact, Italian beer production has grown, reaching an all-time high of 15.5 million hectoliters (Assobirra, 2017). In other words, Italian beer has managed to successfully increasing also its selling abroad. This is made possible thanks to the Italian beers ' high reputation, which is strong and well-established in the country and growing more and more internationally, especially in countries traditionally known for drinking beer. This success is also due to an industry that continues to invest in innovation, quality of products and processes and the environment sustainability, obtaining excellent results (Assobirra, 2016).

The home brewing trend, which began in the US, has expanded throughout the Westernize world. Italy was not the exception: in fact, due to the Italian culture of food and drink quality, a perfect condition for the craft beer market to success. In fact, Craft beers have been progressively gaining market share. Most of the attention has been focused on microbreweries and brew pubs. Such operations offering only their in-house brewed beers which were born from the passion of master brewers and the figure of the informed consumer who searches no longer for standard and anonymous products, instead unique and quality features (Murray & O'Neill, 2011). Nevertheless, these small producers face many limitations in terms of resources, investment, distribution channels, marketing strategies.

1. <u>The beer</u>

1.1. Definition of beer

Beer, from Latin "bibere", is an alcoholic beverage most popular in the world made from sugars obtained from cereals and other grains mainly barley and wheat flavored with hops, among other herbs, and brewed by a slow process of fermentation in water with yeasts (Mark, 2011).

It does not exist a so-called "inventor" of beer, neither an ancient culture can claim that they drank or elaborate beer before the other; the truth is that the development of craft beer and a resulting brewing culture have occurred independently and similar among different villages whereby diverse techniques evolved based on the cereals it had available: for instance, wheat and barley in Mesopotamia and Egypt, rice in Japan, China and Korea or corn and wheat in South America.

Nevertheless, not all the beverages produced by a fermentation based on yeast are called beer, there is also cider, wine among others.

1.2. History

As other known beverages, beer has a long history, but it cannot be exactly dated. Many researches indicate that brewing and drinking this beverage are linked with the beginning of modern civilizations around 10000 B.C. when people began to switch their nomadic life from hunting and gathering to cultivate and farm the land, through these new civilizations, many grains were cultivated, some of them essential for the beer elaboration (Mark, 2011).

There are not registers that shows how the process of elaborating beer was discovered, but it is assumed that unintentionally some grain got wet and fermented thanks to the yeast existing in the area. Some written evidences found about the first barley beer, dates around 5000 years ago attributed to ancient Sumerian civilization.

Brewing and consuming beer rapidly split into new civilizations like Babylonians who brewed more than 20 varieties. Also Egyptians altered the taste adding herbs, dates, olive oil aromatizing and flavoring the beer. On contrary, other cultures like Romans develop another type of fermentation from grapes, considering the beer the beverage for Barbarians, after the Roman Empire fall, beer started to play an important role from a nutritional perspective and being more appreciated by Italians

More modern-tasting brews arrived in the Middle Ages with the Christians Monks and other artisans as an alternative or safer way to drink water because of the inefficient and poor sanitation water supply. Besides during the 13th century, the use of hops became more common as bittering and flavoring agents, acting also as a natural preservative for extending beer's life and getting the right recipe for the process. Earlier ages, gruit or grut ale that is a mix of herbs, was used for bittering and giving flavor to beer, but without similar preservative properties as hops.

Once Germans discovered that hopped beer has a longer life, they standardized barrels' size and began a mass-production and commercialization; method that was spread through Europe. As a result, German brewers stablished the Beer Purity Law that specify certain level of quality in base on water, hops and barley (yeast was considered centuries later after Louis Pasteur discovery about fermentation process).

After Industrial Revolution and with the introduction of the thermometer and Hydrometer, many significant improvements were considered allowing more control on the production processes.

Nowadays, beer is the most widespread alcoholic beverage in the world in terms of production and consumption, considering cultural and geographical diversity. Also it is remarkable the role played by craft breweries and brew pubs which are driven by the increasing preference of current and new consumers making this market more attractive to new players and progressively gaining market share.

Some studies show that would be foolish to ignore a demographic niche of market in terms of age, education and the most remarkable, the annual income, specifically 80 percent of the sample who have a higher income over the national mean, have preferences in consumption of craft beer or could plan their dinning out or vacations over their interest into famous brewing areas (Murray & O'Neill, 2011).

The tendency of home brewing either for personal consumption or small breweries and brew pubs, has introduced in the beer market a stronger competence for the large scale brewers. This trend has started in the US, after new legislation signed by the US president Jimmy Carter in 1976, then widespread all over the world (Murray & O'Neill, 2011).

1.3. Ingredients

The 4 essential ingredients used during the elaboration of the beer are:

- Barley
- Hops
- Yeast
- Water

- *Barley*

Beer could be made from different cereals, however the most used is barley malt, but in past the use of other grains such as oats, rye, rice, corn, mille were very common.

Barley is one of the first domesticated and widely cultivated cereal grain during ancient cultures used for bread elaboration, then replaced by wheat and rye. This type of grain is rich in enzymes and their peels are useful during the malting and the filtration of the must during the elaboration of beer. It is contained in all types of beers including "wheat" beers in a percentage of 30% al purpose of facilitating the filtration of the mixture. Other type of grains such as the mentioned before can be also used as substitutes.

This cereal grain grows in abundance in temperate climates across the world since it can adapt in a wide variety either in temperate areas as summer crop or in tropical temperatures as winter crop.

During 2017, the production of Barley was 147 millions of tons where the 12% of global production belongs to Russia followed by France and Germany as top producers inside Europe. Australia is the 4th in barley global production for the same year with the 6% of the total (Worldatlas, 2017).

- *Hops*

The hops are the cone-shaped flower of the hop plant or Humulus Lupulus who is one of the most used ingredient that gives the bitterness and flavor to the beer; also is used as an agent provider of stability between the sweetness of the malt and the bitterness to the beer. Hops are not exclusive used in the beer' production, they are also used in other type of alcoholic drinks and natural medicines.

Cultivation of Hops requires a special environment, usually moist temperate climates. As a climbing plant, Hops are planted between gills made from rope, strings or wires that gives support and facilitated the plant to greater growth; instead of build structure, they will use the energy in the crop growth. Furthermore, reproduction method distinguishes male and female plantation because pollinated seeds are unwanted for the brewing process (VinePair, 2014).

Exist a method to measure the bitterness in beer, it is the IBU unit or International Bittering Units which measures the iso-alpha acids from the hops used during the brewing process, this assessment of this value is when the process of elaboration ends and the beer is ready to drink. This scale rage from 0 to infinity, it means, the more IBU's, the more bitter it will taste. Breweries can elaborate a beer more bitter simply adding more chemicals such a hops and malt (The brew Enthusiast, 2019).

Hops has a total production of 115 thousand of tons during 2017 according to the International Hop Growers' Convention IHGC, where the top producer is United States with the 42% of the global production, followed by Germany with the 36% of the total in the same year. Total production is estimated to grow for the next year by the 6% reaching a new record of 116 thousand of tons (Journal.beer, 2018).

- *Yeast*

Yeast is the most important ingredient responsible for the fermentations of the sugars in the brewing process.

A research done by Louis Pasteur about the fermentation process in 1957, demonstrate that yeast is the responsible for fermentation to produce alcohol from sugars. Yeast are unicellular fungi invisible to the eye, its function inside the fermentation processes is to take the simple sugars like glucose or maltose from the boiling malted grain and produces carbon dioxide and alcohol.

Nowadays breweries select the type of yeast in order to find out the specific results that they are looking for in terms of alcohol, diverse in flavors, with the expectation of having a beer more interesting and tasty to the palate.

There are some special and most used kind of yeast in brewing: Ale and Lager. Ale or Saccharomyces cerevisiae is the yeast discovered by Pasteur in 1857 during his research, usually used for traditional high or Top-fermented beer, meaning that the yeast is introduce at the top of the wort and at higher temperature, which originally did not contain hops or other aromas as is known nowadays. This type of yeast, also known as brewer's yeast is also used for elaboration of bread and pizza. On the other hand, the Saccharomyces eubayanus discovered unintentionally by the brewers of the south of Germany, bottom-fermented or yeast works at the bottom of the wort because is a hybrid of the Ale, acting at lower temperatures between 7 ° and 13 ° C for longer times. This yeast is widely used for low fermentation beers, today generically called "lagers".

A crisper beer is obtained from the process where the lager yeast was used. Lagers are the most popular and drunk around the world compared with the Ales.

- *Water*

Beer is around 90 to 95% water and many studies have shown that adjustments to water can make a big difference in the quality of the beer. The purity of water is essential for a good beer under certain standards depending on the brewery

The water used in the process can cause different effects in the quality of the beer, one of them is the pH that could be tasted in the flavor, a different seasoning from the quantity of sulfate-to-chloride (bitterness to sweetness) and if the water contains other contaminants, it can change the flavor. Also is necessary a proper level of calcium and acidic content to favor the separation of the malt and hops during maceration and boiling phase.

Each variety of beer requires different type of water, for instance, for soft beers, sweet water is suggested, while for dark beers, hard water is more appropriate and depending of the origin of the water, different type of beer will be elaborated with a special regional character. For instance, Dublin has hard water more suitable for the Guinness beer type, whereas Pilsen has soft water which suits for elaborating pale lager.

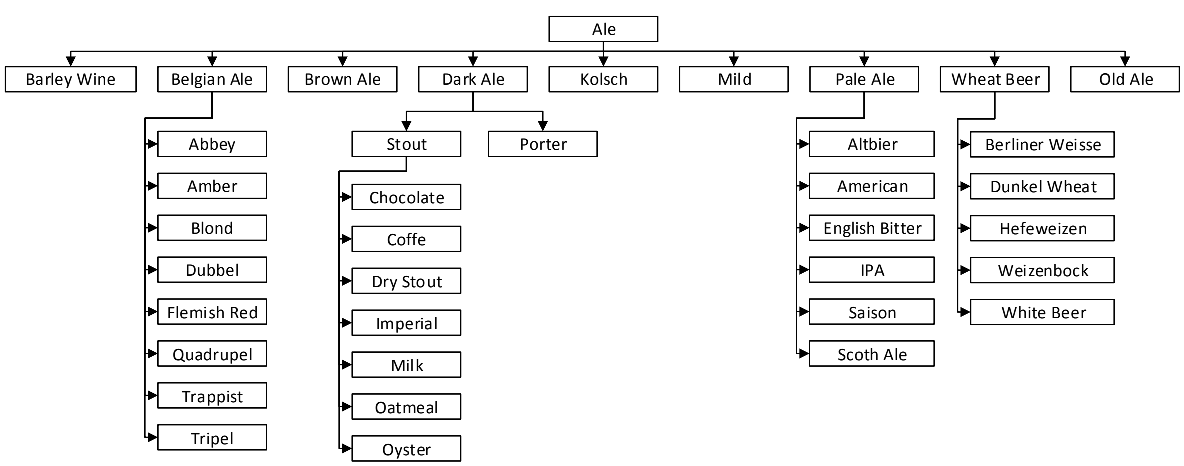
The average use of this resource in modern breweries ranges from 3.7 L/L to 4.7 L/L of beer sold, depending directly to the best practices that each factory has and in the cases of less efficient breweries, this ratio can jump to 10 L/L.

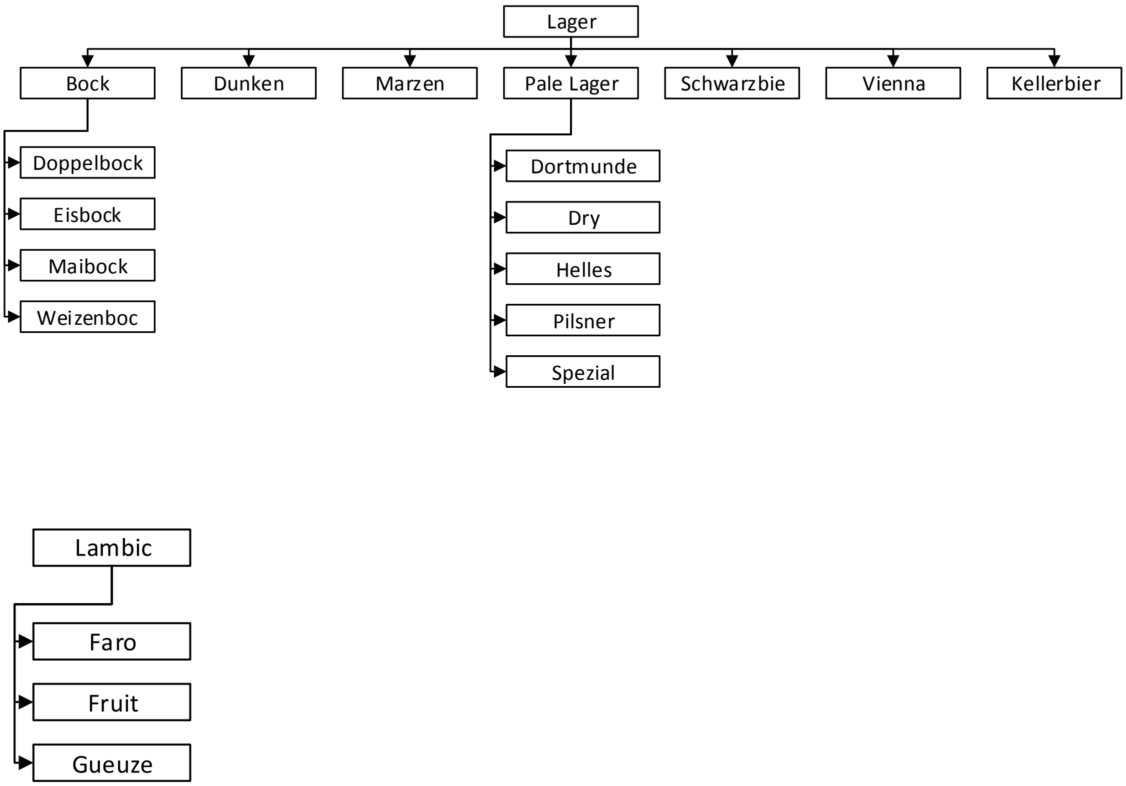
1.1. Types of beer

According to the type of yeast used during brewing, beer can be banded into two big groups: ale and lager, each category with a wide range of varieties sort them by color, flavor, level of alcohol, ingredients used, production technique and temperature of fermentation.

Also another small branch can be mentioned, the Lambic beer, typical from Belgium. As the other types of beer, this branch differs in the type of yeast used, in this case wild yeast instead of cultivated yeast, as the others do. Some brewers do not consider Lambic beer inside the beer family because of the small volume and the limited area of production (microbrewery.wordpress, 2011).

Figure 1 Types of beer.





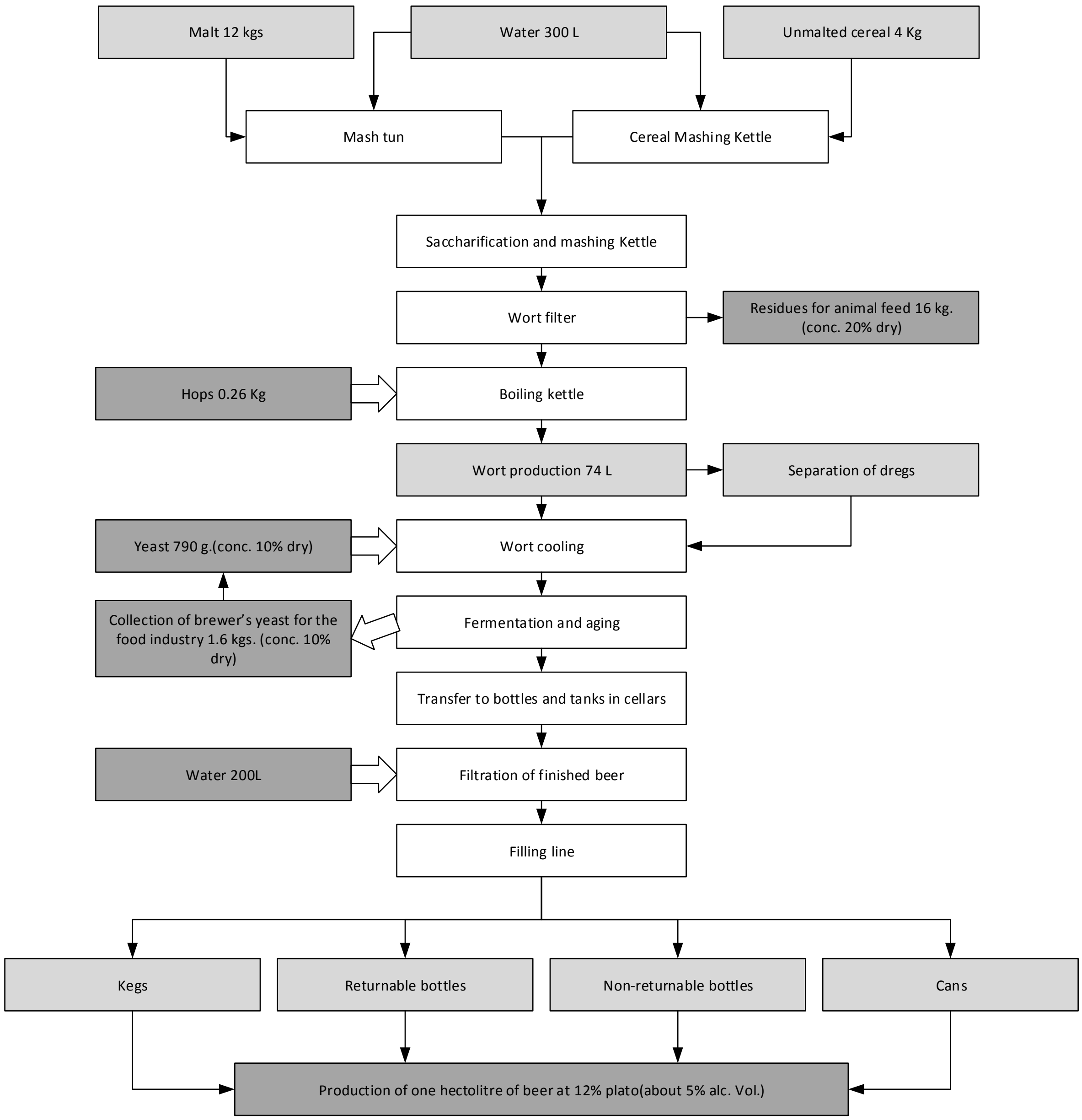
Source: microbrewery.wordpress

1.2. Process Elaboration of industrial and craft beer

Brewing is the process through beer is made. Generally, the process of fermentation takes a couple of weeks before beer is ready to drink, depending also in the type of beer elaborated. It is very likely that each producer makes his own modifications throughout the process to obtain a beer with its own and differentiated characteristics. In general, the elaboration process differs from Ale beers and Lager beers, according to the type of fermentation that takes place.

Before starting the process, malt must be removed from the barley grains through a malting process, this phase needs to complete three steps: steeping, germination and kilning. First of all, the grains are steeping in a vat of water during approximately 40-hour. Then, they are spread out on the floor and left to germinate for 5 days, before the final stage, the humidity of the grains had to be dried out as a result of an increasing temperature process in a hot air kiln. When malting is completed, the grains, which became malt, are ready to be treated and beer is ready to be made (Lewis & Young, 2002).

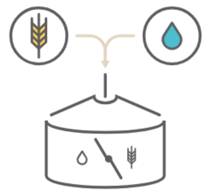
Figure 2: Simplified Scheme for Brewing one Hectolitre of Beer in Italy



Source: Assobirra Annual Report 2017

1.3. Process Description

1.3.1. Malting



Cereal grains, usually wheat or barley, although they can be used of any kind, are immersed in water so that they begin to germinate and dry with warm air soon after. Depending on the degree of toasting we will get lighter or darker malts, which will bring the color of the beer.

1.3.2. Mashing

Mash Tun is a brewing vessel used to mix the malt with water under certain temperature. This process is called "mashing "and the result is called the "mash. " The mash is kept at a predetermined temperature and time (e.g. 65 ° C for 1 h) until the malt starches are converted to sugars and the dissolved malt sugars (wort) are rinsed in the kettle where ho is placed.

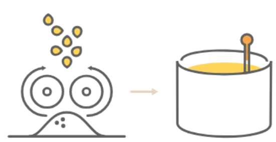
In case of the cereal Mashing Kettle, the process is either combining the cereal, unmalted grain or other starchy food with a specific quantity of barley malt, depending on the type of beer; then water will be added and all together heated until high ending point where the starches will be converted in the main mash.

1.3.3. Wort filter

Beers are mostly made using barley malt as the main source of starch. Wort is a combination resulting from the breakdown of this starch into sugars that still contains different proteins and debris that need filtration removal.

A coarse filter eliminates larger debris and a finer filter removes coagulated proteins. If the wort is left unfiltered, these proteins (or other similar particles) can lead to an unwanted change in flavor. They may also affect the final product.

1.3.4. Grinding and Maceration



The cereal is milled and mixed with water at a suitable temperature to extract the sugar from the grain and obtain a sweet must. Water is the main ingredient with more than 90% of the product, so the duration and temperature during the process will greatly influence the type of final beer and its 'drinkability' or pleasant consumption.

1.3.5. Boiling

The must is boiled in order to eliminate bacteria that may have appeared during the process, and it is at this moment when the hops are added, an ingredient that will provide the desired aroma and bitterness. The duration of the boiling process depends on each recipe, but it usually lasts a few hours.

1.3.6. Fermentation of beer

The mixture boiled pass to the step of fermentation where yeast is added. Its enzymes transform the sugars of must into alcohol and mark the profile of the beer. If the fermentation takes place at high temperature, it will result in an Ale-type or 'high-fermentation' beer, whereas if it is produced at a low temperature, we will obtain a Lager-type beer or 'low fermentation'.

1.3.7. Aging

The resulting liquid is kept for a while in an aging tank, where it rests in cold so that the flavor and aromas obtained during the process stabilize and the final product maintains the desired character.

1.3.8. Bottling

The beer is ready. It is packaged in different formats for consumption and is made available to the end user so that they only have to worry about opening, serving and enjoying.

1.4. Difference between craft and industrial beer

As mentioned before, the four main ingredients in the brewing process are, barley, yeast, hops and water. Nevertheless, the main differences between craft beer and the one produced in big scale are basically in the elaboration processes, the quality of the raw material and the own formula of brewing and because of this reason the variety in flavor, color, texture and benefits to health.

The ingredients used in the craft brewing are more natural avoiding artificial additives or preservatives in the production, while big producers, in order to reduce cost and expenditures, use more economic components.

The craft brewing process is completely manual and natural, without the use of many machinery as in the industrial brewing. This type of beer has two fermentation stages, one during process and the second when some must have to be included in the bottle so that the beverage naturally ferments in the container and naturally produces foam. In contrary with the big-scale production where carbon dioxide is added to achieve this second fermentation and foaming.

According many consumers, craft beers are better tasting than industrial ones, hence more popular. But the main reason why big produces do not get into this niche market are the production costs, because of the quality of the ingredients and the process of elaboration itself. Furthermore, in order to reduce cost, industries tend to “cut” the malt with non-malted and cheaper grains such as corn or rice, but it will dull the flavor and lighten the color as well, even without modifying alcohol levels and with the inclusion of artificial additives, the traditional beer foam will be created. Furthermore, other effect about using this type of grains is lowering the need of hops in reducing the bitterness produced by malt, which will have an impact in the cost, reducing it even more.

In case of industrial breweries, the competitive advantage in prices is because of the economies of scale and not thinking in the quality of the ingredients as long as the beer is palatable and cheap to produce and sell, then marketing will be able to sell it.

Thanks to the difference in the beer quality among industrial and craft brews and also considering consumer’s preferences; there is a significant percentage of consumers that are looking for quality and differentiated products who don’t mind to pay higher prices for a product with these characteristics. Hence, the most appropriate supplier for satisfying these requirements are the craft breweries thanks to traditional brewing techniques, quality ingredients and flexible production.

1.5. Legislation in Italy

According to the Italian legislation, the name "beer" is explicit for the alcoholic drink obtained from the fermentation of wort obtained by the mix of malt, water and hops, with one of the two varieties of yeast either saccharomyces carlsbergensis or saccharomyces cerevisiae (D.P.R. 30 June 1998, n. 272.), the malt can be also specifying the different denominations for a nonalcoholic beer, light beer, beer, special beer and double malt beer with their respective volumes and degrees of alcohol for each category. The initial law about the beer was the n. 1354 of 16/08/1962, modified by Laws 329/74 and 141/89, by Decree Law 109/92 and the last version the one it has been mentioned above, Presidential Decree 272/98.

The Italian Senate approved in July 2016 the DDL S 1328-B, which includes the legal definition of craft beer. This is an important milestone, since previous Italian legislation did not distinguish between small (microbreweries) and large craft breweries in terms of tax or legal / administrative requirements. This could be a significant step in protecting Italy's small craft breweries. The new legal definition also highlights the quality of the products not only in terms of the raw materials used but also in the brewing process. Legal / administrative requirements and taxes for small craft breweries could be reduced in future as it is already mentioned in Council Directive 92/83/EEC of 19 October 1992 on the harmonization of the structures of excise duties on alcohol and alcoholic beverages.

Also as a microbrewery, the annual production must be limited: it must not exceed 200 thousand hectoliters, including in this quantity the quantities of beer produced on behalf of third parties.

Like other products to consume, beer is subject to a complex set of Italian and European regulations aimed primarily to protect consumers' safety and therefore, regulate all aspects of production, fair competition, trade, correct product designation and product presentation.

Some of them are considered inside the Security Decree Law n. 14/2017

Recently, on the ordinary supplement no. 62 / L to the Gazetta Ufficiale della Repubblica Italiana, n. 302 on December 31, 2018, a budget law December 30, 2018, n. 145 was published, containing "State Budget for the 2019 financial year and multi-year budget for the three-year period 2019-2021", which in art. 1, paragraphs 689 to 691, contains provisions on excise duty on beer.

The first measure changed the previous excise established under the law n. 205/2017, restating from 1 January 2019 the rate of excise duty on beer from 3.02 euros to 2.99 euros per Hectolitre and Plato degree.

Also another measure proposed in order to favor of the small independent breweries, the legislation introduces a facilitated taxation (reduction of 40 percent of the ordinary rate), limited to those with an annual production not exceeding 10,000 hectoliters. This measures will be adopted within February 28th 2019.

- *Legal drinking and purchasing age*

In Italy the legal age for drinking alcoholic beverages is 18. Despite severe sanctions, such as fines up to the revocation of the license to sell alcohol, however, not all retailers comply with these limitations.

Generally, young consumers begin to drink alcoholic beverages between 11 and 14 years of age. Teenagers find drinking alcohol a way to socialize more easily and are increasingly inclined to get drunk, a phenomenon that is aided by so-called happy hours, during which it is possible to purchase a drink at a low price, therefore incentivizing drinking among people on low budgets.

- *Driving under alcoholic effects*

  As is known that alcohol affects the human reaction under some circumstances, there are some restriction when driving. In that case the maximum level of alcohol allowed to drive is 0.5 g per liter of blood. If this limit is not met, drivers may get a fine or suspend their driving license. The fine amount and length of suspension depends on the alcohol level of the individual driver's blood. Drinking and driving regulations are becoming stricter.

  In addition, there are some cases that alcohol is not permitted in the bloodstream while driving such the case of under 21 years old drivers, those with a license obtained within the previous three years, those who transport goods and drivers of vehicles with a laden weight of 3.5 tons or more.

- *Advertising*

  The legislation on advertising for alcoholic drinks in Italy prohibits the targeting of consumers under the age of 18, either directly or indirectly. Advertising is at the same time highly regulated to protect vulnerable persons who may find refuge in alcohol. This publicity is also prohibited on television and radio programs between 4 p.m. and 7 p.m.

- *Establishments opening hours*

  Public establishments, clubs and those in public spaces or areas are forbidden to sell alcoholic drinks from 3am to 6am. In case of neighborhood enterprises, the legislation stablishes prohibit the commercialization from 24 to 6am. The administrative penalty could be impost for those who don't respect this law with a payment of a sum from EUR 5,000 to EUR 20,000, besides the removing of the operating license.

- *Taxation and Duty levies*

Two types of taxation will apply to alcoholic drinks, VAT and special excises. Excise duties had increased from EUR 2.35 to EUR 3.04 during 2013 to 2015, more than 30% of increase in only 15 moths, as the Italian government sought to increase its revenue and tax a product that could be harmful to the health of consumers. The measure had contributed to the slow performance of many alcoholic drinks reducing their consumption or switching to a lower price alcoholic drinks (Assobirra, 2017).

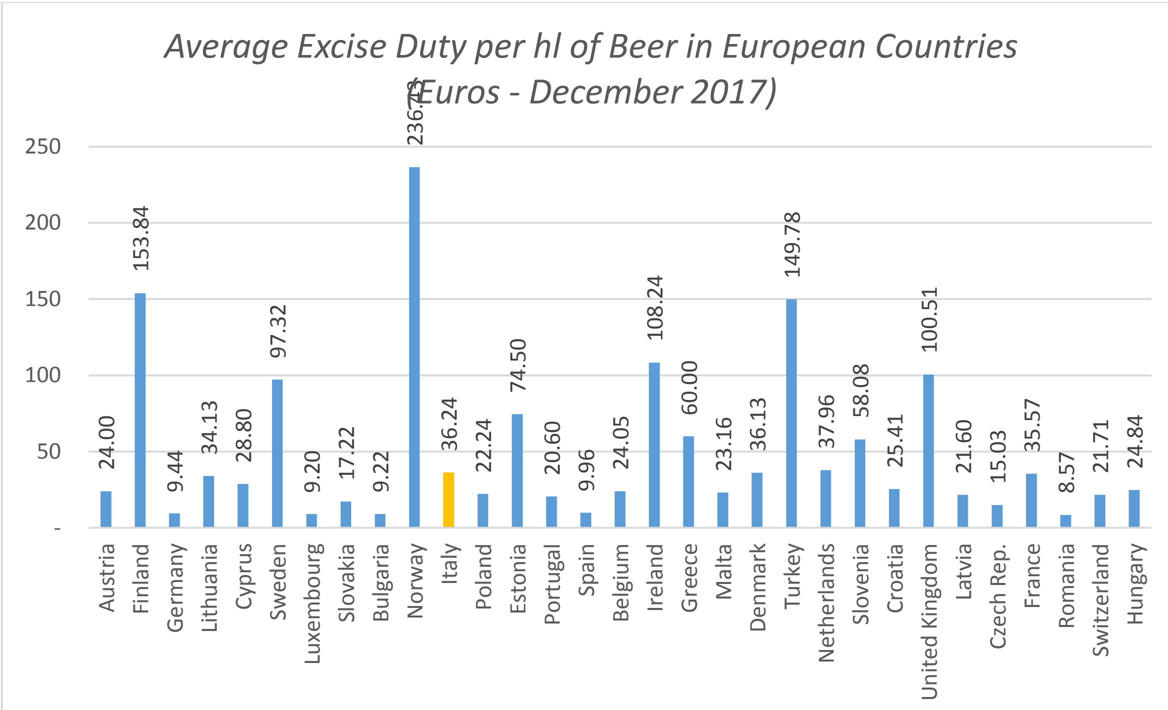
Starting 2017 until 2019, this excise has decreased to EUR 3.02 per hectoliter/degree Plato as is shown in the table 1, which means a reduction of 15 million of euros in taxes to the Italian government. Another similar reduction in the excise for beer will be apply from January 2019, reaching EUR 3.00 per hectoliter/degree Plato, thanks to the amendment voted and approved by the budget committee of the chamber of deputies, within the 2018 budget law and shared by government and parliamentary bodies (Assobirra, 2017).

Table 1: Taxation and excises on alcoholic Drinks in Italy 2017

Excise tax	Value	Volume/Value Unit
Beer	EUR 3.02	Excise duty per Plato/hl
Still Wine	-	
Sparkling wine	-	
Spirits	EUR 1,035.52	Excise duty per Hectoliter
RTDs/high strength premixes	EUR 1,035.52	Excise duty per Hectoliter
Cider/Perry & port	-	
Sales tax	22%	

Source: Assobirra Annual Report 2017

Figure 3: Average Excise duty per HL of beer in European countries



Source: Assobirra Annual Report 2017

As it is shown in the figure 3, Italy is one of the countries whit high excise per hectoliter compared with other where the consume is high,

- *Contraband/parallel Trade*

In Italy, contraband and parallel trade in alcoholic beverages remained marginal in 2017, due to the moderate level of taxation. Spirits that are subject to competition from contraband are also consumed in limited quantities in the country, so it does not have any effect in the alcoholic drinks market. Also the geographical location of Italy, away from countries that source contraband alcoholic drinks, contributes to keeping the level of contraband and parallel trade at a minimum.

- *Duty Free EU*

  There are no limits to what private individuals can purchase and take with them when traveling between EU countries, as long as the products purchased are for personal use and not for resale, except for new means of transport. Taxes (VAT and excise) shall be included in the purchase price of the products in the Member State of purchase and no additional tax payment may be due in any other Member State.

  However, special excise duties apply for alcoholic beverages and tobacco products. If a private person purchases such products in one Member State and takes them to another Member State, the principle that no excise duty has to be only applies if the product is for the traveler’s own use and it is carried by himself.

2. World and European Beer Market

2.1. World Alcoholic Drinks Market

The world alcoholic beverages market was valued at $1,439 billion in 2017, and is expected to reach $1,684 billion by 2025, registering a CAGR of 2.0% from 2018 to 2025 (Prasannan, 2018).

The increase reached in 2017 apparently is not significant, but it is a positive increased compared with the previous years where the consumption of alcoholic drinks was declining.

One of the main drivers of this growing industry is the rising demand for premium alcoholic beverages, especially in emerging countries, such as India, China, Indonesia and Singapore, where the demand for alcoholic beverages is growing faster. Also the use of other purchasing channels, such as convenience stores and online stores have contributed to this growth.

World alcoholic beverage industry is divided into 3 main categories: beer, wine and spirits, but there are also other groups of beverage that can be considered in the analysis; mixed drinks and cider. From all these types of alcoholic beverages, beer is the world's most consumed which has a concentration about 4-7% of alcohol, however, craft brews can make beer with higher percentage of alcohol. Wine is the second largest segment after beer and contains from 6 to 20% alcohol and 40 to 80% alcohol in spirits as standard. Mixed drinks prepared in bars, home or restaurants usually contains one shot of a spirit or a bit more, equivalent to 1 oz. approximately; while cider, made from fermented apple juice, has 2% to 12% alcohol.

The table 2 shows that in 2017, the total volume consumed in the world of spirits and mixed drinks had declined in 0.4% and 1% respectively, while wine and cider industry rose up 0.6% and 2.5% respectively compared with 2016. In the beer market, a slight decrease in the consumption is presented.

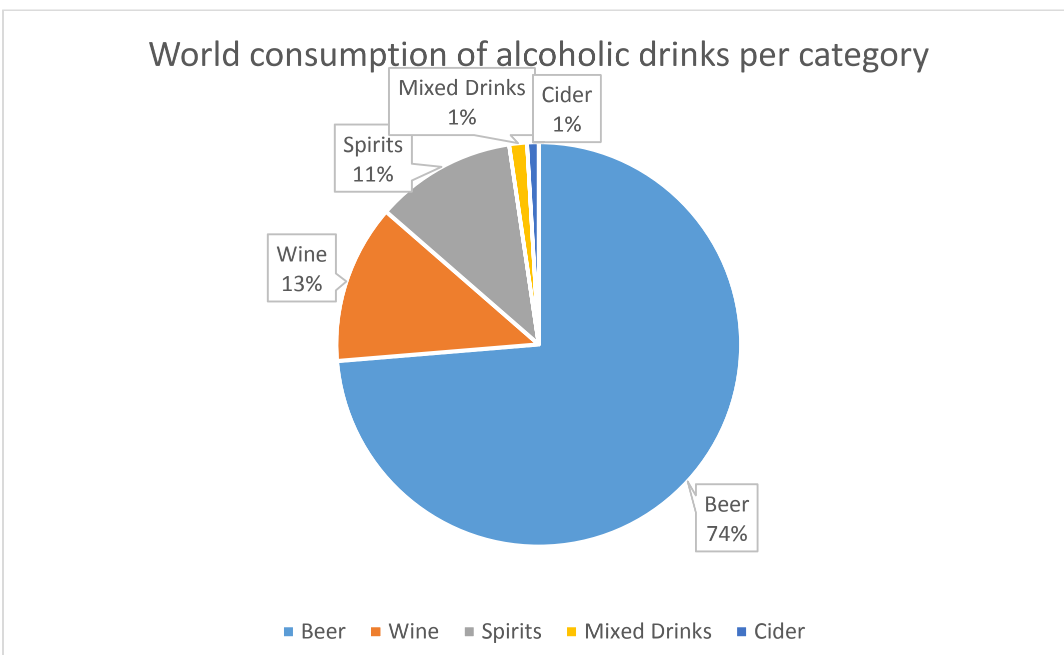
Table 2 : World Alcohol Consumption by category – 2016 vs 2017

Category	Volume 2017	Absolute Volume Change 2016 to 2017	% Change - Volume 2016 to 2017
Beer	20,525.6	-8.2	0.0%
Wine	3,541.8	20.7	0.6%
Spirits	3,134.7	-11.5	-0.4%
Mixed Drinks	395.6	-4	-1.0%
Cider	257.5	6.3	2.5%
Total Alcohol	27,855.2	3.5	0.01%
Units: Millions of nine-liter cases			

Source: IWSR

In the pie chart below is shown that three quarters of the total volume consumed of alcoholic drinks in the world is beer that represents almost 185 billion litters during 2017, in case of wine and spirits, it is seeing that their volume consumed is close, 13% and 11 % respectively and the difference denotes the volume consumed of mixed drinks and Cider.

Figure 4: World consumption of alcoholic drinks per category



Source: Elaborate from IWSR data

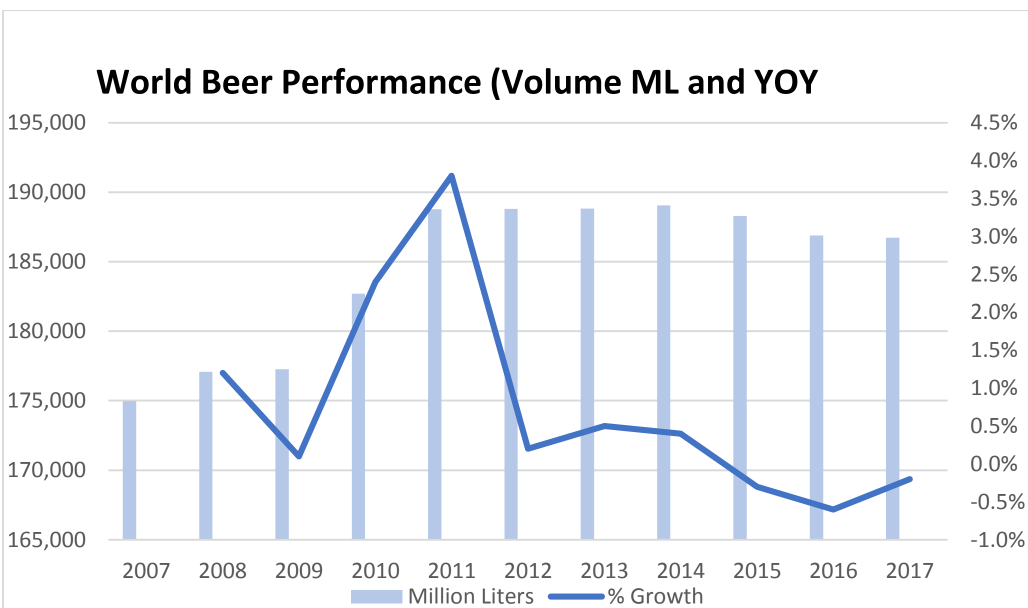
2.2. World Beer Market

The beer market consists on the retail sale of beer and the market is valued according to the retail selling price (RSP) that includes taxes and excises according to own countries legislation.

During 2017, the world beer market was valued at $531231 million and is expected to grow and reach $685354 million by 2025, rising with a compounding annual growth rate (CAGR) of 1.8% (Sinha, 2018).

The consumption of beer had declined for 3 consecutive years, reaching a total quantity of 186724 thousand liters consumed during 2017. The following graph shows the performance of the world beer consumption from 2007 to 2017. During the first 5 years, the volume consumed climb until a total consumption of 188,782 million liters of beer, followed by a period of 4 years of constant consumption. In 2015 a decrease of 0.3% is shown compared with previous year, marking the first annual decrease in 30 years, mostly as a result in reduction of consumption in Asia and Europe.

Figure 5: World Beer Performance



Source: Own elaboration from Kirin Holding Company Reports

For 2017, the total market share between Asia and North America represent almost the 50% of the global consumption of beer. As mentioned before, also this year have present a decline in consumption with respect to 2016 by 0.2%. Although consumption of beer decreased in the regions of Asia, North America and Europe, while consumption increased in other regions. For the tenth year in a row, Asia remained the largest beer - consuming region in the world, despite a 0.8 percent decrease compared to the previous year (KIRIN Holding Company, Limited, 2018).

Table 3: World market share of beer

Region	2017 Total Consumption (thousand Liters	Growth Rate 2016 - 2017	Global Market Share
Japan	5,116	-2.6%	2.7%
Asia (excluding Japan)	57,831	-0.7%	31.0%
Asia Total	62,946	-0.8%	33.7%
Europe	48,633	0.0%	26.0%
Central and South America	32,175	1.3%	17.2%
North America	26,026	-1.2%	13.9%
Africa	13,540	0.5%	7.3%
Oceania	2,196	0.3%	1.2%
Middle East	1,207	4.0%	0.6%
Global Total	186,724	-0.2%	100.0%

Source: Kirin Holding Company Reports

2.3. European Beer Market

Beer is considered the most preferred alcoholic beverage in the European region. After Asia - Pacific, Europe is the second largest consumer of beer. It represents 26% of total beer consumption worldwide.

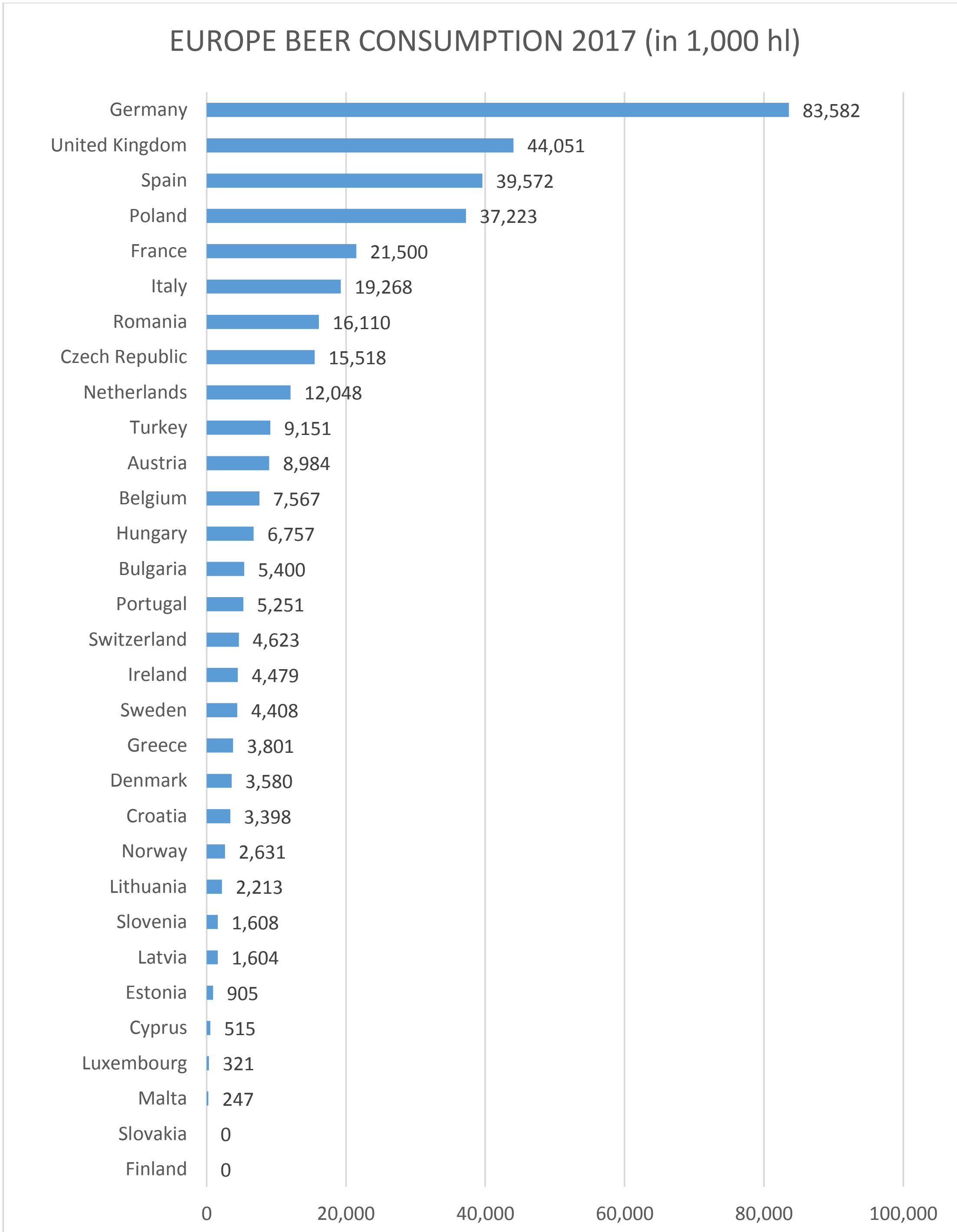
Changes in lifestyles and alcoholic beverage consumption habits, high disposable incomes and popularity among the younger population are the main drivers of the European beer market. However, the greatest challenge for overall market growth is the availability of other beer substitutes. Innovative products such as flavored and crafted beer, also an increasing demand for imported beer are some of the market's opportunities.

While consumption stabilized after three years of growth, beer exports grew steadily, reaching a historical peak that also helped ensure continued optimism on the beer market in Europe. Nearly 22% of European beer production is now exported across national borders, with one third of this beer taking advantage of Europe's reputation for quality beer and shipping to every corner of the world.

Whereas beer production volumes are still a good way off their level before the economic crash nearly a decade ago, this same period has coincided with an unprecedented boom in the number of small and medium-sized enterprises and the emergence of new micro-breweries across the continent. In just one year, the number of EU-active breweries has grown by nearly a thousand. The number of microbreweries has doubled over the past five years, and the European Union now has an estimated 9,500 breweries.

These new brewers helped drive exports that initially resulted in stabilization and then increased growth in the European beer industry. They also push all brewers to strive for even greater excellence and innovation, meaning that consumers of beer now have a variety of high-quality brands, styles and flavors available.

Figure 6: Europe beer consumption 2017



Source: Beer Statistics 2018

Germany is Europe's largest beer consumer with and average consumption of 83,582 thousand HL, followed by the UK, Spain, Poland, France and Italy. Compared to other alcoholic drinks, beer is consumed mostly in the region. France is currently the fastest growing beer consumption market. There are huge growth opportunities for the beer market in Eastern Europe.

Table 4: Europe beer consumption 2011-2017 (in 1,000 hl)

Country	2011	2012	2013	2014	2015	2016	2017
Austria*	9,105	9,110	9,005	8,885	8,977	9,030	8,984
Belgium**	8,574	8,228	8,092	8,095	7,951	7,689	7,567
Bulgaria***	5,100	5,404	5,462	5,230	5,300	5,500	5,400
Croatia	3,547	3,411	3,286	3,218	3,322	3,292	3,398
Cyprus	456	471	480	425	457	468	515
Czech Republic***	15,503	15,960	15,798	15,768	15,703	15,875	15,518
Denmark	3,654	3,437	3,530	3,650	3,430	3,680	3,580
Estonia**	1,020	1,010	1,020	931	900	888	905
Finland****	4,551	4,286	4,337	4,244	4,209	4,208	N/A
France**	20,000	19,941	19,421	19,956	20,600	21,190	21,500
Germany	87,655	86,279	85,888	86,512	86,018	85,532	83,582
Greece***	4,092	3,945	3,916	3,845	3,825	3,882	3,801
Hungary	6,249	5,958	5,704	5,793	6,541	6,704	6,757
Ireland	4,721	4,677	4,328	4,481	4,414	4,576	4,479
Italy	17,715	17,458	17,544	17,755	18,914	19,029	19,268
Latvia	1,626	1,543	1,545	1,555	1,523	1,510	1,604
Lithuania*	2,932	2,830	2,760	2,784	2,680	2,532	2,213
Luxembourg	325	319	316	308	300	312	321
Malta**	189	199	202	211	218	231	247
Netherlands	11,974	12,122	11,721	11,326	11,696	11,871	12,048
Poland	36,236	37,803	37,388	37,644	37,706	37,903	37,223
Portugal**	5,320	4,927	4,937	4,764	4,741	4,891	5,251
Romania	17,000	18,201	16,300	14,900	15,800	15,800	16,110
Slovakia	3,991	4,125	3,874	3,720	3,956	3,708	N/A
Slovenia*** *****	1,672	1,520	1,562	1,615	1,583	1,635	1,608
Spain***	35,233	35,106	35,212	36,302	37,528	38,636	39,572
Sweden**	4,796	4,660	4,713	4,636	4,620	4,452	4,408
United Kingdom*	44,844	42,962	42,422	43,752	43,762	43,731	44,051
Total EU 28	358,080	355,892	350,763	352,305	356,674	358,755	357,826
Norway******	2,534	2,421	2,450	2,509	2,537	2,664	2,631

Switzerland	4,626	4,623	4,595	4,657	4,624	4,605	4,623
Turkey	9,149	9,988	9,047	9,680	9,082	9,003	9,151
Total ALL	374,389	372,923	366,855	369,151	372,917	375,027	374,231

Source: Beer Statistics 2018

3. Italian Beer Market

Nowadays beer sector plays an important role in the national economy and exportations, thanks to the particular features this thousand-year-old product carries with it. Beer has become increasingly involved in Italians ' consumption habits and is an integral part of the Mediterranean diet. This was achieved thanks to the fact that consumption models have evolved and become more responsible, informed and oriented towards quality.

Product diversification of craft beers has refresh the industry, where consumers are becoming increasingly curious and educated about the product. By endorsing natural and human resources, beer contributes to the sustainable regeneration and development of many areas. It contributes the expansion of a prolonged chain that promotes business, commercial and socio-cultural activities with positive social and economic impact. Last but not least, it embodies the excellence of the "Italian Spirit" in terms of taste, high quality, and authenticity, as well as lifestyle–that Italian way of life so highly regarded in the world (Cason, 2017).

These results go further than their impact on the economy. They reflect a multi - faceted sector with distinctive values, deep - seated throughout the entire chain, based on the quality of its raw materials.

Country profile

Italy's economy shrank 0.1% in the last three months of 2018, the same as in the previous period and slightly above the previously estimated 0.2% contraction. It was still the second straight quarter of GDP decline, throwing the country into recession in a decade for the third time.

Italy is world's ninth largest economy and the Eurozone's third largest. The country has a diversified industrial base driven largely by manufacturing of high-quality consumer goods. The GDP's composition expenditure side: household consumption (61 percent), government expenditure (19 percent) and gross fixed capital formation (17 percent). Exports of goods and services account for 30 percent of GDP while imports for 27 percent, adding 3 percent to total GDP (Trading Economics, 2019).

Table 5: Italian Profile

Population	60,483,973
Currency	EUR
GDP per capita in PPS (2018, EU28 = 100)	96

Source: Eurostat

3.1. Market Value, Volume

In 2016, The Italian beer market was valued at 8133.1 Million EUR (Euromonitor, 2017). Despite the long standing financial crisis, for Italians, the perception of drinking still in for pleasure. Although it would be considered that the financial crisis has had an impact, as the market has slightly changed to a more "drink less, drink better" perspective.

Even that total volume of alcoholic beverages consumed in 2016 is still lower than pre-crisis level, the total value is higher and it is shown that continue increasing year to year after 2013.

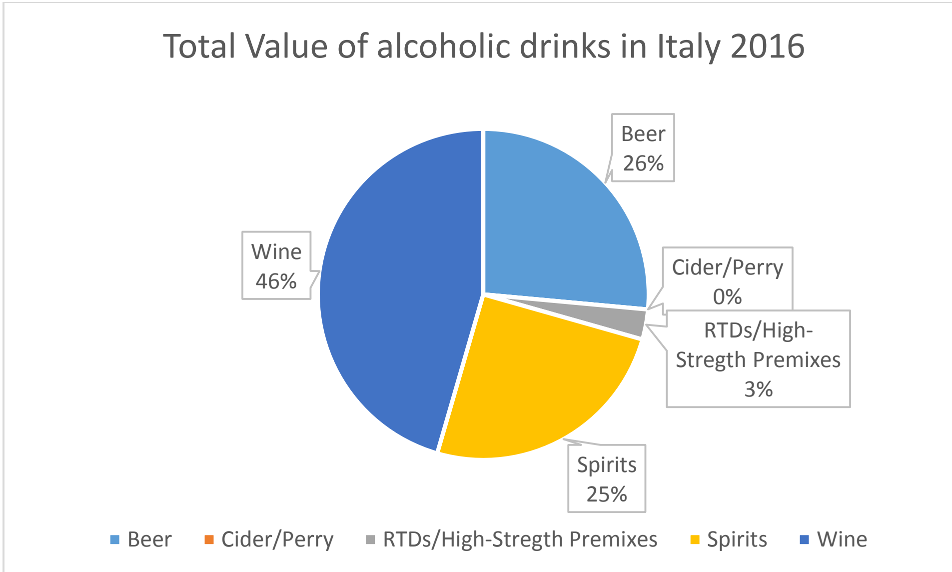
Table 6: Sales of Alcoholic Drinks by Category: Total Value 2011-2016

	2011	2012	2013	2014	2015	2016
Beer	7,668.2	7,925.6	7,895.5	7,902.1	7,985.5	8,133.1
Cider/Perry	0.2	0.2	0.3	0.3	0.3	0.4
RTDs/High-Strength Premixes	801.3	810.5	793.8	814	864.2	902.3
Spirits	8,896.7	8,577.3	8,251.5	7,981.6	7,798.6	7,716.8
Wine	1,3112	1,3167	13,168.1	13,243.8	13,640.9	13,989.9
Total Alcoholic Drinks	30,478.4	30,480.6	30,109.2	29,941.8	30,289.5	30,742.5
EUR Millions						

Source: Euromonitor

There are three main types of alcoholic drink sold in Italy; wine, beer and spirits, which represent around the 96 percent of the total value. Besides knowing that only 3 percent of the total volume sold are spirits, this amount represent almost the same value of the total beer sold.

Figure 7: Total Value of Alcoholic drinks in Italy 2016



Source; Author creation

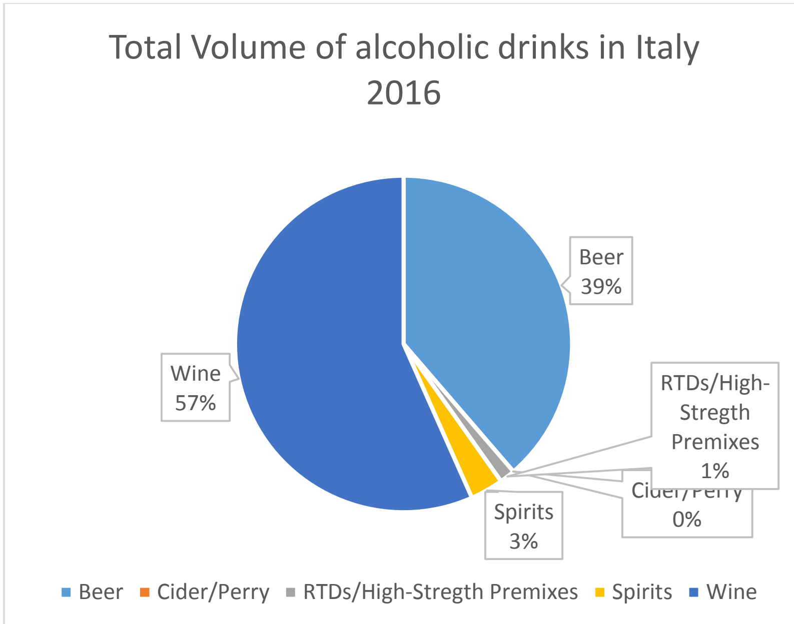
Table 7: Sales of Alcoholic Drinks by Category: Total Volume 2011-2016

	2011	2012	2013	2014	2015	2016
Beer(million liters)	1,619.3	1,620.9	1,588.3	1,562.5	1,563.4	1,575.9
Cider/Perry('000 liters)	22.7	24.1	26.1	28.9	30.9	32.8
RTDs/High-Strength Premixes ('000 liters)	53,947.4	53,666.7	52,350.0	53,979.2	5,7710	60,603.1
Spirits ('000 liters)	151,668.6	144,719.7	138,197.0	134,244.8	13,1134	128,981.9
Wine (million liters)	2,502.8	2,408.1	2,271.5	2,197.9	2,269.7	2,306.7
Total Alcoholic Drinks (million liters)	4,327.7	4,227.4	4,050.4	3,948.7	4,022.0	4,072.2
million liters, '000 liters						

Source: Euromonitor

In Italy, the most widely consumed alcoholic beverage remains wine which represents around the 57 percent from the total volume consumed in Italy, followed by beer. This may seem the opposite compared with other countries, where beer is the favorite alcoholic drink (i.e. in the U.S., beer is about 50% of the market), but for Italy, wine has an historical and cultural meaning.

Figure 8: Total Volume of alcoholic drinks in Italy 2016



Source; Author creation

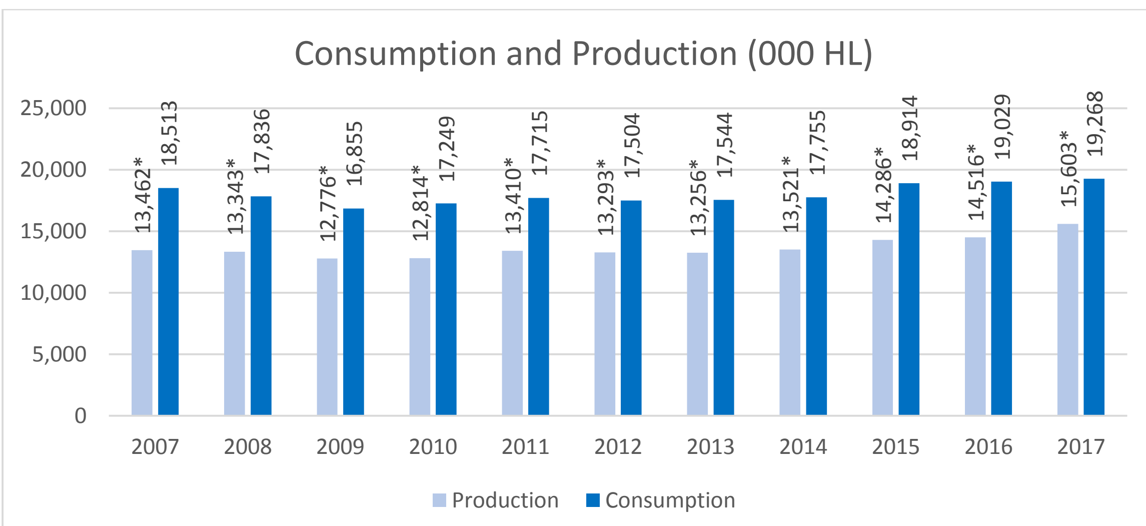
Even though beer producers compete fairly well with other alcoholic beverages, fight the Italian wine culture, compete against wine, beer has a huge competitive disadvantage due to the high taxation and excise that wine producers do not have to bear, and again, this is an Italian anomaly compared to the rest of Europe.

3.2. Production, Consumption

Production also reached its highest absolute value in 2017 (15.6 million hectoliters), with an increase of 7.5 percent compared to 2016. This figure shows the performance of the industry in a context in which, according to data published by ISTAT in February 2018, national industrial production recorded an average growth of 3% in 2017. The entire agricultural chain benefited from the increase in orders, so much so that Italian malt production (75,800 tons) increased by 3.4% compared to 2016 in 2017 (Assobirra, 2017).

Unlike production, Italy's total beer consumption and total consumer spending remained relatively stable at around 19 million hectoliters over the past few years. Even Though Italian drinking culture has always focused on wine, things have recently changed: the beer market is growing, new breweries are being born, historic breweries are producing new types of beer, the number of pubs serving high - quality beer at reasonable prices has increased significantly.

Figure 9: Consumption and Production of Beer 2007-2017



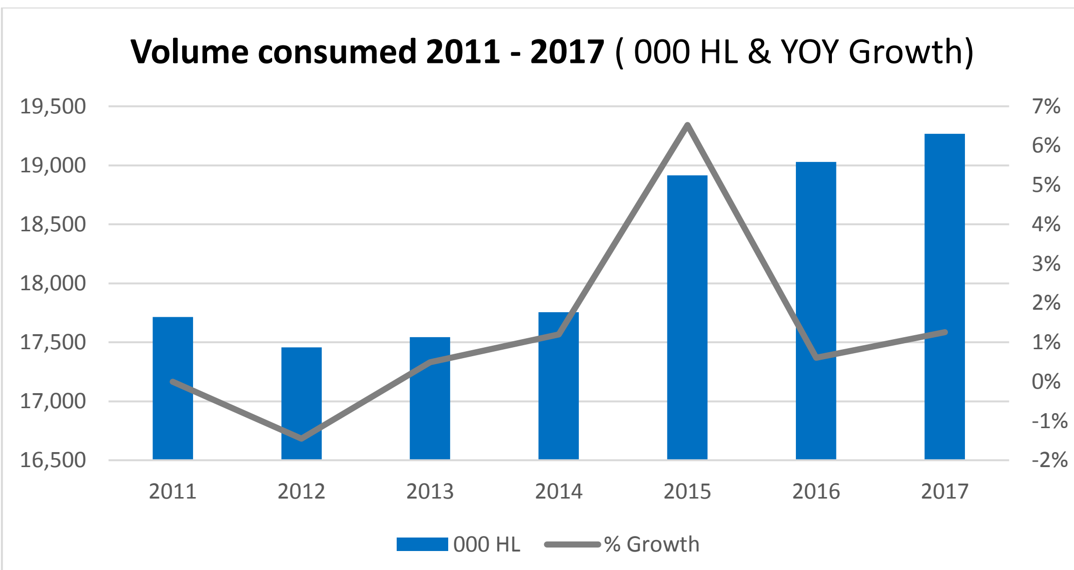
Source: Assobirra Annual Report 2017

Consumption of beer has become increasingly polarized. The ones with attractive prices were more often consumed, which mean that the buying decisions was based on promotional prices and offers. Consumers sought to trade from more expensive to less expensive without compromising quality. In this case the best performing price platform lager was therefore mid-priced at the expenses of the premium and economy products.

Furthermore, Italian consumption of beer has increased more that 1 percent in 2017 compared with the year before, this represent a growing trend which can be projected in future. Since 2013, the tendency of the beer market is to raise, showing an attractive market to enter and compete.

Graph for analyzing the Performance of the volume consumed during the years 2011 to 2017

Figure 10: Volume consumed 2011-2017



Source: Own elaboration from Assobirra Annual Report 2017 data

For the present analysis, it is more important to having into account the per capita consumption results that have mirrored the Italian economic trends over the past 10 years by showing more and more promise. In 2017, per capita beer consumption reached 31.8 liters per year, similar record values were observed in 2007 (the last year before Italy and other countries plunged into the longest economic crisis of the past decades).

Figure 11: Per-capita beer consumption

Source: Assobirra annual Report 2017

It should not be forgotten that, despite this slight "upswing," beer consumption in Italy remains among the lowest in Europe, approximately lower of half of the EU average (70 liters) and 3 to 5 times less than countries with the highest consumption: Czech Republic (138 liters), Germany (104 liters), Austria (103 liters), Poland (96 liters).

3.3. Import and export

Export, production and consumption are improving year by year, having positive impact on the entire chain, from the agricultural to the distribution sector.

During 2017, exports have reached an all-time high (2.7 million hectoliters), with a 7.9 percent growth rate compared to 2016, which represents the 17.8% of the total production in Italy designated to exportation, an absolute record for this sector. If this quantity is compared with the 781,000 hl exported in 2006, the actual figure denotes more than the triple of the trades.

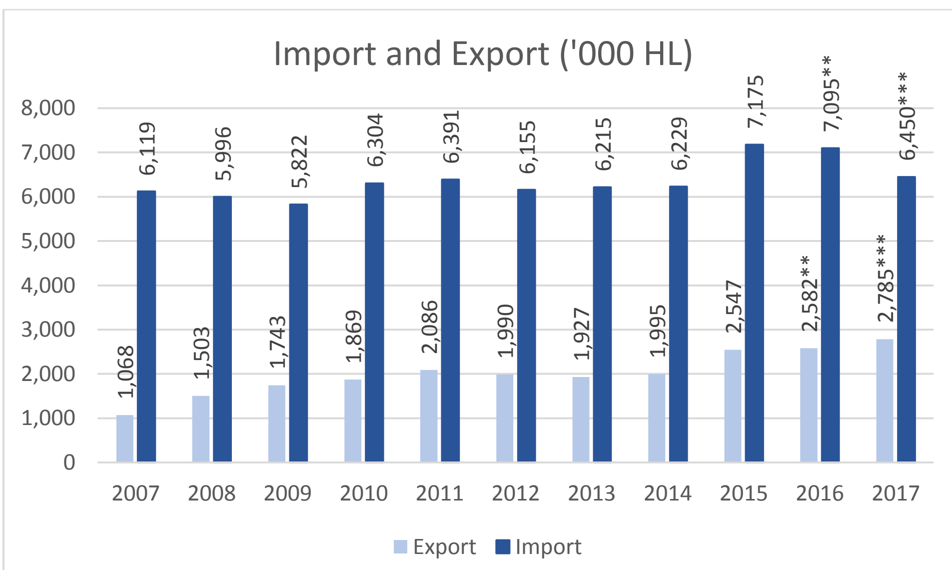
Moreover, the EU was the largest export market with more than 2 million HL of beer produced in Italy (approximately 72% of total exports), with Great Britain still firmly on the lead with 1.4 million hectoliters, followed by France and the Netherlands. Beyond Europe, the US with 218,827 HL, Australia and Albania remained the most important export destinations.

According to Coldiretti, the export value in 2016 was 180 million Euros, mostly from countries with a beer culture such as Germany, Ireland and the UK. Even competition is very high in these countries, the merchandise mark "Made in Italy" is becoming very effective, as is seeing with the introduction internationally of Peroni, Nastro Azzurro and Moretti beer, respectively from Asahi Group Holdings Ltd and Heineken (Euromonitor International, 2017).

In case of Imports, even though per-capita consumption has increase in the recent years, Imports has slightly decrease, which went down by 9.1 percent compared with the previous year. This value amounts 6.4 million HL. The leader of the exports towards Italy is Germany, which represents the 31% of the total imported beer (over o million HL), then comes Belgium with the 23.7% of the imports, Netherlands and other countries inside EU.

Overall, nearly all of Italian imports are still from EU countries (94.6 %) and the rest, Mexico dominates among the extra - Europeans with over 270,000 hl.

Figure 12: Import and Export of Beer 2007-2017



Source: Assobirra Annual Report 2017

It is known that Italy was not a big producer of beer as it is for wine, that is the reason of the trade deficit in this industry, which the imports exceed the exports for about 4 million hl, this as a consequence of the shortage in the production, that is not capable to satisfy the actual demand in the country, which has to be covered by imports from other countries. Also another factor that contribute to imports is that Italian consumers prefer international imported brands to domestic ones. This is because Italy has no long-standing beer tradition and well-known for their quality are imported beers. However, there has been a steady increase in the number of small local breweries over the review period.

3.4. Competitors

Inside this industry, there are many brewing companies which are offering the same or similar product, competing to attempt a larger market share, offering quality, lower prices, variety in flavors, a better distribution channel which ease the availability of the product. It is true to say that competition is good for companies and consumers, because will head beer producers to become more efficient, reducing cost and offering better products in the market.

The Italian market have five main industrial operators which accounts approximately 71% of the Italian Market Share: Heineken Italia Spa, Birra Peroni Srl, Carlsberg Italia Spa, Birra Castello spa, Anheuser-Busch InBev Spa. To these must be added the craft production units, such as microbreweries and brewpubs, which represent 7.1% of the market.

From these five main players in the market, the two companies which lead in the industry are Heineken Italia Spa and Birra Peroni Srl, combined control approximately 50% the market shares. This is possible because of their outstanding marketing strategy, taking advantage of every possibility of their market leadership to hold their position as a market leader, offering a wide range of products with significant investments in new product development and innovation, without forgetting a good communication strategy. For example, Birra Peroni Srl continues to invest on the sustainability of their production, through many initiatives aimed at reducing waste and increasing the efficiency of the brewing processes, reducing the amount of water needed, the CO2 emission and using recyclable materials.

3.4.1. Heineken Italia Spa.

Company leader in the Italian market whose history began when Birra Dreher was acquired in 1974, bringing into the market a mix of local brands with international ones. Since then, by increasing investments and increasingly expanding the production chain.

Through the acquisition of Birra Ichnusa Spa in 1986 growth continued, nowadays named Assemini brewery in Cagliari province.

Partesa was founded in 1989, a company specializing in sales, distribution, consulting and training services for the Ho. Re. Ca channel, which operates with 46 logistics centers across the country and manages a distribution of over 10,000 products. Pollein's (Aosta) brewery was also acquired in the same year.

In 1995 Brewery Comun Nuovo (BG) became part of our group, today the largest in Italy with 2,4 million hectoliters of beer produced annually. But it is in 1996 that HEINEKEN Italy reaches its current size with the acquisition of Birra Moretti. The group today also includes Dibevit Import, a company that has been acquired in 2003 to import and distribute special beers from all over the world.

The company distributes some national brands (Moretti, Dreher, Sans souci), some regional brands (Ichnusa, Jennas, Messina), brands with cheaper positioning (Prinz) and some specials (Mc Farland, Golden Fire). It also manufactures and distributes the international premium brands of the group (Heineken, Amstel).

- *Moretti*

In 1859 a genuine beer was born in Italy: Birra Moretti Original Recipe. From that date the production process has remained completely unchanged to restore the taste of an era intact. Birra Moretti Recipe Originale is a low fermentation beer, obtained from the blend of fine hops, which give it a pleasantly bitter taste and balance, with floral notes, the initial aromas of barley malt.

In July 2016, two new products were by Heineken Italia Spa–Birra Moretti Grani Antichi (made with exclusive grains S Pastore, Senatore Cappelli and Pandas) and Birra Moretti Lunga Maturazione (matured in 40-day vats). These have been added to Birra Moretti Grand Cru, launched in 2009 to celebrate the 500th anniversary of the company.

These three beers are Italian excellence in terms of quality, research and innovation, thanks to both the ingredients used and the complexity of the recipe. The target market is consumers with innovative and refined tastes looking for a high-quality product. Birra Moretti La Bianca was also launched by Heineken Italia SpA in March 2016, the first high fermentation weiss made in Italy with 100% pale malt from Italy.

3.4.2. Peroni Srl

In 1846, Francesco Peroni found a small brewery open to the public, and start producing the beer Peroni. The rapid success led to the opening of several new production sites, first in Rome in 1864, followed by several towns in the center of Italy thanks to the acquisition of other smaller breweries. They acquired an ice and a fake snow producer during the first haft of the twentieth century, which might seem unrelated, but it actually helped them to build a network of distributors, retailers and bars throughout Rome and the center of Italy.

Years later, during the World War II, the production had to stop due to the difficulty of getting supplied with malt, hops and yeast. When everything was restored, Peroni continued to expand, acquiring other breweries throughout the territory of Italy, and it became officially a country beer company of excellence. Then, in the 1960s, Peroni became an international brand with an expansion throughout the world.

After a while it became big enough to attract the interest of the biggest brand in the world, so in 2003 Peroni was acquired by SABMiller, a South-African brand and second biggest beer producer in the world (La Repubblica.it, 2003). In 2016 though, SABMiller was itself acquired from Ab InBev and during the acquisition Ab InBev had to let go some brands in order to avoid sanctions from the antitrust, one of which was Peroni, who has been sold to the Japanese Asahi (La Repubblica.It, 2016).

Through many initiatives aimed at reducing waste and increasing the efficiency of production processes, Birra Peroni Srl continued to invest in sustainability. For example, the company has reduced the quantity of water and CO2 emissions used in its production processes. The company increased the use of recycled materials and waste recycling.

3.4.3. Anheuser-Busch InBev Spa

AB InBev Italia Spa is one of the first company in the world and in Italy distributes some of the most popular international brands, including Beck's, Corona Extra, Leffe and Tennent's Super, as well as specialties such as Hoegaarden, Spaten and Franziskaner.

With a unit of production in Gallarate, not far from Milan, they hired a group of about 250 people, mostly young people operating in an international and multicultural environment.

Anheuser-Busch InBev is a listed company (Euronext: ABI) located in Leuven, Belgium, with secondary listings on the Mexico Stock Exchange (MEXBOL: ANB) and South Africa (JSE: ANH), and with American Depositary Receipts listed on the stock market of New York (NYSE: BUD). AB InBev achieved \$ 45.5 billion in turnover in 2016 (excluding joint ventures and subsidiaries).

The AB InBev Europe Zone consists of 5 business units with more than 16 countries and 26 breweries in the UK, Belgium, Germany, Russia and Ukraine.

3.4.4. Carlsberg A/S

In 1876 Angelo Poretti, a businessman from Varese who first emigrated to Austria and then to Bohemia and Bavaria where he learned about beer and its secrets from the best brewers of the time. So, when he came back to Italy in 1876, he decided to buy an industrial area and to found the plant known as Industry Poretti at Induno Olona, near Varese. After some years, the company became large enough to be part of the 1881 Milan National Exposition.

Unluckily, the 1973 oil crisis caused the business to collapse again, mostly because of the cost of skyrocketing. The United Breweries Copenhagen, which later changed its name to Carlsberg, became a partner in 1975 with Poretti for commercializing the brands Carlsberg and Tuborg.

In 2015 Carlsberg Italia with the Brewery Angelo Poretti participates in the EXPO 2015 in Milan, where the Brewery was the protagonist with their own exclusive space because the good practices, quality and special attention to keep low the costs of production as part of its international strategies.

3.5. Market Share

The Italian Beer Market share represents the percentage of the industry that is earned by each company that is trading inside the country during a specified time period. The market share will be calculated by taking the total company's sales over the period and dividing it by the total sales of the industry over the same period. This percentage is used to provide a general idea of the size of a company in relation to its market and its competitors.

During the last 5 years for this analysis, Heineken has positioned itself as leader in the Italian Beer market, with around 30% of the market share, with its top sell it beer Moretti. Besides the position for the other companies remains almost the same, the second and third player are Birra Peroni Srl and InBev respectively. There is a small difference in the market share of Carlsberg and Birra Castello, which only in the past couple years, Carlsberg Italy have taken the advantage and captured a larger market segment.

In case of other breweries such as microbreweries and other non-members breweries from Assobirra, the trend to consume their products is positive, which its seeing that 2017, the consumption of this type of products grew 0.3% compared with year before.

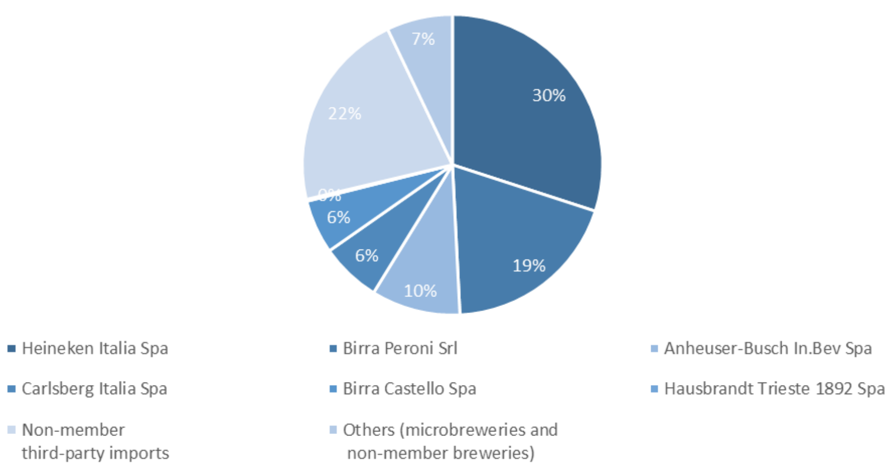
Table 8: Beer marketed for consumption: Supply 2013-2017

	2013		2014		2015		2016		2017	
Brewing Companies	*000 hl*	*%*	*000 hl*	*%*	*000 hl*	*%*	*000 hl*	*%*	*000 hl*	*%*
Heineken Italia Spa	5,082.0	29.0	5,139.0	28.9	5,223.0	27.6	5,336.0	28.0	5,771.0	30.0
Birra Peroni Srl	3,368.0	19.2	3,411.0	19.2	3,477.0	18.4	3,473.0	18.3	3,699.0	19.2
Anheuser-Busch InBev Spa	1,237.0	7.1	1,418.0	8.0	1,624.0	8.6	1,736.0	9.1	1,852.0	9.6
Carlsberg Italia Spa	1,097.0	6.3	1,067.0	6.0	1,129.0	6.0	1,166.0	6.1	1,249.0	6.5
Birra Castello Spa	1,089.0	6.2	1,083.0	6.1	1,088.0	5.8	1,034.0	5.4	1,125.0	5.8
Hausbrandt Trieste 1892 Spa	28.0	0.2	29.0	0.2	33.0	0.2	35.0	0.2	35.0	0.2
Non-member third-party imports	4,555.0	26.0	4,482.0	25.2	5,128.0	27.1	4,953.0	26.0	4,166.0	21.6
Others (microbreweries and non-member breweries)	1,088.0	6.2	1,126.0	6.3	1,212.0	6.4	1,296.0	6.8	1,371.0	7.1
TOTALE	17,544.0	100.0	17,755.0	100.0	18,914.0	100.0	19,029.0	100.0	19,268.0	100.0

Source: Assobirra 2017

In the following Pye chart is shown the market distribution for the bigger players inside the Italian beer Market in 2017.

Figure 13: Beer market share in Italy



Source: Own elaboration from Assobirra Annual Report 2017 data

3.6. New entrants – Craft Brewers and Brew Pubs

Craft Beer it is usually produced by small and medium-sized production units that opt to operate in a local area. Also, it can be elaborated at home (home brewing) or at entrepreneurial level through two operating models: the "microbreweries" and the "Brewpub", offering high-quality products inspired by Northern Europe's larger producers (Germany, Belgium, UK)

"Microbreweries" are actual breweries that produce substantial quantities of craft beers that are then sold to third parties, annual production does not have to exceed 200,000 hl.

The "brewpubs" are brewers that have arranged small production units within them, supplying and selling their products exclusively within their own establishment, thereby combining the brewing activity with the catering activity.

Moreover, craft brewers have a wide variety in flavors, been differentiated because of their own style in base of the international styles, employing unusual aromas and ingredients such as spelt, fruit, chestnut, but also myrrh, ginger and beans, Remarkably, some of Italian wine production experience has been transferred to micro - brewing.

The high costs of implementing the production facilities. have also imposed the birth of a new production system called "beer firm". As the name indicates, this is a beer company that does not have a place of production, it is a beer without a microbrewery, it means that in the market, some companies make available their facilities and machinery for renting and producing third brands.

Over the past few years, the Italian beer industry has changed considerably. Microbreweries have boomed, marked by the brand "made in Italy", where the choice of raw materials is the first step to guarantee the production of a quality beer. This has resulted in malt houses having to adapt to this new style of production, to the point where they are now also handling farmland with crops harvested exclusively for certain microbreweries.

The Beer Industry in all the country registered a total of 3,000 employees. Nowadays the micro sector accounts around 850 small business, which are divided into craft breweries

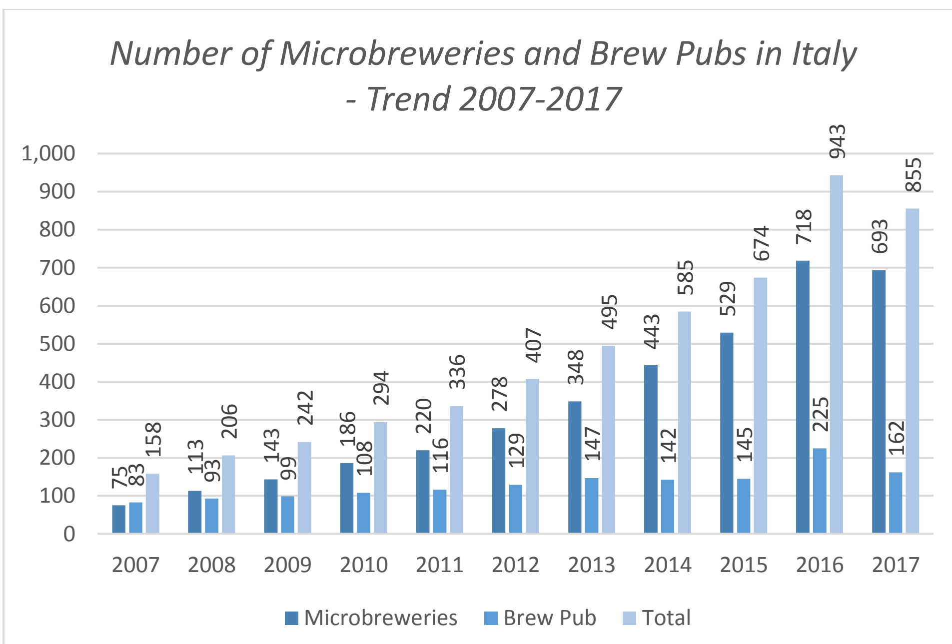
(693) and brew pubs (162), holding a 3.2 percent market share for a total output of 483,000 hectoliters (Assobirra, 2017).

Table 9: Microbreweries and Brew Pubs in Italy - 2017

855	NUMBER - excluding beer firms	3,000	EMPLOYMENT – employees including beer firms
483,000 hl	PRODUCTION – hectoliters of beer (average degree plato14), equal to 3.2% of the national total(including an estimated 135 of exports)		

Source: Assobirra Annual Report 2017

Figure 14: Number of Microbreweries and Brew pubs in Italy 2007-2017



Source: Assobirra Annual Report 2017

Compared with 2016, in 2017 the number of microbreweries and brewpubs has been reduced as well as the total production of craft beer in 1.4% which in 2016 was 490,000 hl and during 2017 was 483,000.

Figure 15: Microbreweries and Brew Pubs in Italy - Geographical Distribution - Year 2017

Source: Assobirra Annual Report 2017

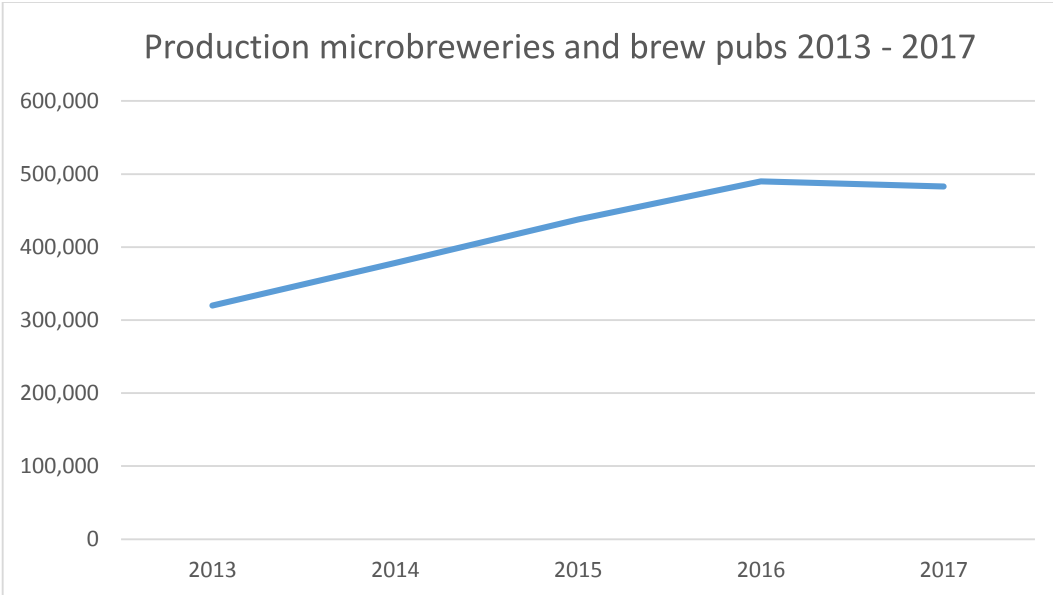
Table 10: : Microbreweries and Brew Pubs in Italy - Geographical Distribution - Year 2017

Regions	Microbrewery	Brewpub	n	%
Abruzzo (The Abruzzi)	28	1	29	3%
Basilicata	12		12	1%
Calabria	22	2	24	3%
Campania	48	7	55	6%
Emilia-Romagna	32	9	41	5%
Friuli-Venezia Giulia	17	9	26	3%
Lazio (Latium)	42	10	52	6%
Liguria	23	6	29	3%
Lombardia (Lombardy)	105	32	137	16%
Marche (The Marches)	27	9	36	4%
Molise	10		10	1%
Piemonte (Piedmont)	62	18	80	9%
Puglia (Apulia)	44	8	52	6%
Sardegna (Sardinia)	30	4	34	4%
Sicilia (Sicily)	38	6	44	5%
Toscana (Tuscany)	55	8	63	7%
Trentino-Alto Adige	22	12	34	4%
Umbria	15	2	17	2%
Valle d'Aosta	5	1	6	1%
Veneto	56	18	74	9%
TOTAL	693	162	855	100%

Source: Own elaboration from Assobirra Annual Report

The north of Italy concentrates the largest amount of microbreweries where Lombardy is the first on this ranking with 137 companies, followed by Piedmont and Veneto with 80 and 74 respectively; on the other hand, the central-southern regions, Tuscany leads with 63 business, Campania, which has 55 craft breweries and brew pubs and Lazio with 52 businesses.

Figure 16: Production of microbreweries and brew pubs



Source: Own elaboration from Assobirra Annual Reports

During 2017, production from microbreweries and brew pubs have slightly decreased compared with 2016 from 490,000 hl to 483,000 hl.

Some of the most important microbreweries that have more presence in the market and the wide variety in products are: Atlas Coelestis, Birrificio Turbacci, Maltovivo, Monastero San Biagio, Birrificio Baladin, Doppio Malto Brewing Company Srl, Birra Del Borgo, Birrificio Troll, Birradamare, Birra Amarcord, Casa Veccia, La Compagnia Della Birra, Birra Flea - Flea Società Agricola a Responsabilità Limitata, Birrificio San Michele, Birrificio Otus, Birrificio Indipendente Elav S.R.L.

3.7. Consumer preferences`

Consumer preferences are a positive motivation expressed by emotional compatibility with a form of product, service or trading. At some point, theoreticians tended to limit their preference to the concept of choice; however, choice and preference are two completely different things: the first is an action and the second is a state of mind. Preferences are the result of a long-term relationship between the brand and the consumer and the second is the link of the brand to a symbol and the perception of getting a high quality product.

Moreover, it has been shown that consumer preference can be measured effectively and that their study can provide a more thorough understanding of consumers ' choices when they decide to select a particular product or offerer against the other, or even when they decide to pursue a timely relationship with the offerer.

As Assobirra pointed out, the economic crisis changed the market share of the different beer segments: cheaper beers and private label beers increased, premium beers decreased, while super - premium beers and special beers increased their market share due to Italian consumer curiosity about craft products; ' ' new beer styles " have gained momentum (Berkhout, et al., 2014).

Recently, consumers with high income have moved from super premium to specialty beers, while other consumers have moved from cheaper beers and wine to specialty beers due to more stringent BAC (Blood Alcohol Concentration) while driving. Consumers were therefore more inclined to drink less while spending the same amount on products with high quality (Berkhout, et al., 2014)

According with the research made in 2015, named “Beer choice and consumption determinants when craft beers are tasted: An exploratory study of consumer preferences” shows that the two factors that affect the beer choice and consumption from a consume preference perspective are: beer attributes and factors related to the purchase process.

In case of beer attributes, the only one evaluated was the taste, while in purchase process, many factors were evaluated such us contribution price, brand, distribution, differentiation and packaging.

The way of collecting data for the research was under a questionnaire, in order to analyze the socio-demographic characteristics of beer consumers.

Table 11: Socio-demographic characteristics of ''purely'' commercial and ''commercial & craft beer'' consumers (values in percentage).

Variable	Purely commercial beer consumers %	Commercial & craft beer consumers %
Gender		
Female	45.71	39.68
Male	54.29	60.32
Age		
18-25	43.48	37.15
26-33	20.29	28.06
34-41	14.49	15.81
42-49	7.25	13.44
50+	14.49	5.53
Professional status		
Employee	30.99	38.40
Self-employed	16.90	19.39
Searching for job	4.23	7.98
Housewives	11.27	3.04
Retired (pensioners)	4.23	2.28
Students	29.58	24.71
Professional status not declared	2.82	4.18
N. of consumers	74	263

Source: Elsevier

The results show that craft beer is more popular among employees or self-employed people, while students and generally younger people are more likely to consume cheaper industrial beer. Besides, the higher concentration of consumers are in the categories under 33 years old, which represents more than the 60% of the total. As far as the age variable is concerned, we can see the same consumer preference among the categories of ages 34-41 and elder than 50, for the purely industrial beer consumption.

One of the possible reasons is the distribution channel, where the consumers from these categories prefer to buy the industrial beer in supermarkets instead of restaurants or pubs, where craft beer has more influence.

3.8. Competitive strategies industrial and craft breweries

Either industrial and craft breweries are looking for long-term success in the market, success that will be reflex in increasing their percentage of market share. To achieve this propose, firms will compete according to their existing resources and what opportunities the market has to offer.

Table 12: Strategies by industrial and craft breweries

	Macro-brewing	Micro-brewing
Mechanism of competition	Efficient production, Marketing Channels of distribution	Quality of beer, Channels of distribution

Source: Author creation

It is easy to see that large breweries can benefit from economies of scale and sell their products at a lower price. Reasonably, what is expecting is that smaller the brewery, higher the price, but in the market small and medium breweries are trying to compete in prices, taking a high risk with the only intention of surviving, where probably the price is very low also for covering the cost of production.

Differently to microbreweries, brewpubs have the higher average value per Hectolitre. They are able to produce and sell to the final customer without any intermediary thanks to their vertical integration, which gives them a competitive advantage on the revenue side, despite they have to face higher costs due to the pub.

As mentioned before, microbreweries and brewpubs focus their efforts in offering a better quality product, working along the beer production chain – from agricultural cultivations to its end product.

Other factor and also very important to be considered by all players, either macro and micro producers, is the Innovation. Through this factor, they will be able to increase their share over the period as the macroeconomic environment continues to threaten the performance of the overall category.

Some innovation launched during 2016 that have helped to breweries to keep and also increase their market share are:

Table 13: New products launched by main breweries 2016

Brand	NBO	Product	USP	Launch
8.6 Limited Edition	Bavaria Italia Srl	Imported premium lager	New beer 8.6 Limited Edition was launched in four different designs of can that are inspired by tattoo art and can be collected.	February 2016
Birra Morena Lucana Bio	Morena	Domestic premium lager	Organic product. Birra Lucana Bio (5.8% ABV) is intended to strengthen the identity of the company and aims at increasing the quality of beer available.	September 2016
Birra Moretti Grani Antichi and Birra Moretti Lunga Maturazione	Birra Moretti SpA	Domestic premium lager	Birra Moretti Grani Antichi (made with exclusive grains: S Pastore, Senatore Cappelli and Pandas), and Birra Moretti Lunga Maturazione (matured in vats for 40 days). These beers represent Italian excellence in terms of quality, research and innovation, both thanks to the ingredients used as well as the complexity of the recipe. The target market is consumers seeking a high quality product, with innovative	July 2016
Nebra X Anniversary	32 Via dei Birrai Srl	Domestic premium lager	New beer launched to celebrate 10 years of activity. Available only in the Magnum format as a limited edition.	November 2016
La Torlonga	Birrificio Antoniano Srl	Domestic mid-priced lager	Birrificio Antoniano launched La Torlonga, made in partnership with Slow Food. After making two beers with grains from Sicily and the Veneto region, the company launched this new product with a grain variety from the Abruzzo region and an ABV of 4.5%. Birrificio Antoniano helps to support the Slow Food Foundation for Biodiversity by donating some of its revenue from sales of La Torlonga to the foundation.	September 2016

Birra Moretti La Bianca	Birra Moretti SpA	Domestic mid-priced lager	The first high fermentation weiss made in Italy with 100% Italian pale malt	March 2016
Leffe Royale Mount Hood	InBev Italia srl	Ale	Leffe Royale Mount Hood, made with tastes and flavours that make it an ideal beer for the winter. A limited edition of Leffe that fits in the Leffe Royale range.	December 2016
Bavaria 0.0% Lemon and Bavaria 0.0% Peach	Bavaria Italia Srl	Non/low alcohol beer	The product is ideal for the hot summer months, and it targets various consumer groups, such as sportspeople, consumers careful about their diet, as well as pregnant women and people that need to drive or have a break at work.	July 2016

Source: Euromonitor International 2017

Another strategy from the macro breweries is to merge or acquire a microbrewery, making possible expanding their wide variety of products and also competing in this niche of market. As an example, HEINEKEN has acquired craft brewery HIBU as part of their strategy to selectively expand in the craft & variety segment and also has a very successful innovation from its other craft producer Ichnusa, one more local microbrewery located in Sardinia, which launched Ichnusa Non Filtered in the Italian Market (Heineken N.V., 2018).

3.9. Market Distribution

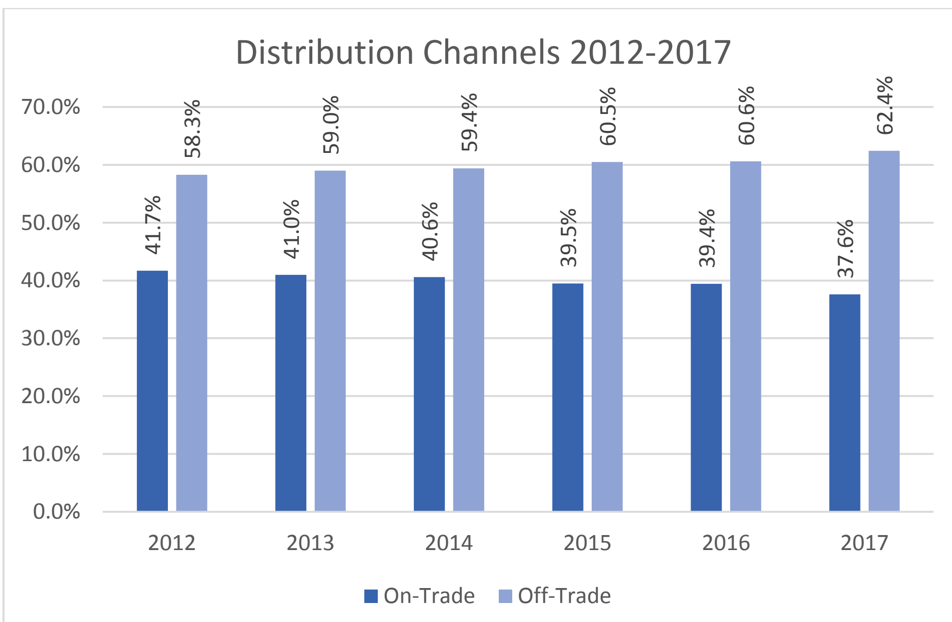
Breweries face the challenge of selling to consumers through pubs and restaurants, as well as supermarkets and off licenses – otherwise known as sales and off - trade. The sales on-trade consider outlets like bars, restaurants, coffee shops, clubs, hotels etc., while the off-trade market consider all retail outlets like hypermarkets, supermarkets, convenience stores, mini markets, kiosks, spirits shops etc.

Figure 17: Percentage of consumption by type of distribution channel

Source: Assobirra Annual Report 2017

Despite the domestic consumption has increased, it is still notice a couple of phenomena that Italian consumers have touched upon in the past years, the steady shifting from on-trade to off-trade consumption and a watchful eye on price (preference of more economic products). These indicate a persistent propensity by the Italian public to spend less on beer consumption.

Figure 18: Distribution Channels 2012-2017



Source: Assobirra Annual Report 2017

Over the years, emphasis is placed on off-trade consumption. In 2017, 37.6% of all beer consumed was done so On-Trade. The remaining 62.4% represents modern and traditional (Off-Trade) distribution. This confirms a trend that has been occurring for the last 10 years: in 2007, the year before of the financial crisis, consumption in bars, restaurants, pubs, etc., was equal to 45.5%, and Off-Trade to 54.5% (Assobirra, 2016).

3.10. Cost – price structure

Cost and price analysis are two different approaches for making pre - purchase decisions about the appropriate value of products or services.

In case of price, during 2016 the average retail unit price increases by 1% compared with previous year. This analysis was made considering the most common beer drunk in Italy, the Lager type (Euromonitor International, 2017).

For this analysis, the beer brands were banded by type, considering three main groups: premium, mid-prices and the economies.

- As premium brands were considered Beck's, Paulaner, Heineken and Peroni Nastro Azzurro among the top brands available in Italy in 2016. In addition to higher prices, premium beers are generally characterized by packaging – generally glass bottles and distinctive closures, along with high quality.

- For mid-priced or standards beer, Peroni, Moretti and Dreher, all of which are domestic brands, as well as Ceres and Bavaria, among the most famous imported ones were considered.

- Finally, as economy, the most popular brands in this category were Prinz, Wührer and Morena, recognized also by a simple and basic packaging. Those are usually known by promotional offers and lower prices.

Table 14: Lager by Price Band 2016

Category	Price range per litre
Premium	EUR 4.55 and above
Mid-priced	EUR 1.81 – 4.54
Economy	EUR 1.80 and below
Price bands for lager are based primarily on price, but positioning and packaging are other factors that are considered in classification.	

Source: Euromonitor International form official statistics, trade associations, trade press, company research, store checks, trade interviews, trade sources.

In case of cost of the production, brewing is a scale game, which means that higher is the quantity of production, cheaper it will get as the process become more efficient, but as far as is known, quality and variety are always compromised with the mass elaboration. If a unique beer is the mainstream, brewing locally is the best option, but it is also associated with higher costs and producing at small scale.

In general, brewing costs considerably differs among the firms. In case of macro breweries, the power of bargaining with the suppliers is higher in comparison with microbreweries, that is the reason why the expenses in raw material, such as malt, hop, yeast, are lower than smaller producers; on contrast, the expenses in labor per unit produced are higher, for microbreweries, this expenditure represents the 14 percent, while for macro and mid-size producers represent only the 11 percent.

Beside the fix cost, packaging, transportation, marketing, brewing cost, such as water, electricity, are also considered in other costs. Those cost represent a higher expenditure for big companies, around the 60% compared with the smaller ones.

Table 15: Cost of raw material, labor and other costs

	Raw Material Cost %	Labor Cost %	Other Costs
Macro breweries	29%	11%	60%
Mid-size breweries	35%	11%	53%
Microbreweries	39%	14%	47%
*taxes and some excise were not considered.			

Source: Author creation

The table below illustrates an average margin of sales or the amount of profit made by each agent in the beer distribution chain for a Typical beer brand, excise duties also considered. That is, after adding all of your cost of supplying a product, including materials, manufacturing costs, advertising, wages and the overhead costs, the sales margin is the difference between total cost and the product's final selling price.

Table 16: Selling Margin of a Typical Beer Brand in Retail Channel which uses Wholesalers 2016

VAT	18.0
Retailer	13.1
Distributor	9.0
Excise	21.4
Manufacturer	38.5
TOTAL	100
% retail value RSP(Retail selling price)	

Source: Euromonitor International

It is shown that approximately the 13 percent goes for the retailer and the 9 percent for the distributor, also taxes and special excises are considered, which represents around the 40 percent of the profit. Also the percentage of profit for the manufacturer is given (Euromonitor International, 2017). The profit made for brewpubs it is different, since the price is higher and also other expenses have to covered.

4. Empirical analysis

Craft beer is now well-known among Italian consumers, principally because of its variety in flavors and quality. Despite its increasing consumption, small breweries have many factors against that will not facilitate a big scale production or even worse a distribution in a small area. In this case, the craft breweries are becoming real competitors for big firms?

This analysis is not intended to be exhaustive and 100% representative of the health of Italian breweries, but has the sole purpose of providing a general picture of the sector based on real numbers. The analysis was conducted interpreting information from the main players, over a period of time, giving an approach to the case. This empirical approach relies on data from the balance sheets contained on the AIDA database, an online source where it is possible to find the balance sheets from most of the companies in any industry in Italy.

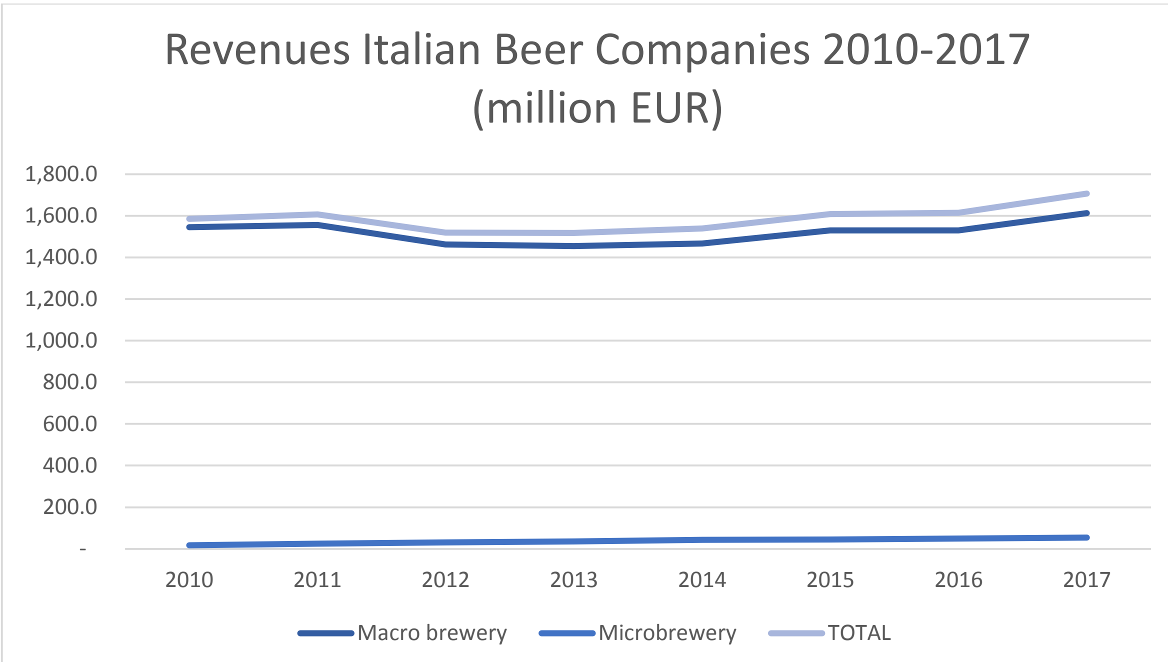
For the examination, the perform of 67 companies will be evaluated, which includes macro, medium and microbreweries with some exclusion depending on the information available in the source, in order to work with a more consistent and reliable data.

The period of time analyzed will be from 2010 to 2017 and all companies that have the information complete about their balance sheet from the period mentioned are considered in the analysis. Also, the companies are banded according to their total revenues from sales into three main groups: macro firm to companies with a revenue higher than 100 million EUR (five first on the list), medium-size firm with revenues from 10 million EUR to 100 million (only 1 company on the list which it will not be analyzed) and to microbreweries to those with a total revenue lower than 10 million (61 companies from the list).

4.1. Revenues Italian Beer Companies

An overview of the market will take place in this section, considering the overall revenue during the years 2010 to 2017. Since the present analysis only takes into account a sample of 66 players from the industry, it is a good approximation to shows the trend in revenues. It is useful to analyze this tendency to understand how healthy the industry is.

Figure 19: Revenues from Italian beer companies 2010-2017



Source; Author creation

Even that the great financial crisis took place last decade and affected the revenues, in Italy still had a great impact during 2012 as it is shown on the graph, where it was the lowest revenue obtained during the period analyzed. This is consistent with the world economy and it likely has accelerated the consumption in next years. At first, consumers consumed less with a lower income, then they began to enjoy beer in a lower volume, but with a higher quality and spending more.

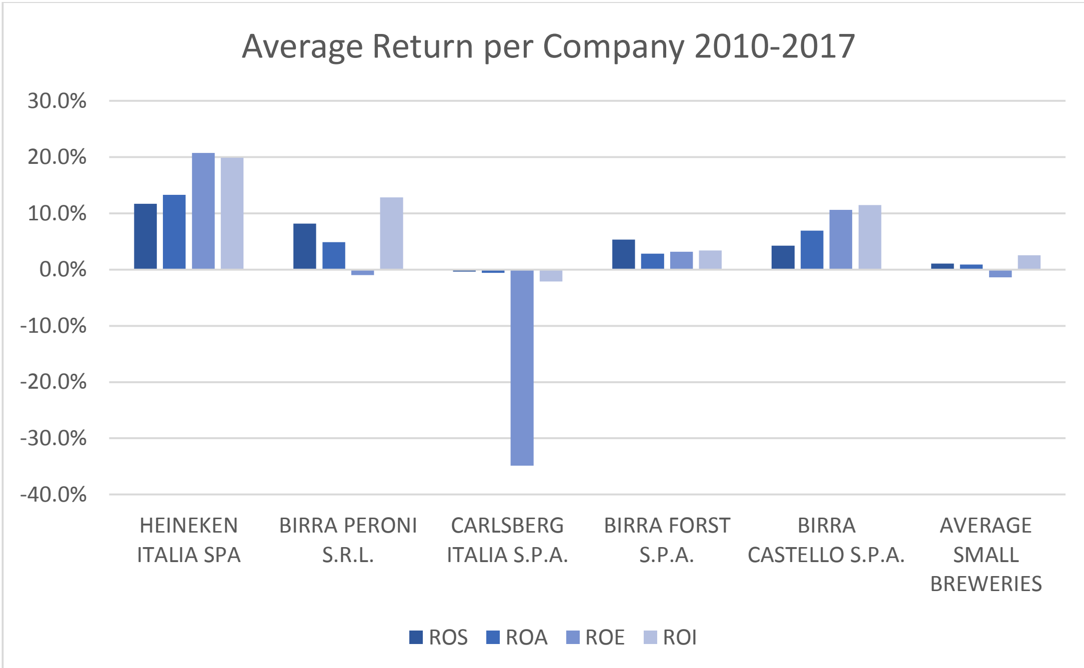
4.2. Profitability

The best measure of a business is its profitability, because without it, it will not be possible to grow and if it doesn't grow, then its stock will fall. Increasing profits are the best indication of a company being able to pay dividends and the share price going upward. Creditors will lend money to a profitable enterprise at a lower rate than to an unprofitable one: as a result, profitable firms can use leverage to further increase stockholders' equity.

Common profitability measures compare profits with sales, assets, or equity: net profit margin, asset return, and equity return. Although most financial services publish these ratios for most companies, they can be independently calculated using net profit and total revenue from the Income Statement of a company's financial report, and total assets and stockholders' equity of the Balance Sheet (Spaulding, 2010)

In order to have a general overview of the market, some profitability ratios from the five macro breweries are analyzed during the period of analysis, while all the others were grouped under the name "Average Small Breweries", averaging all parameters in order to be shown in the graph and make a comparison between the big and the small sector.

Figure 20: Average Return per company 2010-2017



Source: Author creation

As we can see, Heineken is by far the most profitable firm in the sector, followed by Birra Castello, Birra Peroni and Birra Forst, For Carlsberg is shown that the all ratios are negative, one of the reason due to the decreasing value of its equity, also because of the financial crisis from where it is still trying to merge and recover its revenues.

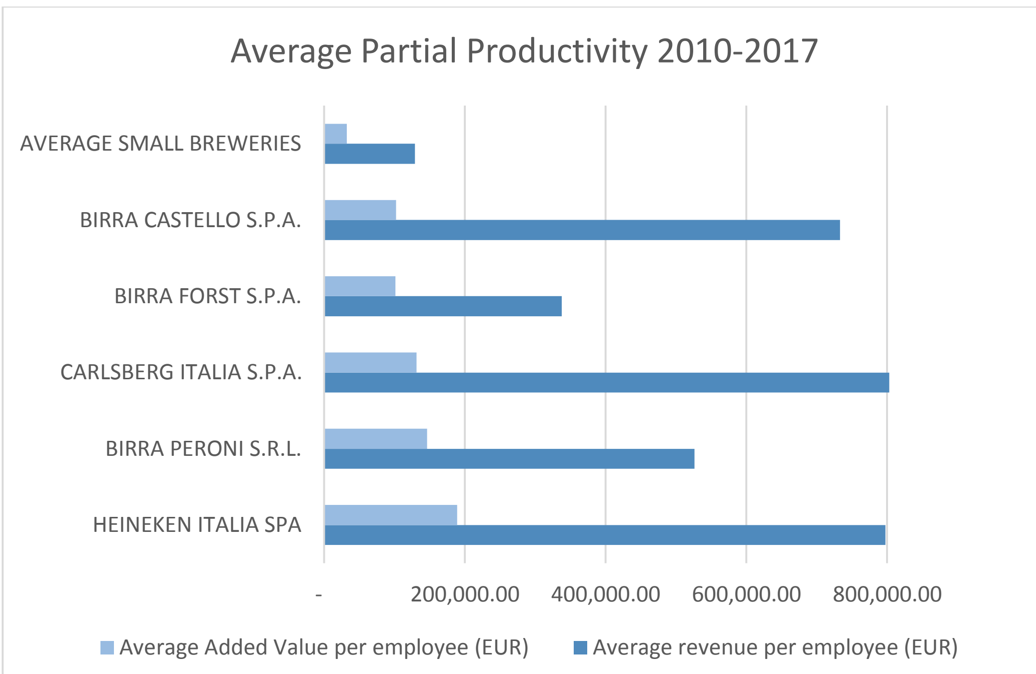
Moreover, the small breweries shown a negative ROE, this due to their poor effectiveness in using its equity.

4.3. Partial Productivity

It is useful to analyze the partial productivity, or in other words how much a single employee adds to the company in terms of revenue and added value, in order to understand how economies of scale affect the beer industry. The average income per employee and added value per employee are significant indexes as they combine the company's efficiency, economies of scale and cost management.

The analysis was perfume under the same criteria from previous one, considering the five main players in the market and the average small breweries.

Figure 21: Average Partial Productivity 2010-2017



Source: Author creation

The graph highlights that economies of scale are a factor in the industry, with all the big business having a much higher average income per employee compared to the market's smaller breweries.

4.4. Craft Breweries

From 2010 to 2017 the number of breweries and brewpubs has increased from around 294 to around 855 (Assobirra, 2017) and also it is seen that per capita consumption stands at 31.8 liters per year, marking an all-time record.

To carry out the analysis for craft breweries in order to take a closer view at this segment of the market, a previous analysis made by Gianccardo Cordo on the Movimento Birra during 2016, titled "Stato della birra artigianale italiana attraverso l'analisi di bilancio di un campione di emprese produttrici" will be replicate, but considering current data obtained from AIDA database, the sample used are 61 companies including breweries and brewpubs divided as follows:

Table 17: Sample of small breweries banded by quantity produced

Category	Annual Range of production	# of companies
Big breweries	Higher than 6000 HL	8
Mid-size breweries	Higher than 1200 and lower than 5999 HL	7
Microbreweries	Lower than 1999 HL	39
Brew pubs	Without limit	7

Source: Author creation

The sample of big breweries is quite representative given that it contains almost all the craft breweries that produce more than 6000 hl per year, also the revenues per company during last year was higher than 2 million EUR. In case of medium, another factor for categorize was the revenues, considering revenues higher than 1 million. While for microbreweries was more difficult since most of the breweries that produce less than 1000 hl / year is often a partnership who do not have the obligation to deposit their balance sheet. Therefore, it is assumed that the range evaluated of small breweries should be better represented in this analysis given that most Italian breweries belong to this category. In fact, the average production of micro-Italians is around 600hl per year (Corbo, 2016).

The sample of Brewpubs is instead very small and also the most heterogeneous. To obtain representative data from this category it would be necessary to increase the sample size. The purpose of the statistics made here on the brewpubs is represents the trends in the market.

4.4.1. Revenues Craft Breweries

In the tables below is shown the data related to the value of production for microbreweries. The value of production represents the annual revenues deriving from the sale of products, including inventories and excluding VAT, which for the producer is not a revenue (and not even a cost).

Table 18: Average Value produced by category 2010-2017

	Average Value Production EUR	Minimum Value Production EUR	Maximum Value Production EUR
Big breweries	2,702,025.85	1,529,226	5,880,939
Mid-size breweries	882,082.39	528,360	1,025,332
Microbreweries	245,815.80	23,605	658,517
Brew pubs	469,587.09	295,891	989,679

Source: Author creation

Table 19: Average Value per Hectolitre 2010-2017

	Average Annual Production HL	Average Value of Production EUR	Average Value per Hectoliter EUR
Big breweries	11,167	2,702,025.85	241.97
Mid-size breweries	2,542	882,082.39	347.00
Microbreweries	731	245,815.80	336.27
Brew pubs	792	469,587.09	592.91

Source: Author creation

As shown in 19, the largest microbreweries sell their product on average for a lower value, around 238 € / hl. It is a competitive price facilitating to remain on the market because economies of scale are better exploited, that is the advantage that derives from being able to spread fixed and variable costs on a greater volume of beer produced.

Mid-size breweries as expected, being able to exploit to a lesser extent the economy of scale, to be competitive must necessarily sell their beer at a higher price (347 € / hl). The small brewery manages to obtain practically the same amount (336 € / hl) of the average brewers from one Hectolitre. An explanation could be that those who are small, to stay on the market, are forced to make competitive prices at least to medium-sized breweries. This could be a big mistake if the entrepreneur of the small brewery does not find a way to keep the costs low since there is a real risk that he ends up selling his product at low cost with the intent to "survive" and remain competitive.

Finally, the higher average value per Hectolitre goes to the brewpubs with an average of 592 € / hl. They can produce and sell to the final customer without any intermediary thanks to their vertical integration, which gives them a competitive advantage on the revenue side, even though they have to bear higher costs due to the extra facilities as the pub.

4.4.2. Costs of production Craft Breweries

The follow table shows how the cost of raw materials with respect to total costs affects all the sectors and also the incidence of personnel costs.

Table 20: Average costs of production small breweries by category 2010-2017

	Average Production Cost EUR	Raw Material Cost		Labor Cost		Excise Duties (EUR)
		Average Value (EUR)	%	Average Value (EUR)	%	
Big breweries	2,584,706.66	918,517.00	35.5%	435,485.69	17%	482,076.00
Mid-size breweries	815,540.66	286,175.63	35.1%	161,444.21	20%	115,200.00
Microbreweries	232,204.80	92,997.49	40.0%	33,443.91	14%	31,572.00
Brew pubs	464,328.95	188,116.34	40.5%	130,890.43	28%	34,200.00

Source: Author creation

As expected, the highest percentage of expenses belong to raw material with a slightly difference between micro and mid-size breweries as a consequence of their low power over suppliers. In case of employees, thanks to the better implementation of facilities, big breweries have lower expense compared with mid-size companies, while in microbreweries, usually the stockholder or the owner is the person in charge of the production, reducing as much as possible this cost.

The figure is different for brew pubs, since they need more workforce in order to cover position in the pub as a part of the business.

A significant portion of the cost comes from the excise duties, value estimated close to the cost of the employees. This is another factor that difficult to compete in the beer industry, acting sometimes as the key factor between staying on the market and fail, especially for small breweries.

4.4.3. Profitability

The factors that need to be taken into account when it comes to economic convenience in business activity are different. Profitability is certainly positive and every business is looking for profits as the reason their existence, so it's a good way to summarize the health of the craft brewery industry. The income resulting from the operation has to compensate the capital invested and the work done by the shareholders in managing the business.

A way to evaluate how effectively management is using the company's assets to create profit is the index called ROE (return on equity), value expressed in percentage.

Table 21: Average Profitability of Small breweries by category 2010-2017

	Production Value EUR	Production Cost EUR	Taxes EUR	Profit EUR	Operating Income EUR	ROE %
Big breweries	2,702,025.85	2,584,706.66	40,308.97	66,626.91	117,319.19	18.4%
Mid-size breweries	882,082.39	815,540.66	8,947.79	12,145.54	66,541.73	13.6%
Microbreweries	245,815.80	232,204.80	2,116.36	-6,132.88	13,611.00	-3.3%
Brew pubs	469,587.09	464,328.95	4,577.90	-1,929.13	5,258.14	-8.4%

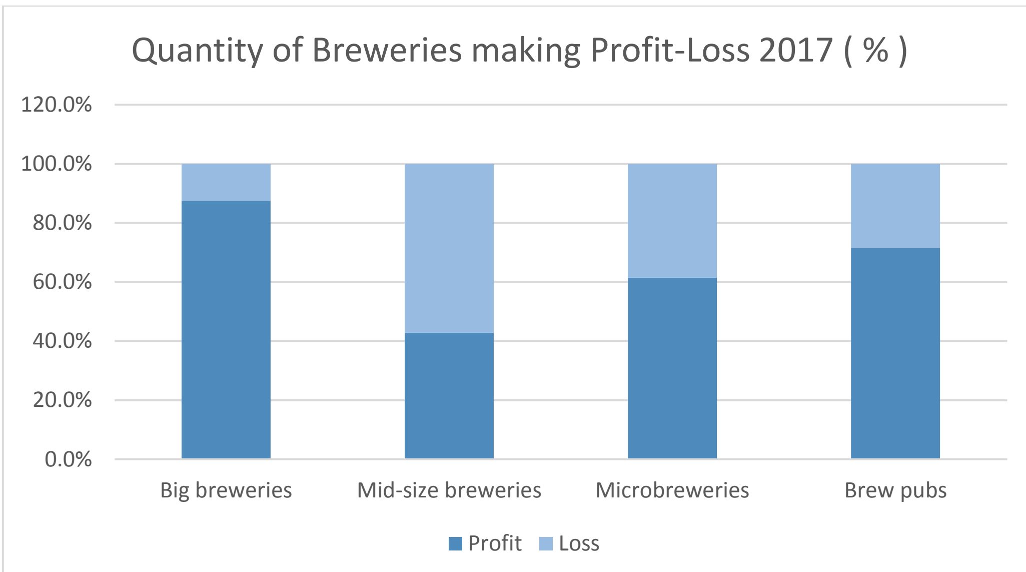
Source: Author creation

As it can be seen in table 21, profit increases with volumes, and on average large breweries are quite profitable, both in absolute terms and in percentage, considering the return on equity

ROE. The final profit is relatively low for medium size breweries, but ROE remains positive, this could be due the low capital invested by the partners.

In contrast with mid and big breweries, small companies and brewpub in average are having losses and negative ROE, in some cases they are not even able to cover their cost, since they are reducing their prices as much as possible only with the intention of remaining in the market.

Figure 22: Quantity of breweries making profit-loss 2017



Source: Author creation

In the graph is shown that during 2017, the few big breweries have had losses, in contrast with mid-size and microbreweries that more than 50 percent of the companies in the market had losses, where one of the factor that influence on this tendency are the excise duties.

One measure that could help the sector is a reduction in excise duty, in order to increase a little their margin, which could be used to hire staff, to make investments or more generally to continue to exist on the market. Also, it is possible to think that in case the excise is reduce, the price also has to be reduce, remaining the same profit or loss for this small sector.

A possible reason for this low indicator is the growing number of craft breweries, while the slightly increase in the demand is not enough to counterbalance the offer of craft beer in the market. Over the past couple of years, craft breweries have been able to steal some of the market share of industrial beer, but it appears that the market is still not ready or large enough to have this high number of breweries to become profitable.

5. Conclusions

During 2017, Italian beer market have performed well, showing an increase in production and consumption around 7% and 1% respectively, production that is also satisfying an increasing external market. However, despite increased consumption, as a result of the prolonged financial crisis, Italian consumers continued to try to save money and changed consumer behavior. Furthermore, the increased excise duties on beer encouraged cheaper products to be purchased.

The Italian craft beer sector have increased in last years from the point of view of quantity of companies in the market and not in volume produced. This means that the cake has been the same for years and it is shared with more and more subjects. Every new brewery that is born takes oxygen away from others without creating a great added value or taking new market shares. In consequence, low profitability is probably due to the increasing in offerors, while the rise in demand it is not enough to counterbalance this growth. It seems the market is still not ready or big enough to have this high number of breweries. Some breweries have been able to enter the market when it was still a blue ocean and gain a competitive advantage, but now it is very difficult for a new brewery to emerge and become profitable, sometimes not even enough to justify their survival.

Small breweries that cannot rely on a favorable economy of scale, find hard to establish themselves in a market that benefits those who are older. Additionally, in the attempt to remain competitive, they have to lower their sales prices with the negative result that in the end there is no room to survive. The cost of labor, rents, taxes and asphyxiating bureaucracy are the factors indicated. From the budgets, it is clear that many worker-members are unable to earn a salary worthy of the name; who has invested as a partner does not see a return in profits and who, more generally, works in the sector has a very low average salary. The picture changes a bit positively when it comes to large-scale breweries.

One of the factors that small microbreweries have to face and cannot avoid are the higher excise duties, which means significantly reduce profitability, moreover, competitiveness. Italy is one of the countries with the highest excise per Hectolitre of beer in Europe, which prevents a fair competition with other alcoholic beverages, especially between wine and beer. If the scenario would be different, the beer would steal some other market share. Recently the Italian Government have taken some measures in order to support microbreweries, reducing the excises by 40% to companies with an annual production lower than 10,000 hectoliters. This measure will change the trend of many craft breweries from 2019 onwards.

The retail channel also outperformed the food service channel as consumers increased in -house consumption in order to save money. Consumers also favored mainstream products over the premium ones, in line with reduced levels of disposable income.

The main player in the Italian beer market have kept more than 70% of the market share, maintaining their position over the years, Heiniken has positioned itself as leader over the years with its top sold beer Moretti; followed by Birra Peroni Srl, InBev, Carlsberg and Birra Castello.

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