Craft beer in Portugal – A study about consumers, perceptions, drivers and barriers of consumption

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Abstract

Title: Craft beer in Portugal - A study about consumers, perceptions, drivers, and barriers of consumption.

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Keywords: craft beer, alcoholic beverages, consumption, drivers, perceptions, barriers, innovation, tradition.

The craft beer movement has revolutionized the beer industry worldwide, through the investment on new styles of beer, produced in small quantities and in an independent way of large breweries, in a process that links tradition to creativity and innovation. Portugal is no exception to the emergence of this phenomenon. Therefore, this study aims to understand who are the craft beer consumers in Portugal, how is this beverage perceived by the population and also what are the drivers and barriers of this consumption in this country.
A mixed methodology was chosen, combining in-depth interviews and an online survey. It was noticed that the consumption of craft beer in Portugal was predominantly carried out by male individuals. The results indicated that the desire to experience novelty, perceived authenticity, and the attractiveness of packaging and branding are drivers of the consumption of craft beer in Portugal compared to the consumption of any other alcoholic beverage. Craft beer is seen as a high-quality beverage, and its consumption is not associated with a craving for intoxication. It was also verified that the consumption of this beverage is based more on the consumption of a concept or a culture rather than on a specific brand. This investigation was inconclusive about would be the substitute beverages of the consumption. Finally, price and availability were considered as barriers to more frequent consumption of this beverage.

Sumário

Título: Cerveja artesanal em Portugal - Um estudo sobre consumidores, perceções, fatores impulsionadores e fatores impeditivos do consumo

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Palavras-Chave: cerveja artesanal, bebidas alcoólicas, consumo, impulsionadores, perceções, barreiras, inovação, tradição.

O movimento das cervejas artesanais tem revolucionado a indústria cervejeira a nível mundial, através de uma aposta em novos estilos, produzidos em pequenas quantidades e de uma forma independente das grandes cervejeiras, num processo que combina a tradição com a inovação e a criatividade. Portugal não é exceção à emergência deste fenómeno. Desta forma, o presente estudo pretende perceber quem são os consumidores desta bebida em Portugal, a forma como esta bebida é vista pela população e quais os fatores impulsionadores e impeditivos do consumo de cerveja artesanal neste país.

Uma metodologia mista foi escolhida, combinando entrevistas presenciais com a realização de um inquérito *online*. A cerveja artesanal em Portugal é predominantemente consumida por indivíduos do sexo masculino. Os resultados indicam que o desejo de experienciar a novidade, a autenticidade e atratividade do *packaging* e do *branding* foram considerados atributos impulsionadores do consumo de cerveja artesanal, em comparação com o consumo de uma qualquer outra bebida alcoólica. A cerveja artesanal é vista como uma bebida de qualidade superior, não sendo o seu consumo associado a um desejo de embriaguez. Verificou-se também que o consumo deste segmento cervejeiro é baseado num consumo de um conceito e de uma cultura, mais do que um consumo associado a uma marca específica. A investigação foi inclusiva em relação as bebidas substitutas do consumo de cerveja artesanal em Portugal. Para concluir, o preço e a menor disponibilidade desta bebida foram considerados como fatores impeditivos de um consumo mais frequente de cerveja artesanal.

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This thesis does not represent an end of a travel started in February of this year, but rather the end of a journey started in September 2013, when I had the privilege of entering in this house for the first time to take my bachelor degree, so this thesis reflects the experiences and the knowledge obtained along this journey.

Therefore, my first thank you note has to be addressed to my family, with a particular focus on my parents, because they have always given me the freedom to make my decisions, without ever interfering with them, which gave me the responsibility to never defraud them and to make them proud in every moment of my life.

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List of Abbreviations

Asymp-Asymptotic

Aut- Authenticity

BA- Branding Attractiveness

GVA- Gross Value Added

H- Hypothesis

Nov- Novelty

PA- Packaging Attractiveness

RI- Regional Identity

RQ- Research Question

SD- Standard Deviation

Sig- Significance

USA- United States of America

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1- Background

This chapter intends to expose the problem statement of this dissertation, making a small contextualization on the surrounding themes, divulging the main goals of this research through the presentation of research questions and their relevance in academic and managerial terms.

1.1- Beer Market Overview

Beer, along with mead is one of the oldest beverages of humanity finding signs of its consumption in the Neolithic period (Cabras & Higgins, 2016). Its production is based on four primary ingredients: water, malt, hops, and yeasts. Despite this apparent simplicity, this is an extremely complex beverage and can be categorized into multiple types and styles, as a result of a wide range of ingredients and brewing process (Wunderlich & Back, 2009). Regarding the different beer types, their classification is related to the fermentation process used, standing out for its higher implantation, the lager, and the ale, whereas the lambic has a more regional scope (Moura-Nunes et al., 2017). The latter is distinguished from the other two by its spontaneous fermentation, which can last until three years before bottling (De Keersmaecker, 1996). Lager, the most consumed beer type in the world, has a fermentation process at low temperature, between 6ºC and 15ºC, through refrigeration techniques, while in ale, this process occurs between 16ºC and 24ºC, being a high fermentation beer (Moura-Nunes et al., 2017).

Despite being an ancestral good, beer has felt a substantial revitalization in recent years through innovation in the styles and flavours offered, as well as new production techniques (Garavaglia & Swinnen, 2017). Much of this innovation was due to small entrepreneurs who decided to investment on the resurgence of the craft segment, revolutionizing the way beer is perceived by the population (Aquilani et al., 2015). Consequently, this increased diversity has led to the growth of the brewing sector as a whole, which was in decline in developed countries (Pokrivčák et al., 2019), contributing to the development of local economies (Danson et al., 2015).

Beer is the second most consumed alcoholic beverage in the world ahead of the wine and behind the spirits (WHO, 2018). In Portugal, annual beer consumption per capita was 51 litres in 2017, a low amount, taking into account the European panorama, in which the average per capita consumption was 71 litres. This value is influenced mainly due to countries with an influential beer culture that had a consumption of over 100 litres per capita in that year, such

as the Czech Republic, Austria, and Germany, whose annual per capita consumption was 138, 105 and 101 litres respectively (The Brewers of Europe, 2018a). Regarding annual production, beer in Portugal had a significant increase in 2017 of 7.4% compared to the value obtained in 2016, maintaining the growing trend started in 2016, after a period of a sharp reduction of produced beer (The Brewers of Europe, 2018b). However, the registered production value in 2017 of 6,994,000 hl is still low comparing to the quantity produced in 2011, 8,299,000 hl, approximately 15.7% more than the value of 2017 (The Brewers of Europe, 2018b).

On-trade consumption refers to beer sales done in the hospitality sector. This value in Europe accounted for an average of 34% of total beer consumption in 2017, excluding Finland and Lithuania, whose data were not available for that year. In Portugal the opposite occurred, since the on-trade consumption corresponded to 69% of the total beer consumption that year, being the country present in the study with the highest value for this category (The Brewers of Europe, 2018a).

The importance of the brewing sector to the Portuguese economy should not be neglected. In fact, additionally to its strong exporting character, it is capable of creating 82,816 direct and indirect jobs, generating an added value for the economy of 993 €M, being the 15th sector with the highest contribution to this indicator in Portugal, and a tax revenue similar to 721 €M (The Brewers of Europe, 2019; *Cervejeiros de Portugal*, 2018). Additionally, this is a sector that is expanding rapidly concerning the level of breweries on activity, since from 2011 to 2017 this number has gone from 7 breweries to 120. This evolution is even more noticeable if the focus is centred on the expansion of microbreweries since they are the main responsible for the disruption of the beer market through the resurgence of the craft beer in Portugal. Indeed the number of microbreweries on activity has risen from 1 to 115 in the same period, so about 95.8% of the breweries in operation are of small size (The Brewers of Europe, 2018a).

1.2- Problem Statement

The overall goal of this research is to understand who are the craft beer consumers in Portugal, what are the main drivers responsible for this consumption, how is this beer segment perceived by the population in terms of competition and consumption contexts and finally what are the barriers of the proliferation of craft beer consumption in Portugal.

1.3- Research Questions

To answer to this problem statement, the following research questions will have to be investigated:

RQ1: Who are the craft beer consumers in Portugal?

RQ2: What are the main drivers for craft beer consumption in Portugal?

RQ3: How is craft beer perceived in Portugal?

RQ4: What are the main barriers to consume craft beer in Portugal?

1.4- Relevance

1.4.1- Academic

In the world brewing sector, a new segment emerged that are changing the current paradigm of this beverage consumption, and for that reason are arousing the interest of several researchers from the more diverse areas of knowledge (Koch & Sauerbronn, 2019). Furthermore, craft beer segment has been a source of innovation for the brewing sector through its focus on the diversity of styles and flavours, and also of new production techniques (Kraftchick et al., 2014; McLaughlin et al., 2014, Aquilani et al., 2015; Berkhout et al., 2013), being therefore an appropriate theme for a Master degree dissertation in Management with specialization in Strategy and Entrepreneurship. This study intends to research about craft beer in Portugal. Understanding who are the consumers of craft beer in Portugal, how is this beverage perceived by population, who are the main drivers responsible for this consumption and which factors works as barriers to higher consumption level of the Portuguese population, taking into account the insufficient literature and data about this subject in this country.

1.4.2- Managerial

The Portuguese brewing sector contributes with 993 €M to the GVA, being the 15th more relevant sector for the Portuguese economy, generating about 80 thousand jobs (Marvão, 2017) and with a robust exporting character, since about 1/3 of Portuguese production is destined for consumption abroad (The Brewers of Europe, 2018a). In Portugal, the sector is made up of 120 companies, the majority of which are microbreweries, responsible for the production of craft beer, many of which have not yet reached the break-even of their initial investments (Gírio, 2017). Therefore, this study will work as a useful tool for microbreweries realize essential features about the consumption of this beverage, in order to tackle consumer expectations more efficiently. Nevertheless, the findings of this investigation will also be

interesting for large breweries, as they have chosen to diversify their supply in order to attract consumers who felt involved in the craft culture (Gírio, 2019; Carrol & Swaminathan, 2000).

2- Literature Review

This chapter covers the main topics related to the research questions mentioned above, also contributing to give a general view of the phenomenon under analysis. Firstly, an introduction will be made related with the emergence of this beer segment, and because it is a recent issue in the Portuguese panorama, a definition of the concept will be presented for better elucidation of the characteristics that beer needs to have to be considered as a craft one. Moreover, the topics related to the consumption of this beverage will be analyzed, particularly at the level of drivers, socio-demographic aspects, perceptions, competitors, and barriers to craft beer consumption. In parallel, throughout the literature review, the different hypotheses to be tested during the investigation will be presented.

2.1- Introduction

Beer represents an extremely interesting example of a type of industry that after an extensive process of consolidation and production control by a reduced number of corporations of a standardized good, has been known to reinvent through a growing movement of return to origins based on processes that link tradition to innovation and creativity (Kraftchick et al., 2014; McLaughlin et al., 2014, Aquilani et al., 2015; Berkhout et al., 2013). This theme has aroused the interest of several researchers, mainly because it is a type of industry where consumer habits remain stable for a long time, and a paradigm change can show that the perception about the product has changed (Wood & Neal, 2009). The craft beer movement is one of the most growing trends in the beverage industry and is reshaping the consumers' preferences (Aquilani et al., 2015). Because in a time of less beer consumption, consumers have become more adventurous, wanting to try new flavour combinations, escaping from the mainstream and experiencing something more unusual, unique and premium (Berkhout et al.., 2013; Carroll & Swaminathan, 2000; Donadini et al.., 2016).

This movement began in the United States of America and has been internationalized during the last decade, without, however, achieving the resounding success of the USA. Currently, the craft beer segment is responsible for 76.2 billion dollars to the USA Economy, having in this country a market share of 13.2% (Brewers Association, 2018). This success led large breweries to bet on new range of beers, which they designated as special and premium beers, however in some cases this was insufficient, since these new ranges are still perceived as being industrial by consumers, which forced the large breweries to opt to create subsidiaries with the responsibility of developing craft beers (Carrol & Swaminathan, 2000).

2.2- Craft Beer Definition

Now, it is essential to define the concept of craft beer There is much controversy regarding the definition of this type of drink, but almost every definition includes three universal criteria that a beer needs to have to be considered a craft one: being independent, traditional and small (Reid & McLaughlin, 2014), (Kleban & Nickerson, 2011) and (Brewers Association, 2019). Independent means that any possible capital participation of any alcohol beverages group/company besides the brewer itself be restricted to 25%. By traditional, the flavour needs to come from traditional or innovative brewing ingredients and their fermentation. Finally to a beer have the epithet of craft she needs to be small, being the definition of this concept the source of controversy. Reid and McLaughlin (2014) and Kleban and Nickerson (2011) suggest that to be considered small the annual production needs to be equal or less to 9,539,238 hl of beer, being that the definition that the present study will use. Brewers Association, a representative institution of the companies of the craft beer segment in the United States of America, defines small as an annual production equal or less to six million barrels, i.e., 7,040,865.948 hl of beer (Brewers Association, 2019) and in Italy by small they define an annual production equal or inferior to 200,000 hl (Garavaglia & Swinnen, 2017). *Cervejeiros de Portugal*, representative association of the brewing sector in Portugal, is critical of this definition. Primarily due to the question of independence, since it will not be because a microbrewery that has always produced in an artisanal way, became acquired by a large brewery, keeping its form of production unchanged, should not leave to be considered as a craft brewery. Craft beer is one that stands out from the non-craft segment for the production in small quantities and a lesser degree of automatism in the brewing process, and which because of these factors has greater creative flexibility to develop new styles and flavour combinations in relation to large breweries. Nevertheless, this is a perilous criterion, since when craft brewers gain market implementation and intend to scale their production, it is natural that they opt for a greater automatism and a consequent increase of production (Gírio, 2019).

Within this world, it is now essential to clarify the concepts of "microbrewery," "regional breweries," and "brewpubs," as they are responsible for the production of craft beer. According to Brewers Association (2019), for a brewery be considered as a Microbrewery the annual production needs to be inferior to 15,000 barrels, i.e., 17,600 hl and are facilities responsible for producing and selling beer through three distinct ways. The first one is through direct sales to consumers through on-site taprooms and carry-out sales. The second is selling to a wholesaler, who in turn will sell craft beer to retailers and consequently to

consumers. Lastly, they can sell their products working as a wholesaler in order to sell their products to retailers. The only difference between this definition and the regional brewery definition is the volume of production. Indeed to be considered a regional brewery beside to respect the selling criteria needs to have a production higher than 15,000 barrels and lower to 6,000,000 barrels. Brewpubs are restaurants or bars, defined by the fact of producing and sold their own beer.

2.3- Craft Beer Emergence – Drivers

Craft beer returned to gain importance after 1978 in the United States when President Jimmy Carter re-legalized the home brewing activity that has been banned during the period known as Prohibition (1920-1933) (Maciel & Wallendorf, 2017). This movement, according to Dinghe (2016) emerged in that country as a long-term consequence of market saturation with a very similar offer among competitors and with increasingly less alcoholic content, as a result of an attempt to attract new consumers with more significant concern about health issues. In addition to the mentioned saturation with the standardized offer of lager beer, certain authors emphasize the regional and local dimension of the craft beer in response to the great commercial brewers (Tremblay, C.H & Tremblay, V. J. 2011). Later on, this movement has become international, Portugal included (Gírio, 2019), and there has been significant development of this segment everywhere, both in countries with a high brewing culture like Mexico and others without a great tradition in these areas like France (Gómez-Corona et al., 2016b).

H1: Craft beer consumption emerged as a long-term saturation with the mainstream supply of large breweries.

Consumption motivations of individuals are related to their perceptions about a given product, such as those related to brand values, identification with the good and the feelings associated with the purchase of the product (Bhattacharya & Sen, 2003). Craft beer contrary to Non-craft beer emerges as an "experience-based product" (Gómez-Corona et al., 2016a), having various motivations for its consumption, many of which are representations analyzed by the field of social psychology. These are based on three essential pillars: the first one concerns the knowledge that individuals have of a particular good. The second one refers to the attitudes of an individual or a group towards that particular product, i.e., the connotations established

through that product. The last one concerns the mental hierarchy made by the costumers about which attributes are most relevant (Bonardi & Roussiau, 2014).

Craft beer consumers do not consume this type of beer by their functional attributes, but rather by a desire to try out new flavours and new realities, emerging thus from a mainstream consumption pattern characterized by Non-craft beers (Gómez-Corona et al., 2016a). This evidence is in line with the findings of (Clarkson et al., 2013) that consumers are experimenting new products to increase their experiential knowledge because they believe this will be beneficial to appreciate future consumer experiences better.

H2: Craft beer consumption emerged by a desire to try new flavours and new realities

Several researchers suggest that the consumption of craft beer is motivated by the perception of authenticity (Gatrell et al., 2018; Pokrivčák et al., 2019; Pozner et al., 2014). Aspects related to issues like identity and authenticity are crucial to create a strong involvement with a product (Belk, 1998; Beverland & Farrelly, 2010; & Ahuvia, 2005. Regarding the concept of "authenticity," it is necessary to differentiate between nominal and social authenticity. The first one is related to the existence of a connection with relevant historical significance to a person, event, place or time, being, therefore, a factual concept (Frazier et al., 2009). However, this criterion is not sufficient to define authenticity, for example, a brewery could be placed in some region, but that it is not enough to represent that region, for that the beer needs to personify the identity of that place. Thus, social authenticity is more about the interpretations that the consumers make about a specific product rather than the factual characteristics of that product (Kovacs et al., 2014). Within authenticity and more specifically of social authenticity, another concept emerges, which is called "neolocalism." This one refers to terms with a proper symbology concerning issues such as place, regional identity and a narrative based on matters related to local economic sustainability as well as an environmental one (Flack, 1997; Shortridge, 1996). With regard to the craft beer market, this is an idea that succeeds in attracting new consumers for this segment, whose interest in local movements has become more pronounced in this global world. The Failure to integrate these concepts proves to be detrimental to a more unlikely success for craft beers (Patterson, 2016).

H3: Authenticity is a driver of craft beer consumption
H4: Identity, namely regional identity, is a driver of craft beer consumption

Several researchers suggest that any consumer based characteristic capable of contributing to a product differentiation that leads to an increase of the acceptance, choice, and purchase of any specific product should be taken into account. In this case, the findings show that issues related with the attractiveness' of a packaging and branding will be detrimental to add value to the product (Calvo Porral & Levy-Mangin, 2015; Caporale & Monteleone, 2004; Chaya et al., 2015; Della Lucia et al., 2013)

H5: Branding attractiveness is a driver of craft beer consumption
H6: Packaging attractiveness is a driver of craft beer consumption

Koch and Sauerbronn (2019) through the model of Pimentel and Reynolds (2004) analyzed the consumption of craft beer through an attitude based on the feelings and level of commitment of the consumers with the craft beer subculture. They first decided to segment the consumers into five different types: Novices, explorers, enthusiasts, specialists, and home brewers according to their level of attachment with the subculture in question by dividing them into three levels. The first two types were characterized as peripheral consumers, enthusiasts as soft core consumers and the last two as hard core consumers. Craft beer consumers point out the diversity of this as a highly valued feature, seeking more and more new flavours, which makes them more attached to the craft subculture than to a specific brand, even though they have their preferred beer styles and brands. For all, craft beer was described as a high-quality one, special, and any desire for intoxication does not mark its consumption, but on the opposite side as something sacramental. This perception that craft beer is a high-quality beverage could lead to a consumption based on social status issues, in this case of higher social status (Holt, 1995).

H7: Craft beer is perceived as a high-quality beverage
H8: Craft beers consumers are more attached to craft beer culture rather than a specific brand
H9: Any desire for intoxication does not mark craft beer consumption

2.4- Socio-demographic factors

Much of the expansion that craft beer movement feels is due to consumption led by new generations, especially the millennials (Fromm, 2014; Granese, 2012). They are strongly attracted to products that escape from the mainstream, transmit a specific lifestyle, are driven

by their own values and demonstrate a great authenticity and identity, being strongly influenced by their peers and online reviews in the moment of purchasing some good rather than the traditional forms of advertisement (McCluskey & Shreay, 2011). They consider that there is, in a general way, tremendous power and control associated with a small number of corporations; therefore they are searching for smaller and independent producers to meet their needs (Carter, 2016). Craft beer represents certain aspects presented here, which leads to a significant identification of them with this segment of beer. However, in some cases, this is not the generational layer that drives the consumption of this beverage actively. For example, in Italy are individuals between the ages of 42 and 49 who are more likely to consume craft beer (Aquilani et al., 2015).

Furthermore, this factor leads to speak of another attribute that significantly influences the consumption of this good: the income. Craft beer consumers stand out as high-income consumers, since on average this beer segment commands higher prices than industrial and imported beers (Tremblay, C. H. & Tremblay, V. J, 2011), and also because higher income is associated with a greater demand for variety and novelty, something that characterizes the supply of craft beer (Elzinga et al., 2015).

H10a: Millennials are the main responsible for the consumption of this beverage
H10b: Millennials are not the main responsible for the consumption of this beverage
H11: Craft beer consumers are high-income consumers

The consumption of alcoholic drinks has always been seen as something almost exclusively male (Holmila & Raitsalo, 2005), so the brewing industry has opted for many years to make a clear gender segmented marketing strategy. However new researches are challenging this idea previously conceived (Cavanaugh, 2014; Hearn & Hein, 2015; Lian & Yen, 2014; Workman & Lee, 2012). According to Inglehart and Norris (2003) and Wolin (2003), this segmentation no longer makes more sense, taking into account the social changes that have made the role of both genders more homogeneous, opening in this way a range of new opportunities in the field of the brewing industry. However, Goméz-Corona et al. (2017) suggests that this may be true, but only in the Non-craft beer segment, in which both genders have a great familiarity with the product, because in the craft segment gender differences still play a considerable role regarding consuming habits, in which male consumption is much more usual.

H12: Men have a higher propensity to consume craft beer comparing to women

2.5- Competitors

Hausman et al. (1994) define that beer should be segmented into three main categories: craft beer, imported beer, and mass-produced beer also known as non-craft beer, and the last one must be divided into three subcategories: the premium, the popular and the light. Premium beer is the one that reaches a higher market share, whose success is based on aggressive marketing through effective advertising. The popular beer is a beer that is sold at discounted prices, while light beer is a beer that has lower alcohol content and consequent lower caloric content.

Although the existence of diverse categories of beer, there is statistical evidence that the substitutability degree among the presented categories is low. In fact, Toro-González et al. (2014) analyzed the cross-price elasticity across craft, non-craft and imported beer in Chicago and found that the value of this elasticity was close to zero, indicating that the degree of substitutability between them is small. The study also suggests that in response to a significant increase in the price of craft beer, consumers seek to replace their consumption not with other beer categories but with wine and spirits.

These findings contradict Wesson and Neiva de Figueiredo (2001) conclusion for the relation between craft and imported beer, that there is a considerable degree of substitutability between those beer segments since craft breweries sales are negatively correlated with the level of beer imports, given that consumers perceived these goods as direct competitors. According to the same study, this also strategically makes sense, because while mass produced beers work to reach a higher number of consumers, in order to take advantage of their economies of scale, craft and imported beers work to achieve niche markets (Swaminathan, 1998).

H13: Craft beer and non-craft beer are not substituting goods

H14a: Craft beer and imported beer are substitute goods

H14b: Craft beer and imported beer are not substitute goods

H15: Craft beer and spirits are substitute goods

H16: Craft beer and wine are substitute goods

2.6- Factors affecting Craft Beer consumption

According to several researchers, craft beer has changed the paradigm of how this beverage is perceived by the population (Berkhout et al., 2013; Carroll & Swaminathan, 2000; Donadini

et al., 2016) and had the importance of revitalizing the beer industry as a whole, whose consumption was gradually declining (Pokrivčák et al., 2019). However, the extraordinary success of the United States finds no parallel in other countries (Gírio, 2019; Gómez-Corona et al., 2017). Thus, it is crucial to understand what are the factors that contribute to residual beverage consumption in terms of attributes and purchasing process characteristics.

Muggah and McSweeney (2017) conducted a study in Canada to understand how women and men evaluated craft, and Non-craft beers through a method called preferred attribute elicitation between two groups of men and two of women, considered as regular consumers of beer. The study was performed in order to test the perception of these groups regarding the preference among one non-craft and one craft style versions of an India pale ale beer and a lager style one. Some findings proved to be very interesting for a better understanding of the specific attributes that lead to a greater or lesser interest in the consumption of craft beer.

Regardless of the gender, there was unanimity regarding the vital importance of five terms for beer consumption, independently of its style and whether it was a commercial or craft beer. These include the "level of bitterness, the aftertaste, flavour strength, carbonation, and sweetness." Besides, women attach great importance to factors such as refreshing and fruity flavour, while men have placed a higher value on a beer with a sour, floral, and balanced flavour.

It was concluded that consumers preferred Non-craft beers significantly, even though they only identified one or two of the attributes that they considered essential for beer consumption. Much of this result is related with the considered excessive level of bitterness of craft beers, especially for female consumers, which does not fit on the findings of King and Moreau (1998), who concluded that there is no relationship between gender and the appreciation of bitterness on beer, although the focus of their study was on non-craft beer.

H17: The higher perceived bitterness content on craft beer is a barrier factor to the consumption of this beverage for women

In addition to the bitterness level, Gómez-Corona et al. (2016a) point to other three factors that work as a blocking force of craft beer consumption. The first one, concerns the packaging format of craft beers in the retail segment, as they are traditionally in the form of individual bottles, while the non-craft one is in the form of a pack of six bottles, something more conducive for transport to home.

H18: Individual packaging format of craft beer in the retail sector is a barrier to higher consumption of this beverage

The second one, concerns with the inevitable price comparison between this type of beers and the industrial ones (Figure 1), which suggests that middle consumers see craft beers as a direct competitor of Non-craft beers. Something that coincides with the findings Koch and Sauerbronn (2019) for the behaviour of periphery consumers of craft beer that attribute to the high price of this beverage as one of the main reasons for a lower level of commitment. However, this is not true for the layers with a higher attachment with craft beer. In fact, according to Maciel & Wallendorf (2017) who from a subculture analysis found that the high price of craft beer in relation to Non-craft beer is not a factor that blocks craft beer consumption by "aficionados" in the United States, since this type of consumers compares craft beer with wine, something that is seen by American society as snobbery (Lehrer, 2009). "Aficionados" are described as consumers extremely committed with the whole reality surrounding a particular product, always seeking to improve their skills either through interaction with their peers or even through enrolment in courses and workshops related to that good (Strong, 2011; Benzecry, 2011).

Figure 1- Price comparison among different beer segments

Segment	Style	Name	Price in €*
Non-Craft	Pale Lager	Sagres	2.72
Non-Craft	Pale Lager	Super Bock	2.72
Foreign	Pale Lager	Heineken	3.03
Special	All Styles**	Sagres Bohemia	3.03
Special	All Styles**	Coruja	3.37
Foreign	Pale Lager	Carlsberg	3.91
Craft	Vienna Lager	Nortada	4.52
Craft	India Pale Ale	Nortada	5.42
Craft	Weissbier	Vadia	7.42
Special	All Styles**	1927	7.55
Craft	All Styles**	Sovina	9.06

*Price per litre in €, without promotions, based on *Continente* *online* of 2019/04/03.
**All Styles mean the different styles available *at Continente online* with the same price.

H19: Price is a barrier for a higher consumption of craft beer

In third place, the availability of the product is also referred to, because this good is not available in every commercial establishment, as some types of consumers wish, while others prefer to drink it in specific establishments, which denotes a degree of sacralisation by them.

H20: Lack of availability is a barrier to higher consumption of craft beer

3- Research Methodology

This chapter presents the research methodologies chosen for the ongoing investigation, and they are based on the insights gathered through the literature review. Researchers can follow two different approaches to test their hypothesis: a quantitative and a qualitative analysis. This dissertation uses a mixed research methodology called triangulation that combines the quantitative analyzes with the qualitative one, being able to mitigate the disadvantages arising from the use of a separate method (White & Rayner, 2014), joining the rigor of the statistical validation with a broader and richer view about the real perceptions and motivations of the consumers (Branthwaite & Patterson, 2011). Therefore, this method is ideal for analyzing the complexity of subjects related to consumer behaviour research (Stewart, 2009).

3.1- Qualitative Approach

A qualitative approach is useful for a higher sensitivity of the subjective realities of human behaviour, and in a management context, it assumes enormous importance for the researcher perceive and clarify the perceptions transmitted by the interviewee about their complex consumption reality (Aaker et al., 2003). Inside qualitative data collection, three main methods could be used: interview, observation, and diary (White & Rayner, 2014). The present study will only use in-depth interviews as a qualitative method, as compared to other interviewing methodologies, this allows to more effective control of the sample and a reformulation of the questions whenever it is necessary for a comprehensive understanding of what is asked to the interviewee (Kothari, 2004). In relation to the focus group, it has the advantage of listening individually to each person, avoiding the risk of the interviewees being influenced by third part opinions.

Firstly, exploratory research will be carried out to bring new insights to this research (Kothari, 2004) through a technique known as a semi-structured interview with Francisco Gírio, Secretary General of *Cervejeiros de Portugal*, a representative association of the brewery industry in Portugal. This interview has the purpose of analyzing the evolution of craft beer in Portugal over the years, its actual state and the prospects for this segment in this country, due to the almost no data for this country. This method was chosen because it gives the possibility for the interviewee to explores subjects that consider appropriate and that add value to the discussion (Longhurst, 2010).

Subsequently, a descriptive research will be done, as the name suggests this allows obtaining an accurate perspective about specific aspect (Aaker et al., 2003), while at the same time, in a

management context, has the capability to the researcher perceive the existence of specific characteristics to influence the consumption of particular good (Kothari, 2004). In this context, a comparative analysis between craft and non-craft beer will raise questions about the perception of the respondents about their own definition of craft beer, fundamental for the study considering the divergent points of view within Academy and between this and the corporate opinion (Reid & McLaughlin, 2014), (Kleban & Nickerson, 2011) and (Gírio, 2019). How the attributes associated with both beer segments and the contexts in which they are consumed diverge and influence how both beers are classified, and its consumption is compared with other beverages. Lastly, it will be addressed the issues that prevent a more frequent consumption of craft beer and the socio-demographic factors that influence the consumption of this beverage, namely the ones related to the territory, gender, and age. Income level issues will not be inquired, since this descriptive research will resort on a semi-structured interview method, for the reasons previously invoked, with the purpose of not embarrassing the interviewee with such degree of intimacy questions (Patton, 2002).

Regarding the sampling method, it was decided to use purposive sampling since it allows the researcher to choose the participants in their sample deliberately. In this case, by taking into account the main characteristics that are intended to study, through the identification and selection of individuals or groups of individuals that have strong knowledge about the phenomenon under analysis, being recurrent in qualitative analyzes (Bernard, 2002). Contrary, to random sampling methods that seek a sample as heterogeneous as possible, the purposive method intends a higher concentration in the population layers considered relevant for the explanation of the phenomenon (Etikan, 2016).

Consequently, it was sought to interview people who considered themselves as beer enthusiasts, regardless of their preferences about styles and segments, provided they had a valid opinion on craft beer, based on the assumption that their contributions would be more fruitful for the present study. The general goal is to find what are the characteristics that they look for in a beer; what are the contexts in which they consume those beverages; and the perception they have about the concept of craft beer. Moreover, it was intended to combine this knowledge with certain characteristics analyzed in the literature review that impact the consumption of craft beer. Therefore, it was decided to have a sample as heterogeneous as possible in geographic terms (Figure 2) as far as "neolocalism" is one of the drivers for the consumption of craft beer (Patterson, 2016), as well as socio-demographic factors like age (Froom, 2014) and gender (Goméz-Corona et al., 2017).

3.1.1- Qualitative Research Design

Before the interviews being carried out, two pilot tests were conducted in order to verify the feasibility of the interview, to find if the understanding of the questions were correct and if they were relevant to the performing investigation (Maxwell, 2013). In this way, the formulation of some questions was changed, at the same time that some questions were included and other excluded, as a result of being considered redundant, due to the observation by the interviewer, taking into account the general understanding of the questions raised and the insights they brought to the investigation.

Regarding the interview itself, firstly participants were asked about their level of interest in craft beer in comparison with non-craft beer, in order to understand the commitment level with each of the beer segments to extract insights between the different degrees of interest with the perceptions and characteristics associated with craft beer. Afterward, the respondents were asked about the characteristics associated with the different beer segments, given their importance for consumption, as well as whether the contexts in which both were consumed were divergent. After these questions it was decided to inquire if the interviewees consider both beers as direct competitors or not (Toro-Gonzalez et al., 2014; Wesson & Neiva de Figueiredo, 2001; Maciel & Wallendorf, 2017), and if they were not, what would be then the beverages direct competitors of craft beer. Afterward, in order to understand whether there would be consumption based on the craft subculture (Koch & Sauerbronn, 2019), it was asked if it exists any preferred brand and if yes, if the consumption was being confined to that brand and to a specific style. After that, it was asked if the participants were satisfied with their frequency of consumption of craft beer or if they would like to have higher consumption. In this case, what are the factors that lead to less consumption? Finally, before asking the interviewees if they would have anything else to add, they were asked to describe the concept of craft beer, i.e., what criteria lead to a beer being recognized with this epithet.

Figure 2- Place of birth of respondents

District	Number of Respondents
Beja	1
Braga	1
Castelo Branco	2
Faro	1
Leiria	1
Lisbon	4
Oporto	2
Santarém	1
Setúbal	2
Viana do Castelo	1
Vila Real	1

3.1.2- General insights of the exploratory research

Craft beer is a global phenomenon started in the United States of America and arrived in Portugal a few years late than in other European countries such as the Netherlands, Italy, and Denmark, which were pioneers of the craft beer segment resurgence Europe, at the beginning of the millennium, while the boom in Portugal only occurred in 2012. This reappearance has been extremely beneficial to all involved in the brewing industry. As it has led to more considerable attention of media to the brewing phenomenon; to a higher degree of information of the public that perceives now more the versatility of this beverage; and even for non- craft large breweries, which have innovated to diversify their offer in order to reach consumption fringes that until then were neglected. Therefore, in the last chance, also the consumers were rewarded since they now have the possibility of consuming from a more diverse range of beer. It should be noted that the re-emergence of craft beer in Portugal was due to the supply side and not to the demand side since the desire of consumers to experience new beers just arose after the entry of craft breweries in this country. Portuguese consumers, in a general way, are very accustomed to the consumption of lager style beer, not realizing the existence of a rich panoply of different styles and combinations of flavours.

This segment in Portugal has been growing every year, in a first phase at a faster rate than in the non-craft segment, something that has been dissipated in the last two years, where the growth has been lower than in the non-craft segment. This growth was driven by the youngest generations, who are generally more likely to experience novelty, not having significant

differences regarding consumer's perception of the consumption of craft beer in retail and craft beer on breweries or similar establishments.

In the opinion of the interviewed the market of craft beer in Portugal is entering its maturity stage in which mergers and acquisitions will probably happen between the leading players in the craft segment. The others will have two hypotheses: the first is to abandon the market, and the second one remains on the market but at a regional or even local sphere. The reason given for this is the consolidation process started after the dazzle with the "brave new world of beer tastes and styles" triggered by the resurgence of craft beer, since "all producers, in general, produce an India Pale Ale, Brown ale or a Porter." For that reason, consumers have become identified with a particular preferred brand and style of beer, starting to consume this eventual brand and style preferentially. Therefore, the American reality where craft beer assumes a very significant market share in the global beer market will not occur in any other European country, Portugal included where the market share of this segment is according to estimates of the respondent of approximately 0.5%. Besides the presented reasons, it is necessary to realize that any craft player of the United States has higher production than the two largest non-craft Portuguese breweries.

3.1.3- General insights of Descriptive research

In general, interviewees assume that they have a higher preference for non-craft beer than for craft beer since the first one is more "versatile" since it can be consumed in the most diverse situations, being a "common practice in our daily lives." Non-craft beer is a segment associated with nightlife, friends, contemplation of sport events like football and the summer, in turn, the craft beer is more associated with special occasions, such as dinners in friends' houses and socialization in bars, without the purpose of intoxicating the body, contrary to what happens in the non-craft segment. The only point of contact with consumption contexts is the use of both for food pairing, but with specific nuances. While some use both beers for food pairing, using the craft for more "sophisticated" dishes and non-craft one for more "casual" meals. Others choose to use only craft beer for this purpose, as it has "lower gas content", turning the meal more pleasant; even others only use non-craft beer for food pairing, since craft one has" higher alcohol content" and "a heavier and intense flavour", which leads to a higher difficulty to match this beer segment with any dish. In this way, most of the interviewees do not consider them as direct competitors, especially those who claim to be lovers of both segments in the same proportion. They indicate that wine is the main competitor of craft beer for food pairing and cocktails for socialization with friends in bars or

breweries, since like in the case of cocktails the consumption is not excessive and is not intended to intoxicate the body. Contrary to this main opinion is the perception of the respondents who do not like craft beer, because they consider in a unanimously way, the two segments as direct competitors.

There is some confusion on the part of those who do not consider themselves to be profoundly acquainted with the craft phenomenon since they perceive craft beer in the same way that special beer, which is not the case with the respondents with a higher propensity to drink craft beer. The definition of interviewees about the concept of craft beer was closer to the definition of Gírio (2019) than the one presented by (Reid & McLaughlin, 2014), (Kleban & Nickerson, 2011) and (Brewers Association, 2019) because it is described as "a higher quality beer produced in a smaller quantity and in a traditional way, innovating in the diversity of styles and flavours presented". The question of the independence of a large brewery was expressed as an essential factor only by one of the respondents, who considered himself as a craft beer lover.

In this segment, there was not a significant brand loyalty with craft beer brands, regardless of its attachment to this beer segment, as the interviewees present themselves as consumers of the concept and not so much of a specific brand. This is also verified for even who consider themselves as craft beer lovers because although they have their favourite brands and styles, they want to try new brands in order to increase their knowledge about this phenomenon and possibly discover another brand that they will prefer. In this way, the observed reality is comparable to that verified by Koch and Sauerbronn (2019) in Brazil.

The literature analyzed indicates that authenticity and identity are one of the main drivers of the consumption of craft beer (Gatrell et al., 2018; Pokrivčák et al., 2019; Pozner et al., 2014; Patterson, 2016), something that was not identified by any of the respondents composing this sample. However, this issue was considered necessary for the brand loyalty in the non-craft segment, either because of "neolocalism," or feeling of belonging to a particular group: "Whenever I am in the Algarve I am used to drinking a Cristal because it is a beer with a strong implementation in the region."; "I am unable to drink another beer than Super Bock, since it is something cultural in the city of Oporto, always having drunk beers of this brand. For me, beer is synonymous of Super Bock."; "As a huge fan of Sport Lisboa e Benfica, I can only drink Sagres beer because this brand is one of the main sponsors of my football team."

Finally, it is essential to highlight the factors presented as an impediment to higher consumption of craft beer. In this context, interesting insights can be drawn depending on the level of interest in this segment. For those who show little interest for this segment of beer,

the main obstacle is the "intensity and bitterness characteristics of this type of beer", as well as individual associations made by the respondents to the consumption of craft beer, as if it was something done by hipsters, not wanting to be identified with this group of people. For the moderate enthusiasts, the price, the availability, and the lack of knowledge, by this order, are presented as the main responsible for consumption not as frequent as what they would wish. Lastly, craft beer lovers highlight the availability as the main factor resulting in lower consumption than they would like, a few bars and supermarkets have this kind of offer, and when they have, it is an insufficient size. Therefore, these findings are similar to those observed by Gomez-Corona et al. (2016a) concerning price and availability, and those of Muggah and McSweeney (2017) for bitterness level.

3.2- Quantitative Approach

A quantitative approach is beneficial to describe, explain and test relationships, and it is frequently used in research on business and management because these can provide a reliable and objective base to several aspects (White & Rayner, 2014). Within this approach, the choice felt on the elaboration of a survey, since this method allows reaching large samples in a short period, without incurring in significant costs, comparing to other methods (Evans & Mathur, 2005). Besides that, it also has the advantage of loading directly the data in a data analysis software.

The overall goals of its survey are to comprehend who are the consumers of craft beer in Portugal, what are the motivations and the consumption pattern according to the attachment level of each consumer, what are the main substitutes beverages, and how is this segment perceived by consumers and non-consumers to verify the differences.

3.2.1- Survey Design

The survey model was developed, taking into account the model of Aquilani et al. (2014) and the insights gathered in the interviews. The survey consists mostly of multiple choice and matrix questions; however, it also includes yes/no questions, whose purpose is to segment the respondents into consumers or non-consumers. In the scope of a matrix, questions were opted to develop a Likert model (Likert, 1932), through a five-point scale, since this format appears to be less confusing and is associated with a higher response rate (Devlin et al., 1993; Babakus & Mangold, 1992; Hayes, 1992). The survey was built on Qualtrics web platform, disseminated through Facebook, Linkedin, and Whatsapp, reaching in this way the personal and professional author's network, and was analyzed through the IBM SPSS tool.

The inquiry was intended to have no restrictions, in order to understand the complete profile of craft beer consumers, in terms of age, gender, income, region, and level of attachment, being also opened to non-consumers, in order to verify if craft beer is perceived differently from consumers. The only restriction imposed was that the respondents were Portuguese or had the permanent resident status, with the purpose of allowing to comparisons between the findings of this investigation with previous studies, in which the target was the national citizens (Aquilani et al., 2014; Gómez-Corona et al., 2016; Pokrivčák et al., 2019; Koch & Sauerbronn, 2019).

Therefore, the survey was just written in the Portuguese language (Appendix III) and was distributed between 8th of May until 14th of May.

The survey was segmented into six different blocks, being the questions related to the socio-demographic profile of the respondents left to the last place, in order to avoid the negative impact of the provision of personal data at the beginning of the survey into the behaviour of the participants when answering the questions (Oppenheim, 1992).

1. Consumption Frequency & Enjoyment Level
2. Consumption Drivers for any alcoholic beverage
3. Consumption Drivers for craft beer
4. Craft Beer Perception
5. Craft Beer Competitors
6. Factors Affecting Consumption
7. Socio-demographic Profile

Nevertheless, despite being seven different blocks, non-consumers were only required to answer to block 2, 4 and 7, since the answers to the questions present in the other blocks need that the participants tried already beer of this segment.

4- Result's Analysis

This chapter contains only the statistical analysis relative to the quantitative approach, because although the research follows a mixed methodology, the qualitative approach served to obtain general insights about the craft beer panorama in Portugal, and its results were analyzed in the previous chapter.

4.1- Sample Characteristics

The survey achieved 159 people, but after a process of cleaning data in which outliers and not-completed surveys were deleted, 138 completed answers were considered valid. The following results about the sample characteristics could be found in the appendices.

In terms of gender, the survey shows a greater preponderance of male responses, since 56.5% of the sample is composed of males against 43.5% of female responses. Regarding age, the relevant majority was centred in the 18-29 years old segment, with 55.1% of the responses, followed by 30-39 years old, with 18.1% of the answers and by 40-49 years old, with 13% of the total responses (Appendix IV).

Looking at household composition, the majority of the sample is composed of four elements, 32.6% followed by three elements, 26.8%, and by five elements, with 18.1% of the responses. Regarding income, there is a tremendous homogeneity of responses, except for the cases with an income of less than 1000€, all of them composed of one element household. Nevertheless, it should be pointed out that 23.9% of the sample admits to having a household income higher than 5000€, followed by 20.3% of the sample with a household income between 3000-4000€ and then 18.8% with a household income between 4000-5000€ (Appendix IV).

Concerning the place of birth, the sample is in her majority composed of Lisbon respondents, 55.1%, followed by Santarém, 7.2%, and Oporto with 5.8% of the respondents (Appendix IV).

Finally, it was decided to question only those respondents who stated that they had already consumed craft beer, N = 105 (Appendix V), their enjoyment level and consumption frequency with this beverage on a 1-5 scale. The majority, 30.5%, stated that enjoy moderately (3) this beverage, followed by the group that showed a high enjoyment level (4), 26.7%, and thirdly by those who showed a very high enjoyment level (5), 18.1% (Appendix VII). In terms of consumption frequency, craft beer shows a low level of consumption frequency, since almost half (49.5%) of the craft beer consumers sample has less than one

time per month consumption, 27.6% says that consume once per month, and 17.1% just tried this beverage one time (Appendix VI).

4.2- Statistically Analysis

The statistical analysis will aim to verify the applicability of the hypotheses formulated throughout the investigation to the Portuguese reality. Thereby, a descriptive and inferential analysis will be carried out whenever its use is justified, many times in a simultaneously way. The inferential analysis will be based on non-parametric tests, as a result of the normality of the distribution and the homogeneity of the variables having not been achieved by conducting a Kolmogorov-Smirnov and a Levene Test respectively, even after attempts to transform them. On the other hand, although the central limit theorem indicates that when N gets larger, the variables tend to approximate to a normal distribution, however by deliberation of the author this was not assumed since an N of 138 was not considered sufficient larger for that.

The significance level chosen to reject every null hypothesis was set at an alpha lower than 0.05, in order to maintain the consistency.

Furthermore, detailed data on each test performed are provided in the appendices for a better understanding of each result.

Research Question 1- Who are the craft beer consumers in Portugal?

This research question is about a socio-demographic analysis of who the consumers of craft beer are, in terms of age, gender, and income. The purpose is to find out if millennials are the main responsible of the consumption for this beverage in Portugal; if it is verified that the craft beer consumers are high-income individuals; and to ascertain if there is a predominance of male individuals as craft beer consumers.

Chi-Square Tests were used to do a comparative analysis between consumers and non-consumers for socio-demographic variables because it is a test indicated to analyze the associations between two nominal variables or a nominal variable with an ordinal one.

H10

Regarding age, first of all, a dummy variable denominated millennials was created, in which the value "1" was assigned for the individuals with age lower or equal to 39, and "0", for the remaining individuals. The purpose of this transformation was to be able to test hypothesis number 10a and 10b, in which it is necessary to have a variable capable of aggregate all the millennials.

Descriptive statistics show that 78.2% of the millennials have already consumed craft beer, while the percentage of non-millennials that have already tried craft beer is lower by 7.9 percentage points (Appendix XXI). Regardless, to verify if there are associations between being millennial and consuming craft beer, it is necessary to carry out a chi-square test.

The Chi-Square Test shows that H0 cannot be rejected because P-value = 0.332, i.e., it is not possible to conclude that there are statistically significant associations between being millennial and consume craft beer (Appendix XXI).

H11

In terms of income, a dummy variable was created (HighIncome), in which the value "1" was assigned for the individuals with an income higher than 3000€, and "0", for the remaining individuals. The purpose of transforming an interval variable into a nominal one was to create conditions to perform a Chi-Square Test, in order to verify if there was an association between higher income and being a craft beer consumer in Portugal. The conclusion reached was that there was no statistically significant association between having higher income and being a craft beer consumer since the P-value is 0.936 (Appendix XXII).

H12

A predominance of male consumption is visible through a descriptive statistics analysis since 85.9% of the males already have consumed craft beer, while the percentage of female consumers is 63.3% (Appendix XXIII). To verify if these differences were likely to lead to an association between gender and being a craft beer consumer, a Chi-Square Test was taken.

The test results allow rejecting H0 and concluding that there is a statistically significant association between genders and being a beer-beer consumer since the P-value is 0.002 (Appendix XXIII).

To conclude, it was found that consumers of craft beer in Portugal are predominantly male, there is no association between the variables income and being a craft beer consumer. Regarding the age issues, although the consumption of this beverage is more visible for the millennials, this is not enough to conclude that there is an association between this variable and to be a consumer of this beer segment, as indicated by the conclusions of the Chi-Square Test.

Research Question 2- What are the main drivers for craft beer consumption in Portugal?

This research Question focuses on the attempt to discover the drivers of craft beer consumption in Portugal, so two approaches were used to test the hypotheses related to this research Question. On the one hand, it was decided to perform a Mann-Whitney Test to investigate the existence of significant differences about the possible saturation with large breweries supply for consumers and non-consumers, in order to understand if this could be a driver of this beverage consumption. On the other hand, a Wilcoxon Test was conducted to verify if the differences between the attributes of "novelty", "authenticity", "regional identity", "branding attractiveness" and "packaging attractiveness" for the consumption of craft beer are statistically significant in comparison with the importance of the same attributes for the consumption of any other alcoholic beverage. The primary purpose of this test is to ascertain if those attributes can be considered as the main drivers of this beverage consumption. In order to perform the Wilcoxon Test, a new dataset had to be created, containing only the responses of the craft beer consumers, in order to carry out an intra-group differences analyze between craft beer consumers about the importance attributed to the mentioned characteristics for the consumption of craft beer in relation to the consumption of any other alcoholic beverage.

H1

Craft beer consumers appear to be more saturated with the supply of large breweries than non-consumers, although neither group claims to be relatively or totally in agreement with the statement: "I feel saturated with large breweries supply" (Appendix XII).

Mann-Whitney Test results show that the differences are not statistically significant, since the P-value is 0.05, so it can be concluded that the saturation with the large breweries supply is not a driver of consumption of craft beer in Portugal (Appendix XII).

H2

In this case, it turns out that the craft beer consumers value much more the novelty for the consumption of craft beer in comparison with the consumption of another alcoholic beverage (Appendix XIII).

As P-value (0.000) is less than 0.05, H0 is rejected. Thereby, the importance of novelty for the consumption of craft beer is statistically significantly higher than the importance of the same attribute for the consumption of any other alcoholic beverage. So, novelty is a craft beer consumption driver (Appendix XIII).

H3

The table shows that consumers value in a superior way the perceived authenticity for the craft beer consumption than for the consumption of any other alcoholic beverage (Appendix XIV).

The P-value (0.003) indicates that the differences between craft beer consumers for the importance of authenticity for craft beer consumption comparing with the consumption of an alcoholic beverage are statistically significant. For that reason, the null hypothesis can be rejected, concluding in that way, that this attribute is a driver for the consumption of this beer segment in Portugal (Appendix XIV).

H4

The craft beer consumer shows that regional identity is more important for the consumption of craft beer than for the consumption of any other alcoholic beverage, but in a somewhat tenuous way (Appendix XV).

According to the Wilcoxon Test results, H0 cannot be rejected, which indicates that the differences are not statistically significant, so the regional identify cannot be considered as a driver of this beverage consumption (Appendix XV).

H5

The craft beer consumers value more the branding attractiveness for the consumption of this beer segment than for the consumption of any other beverage (Appendix XVI); however, it is important to realize if these differences are statistically significant to be considered a craft beer consumption driver in Portugal.

Since P-value is equal to 0.006, the H1 is accepted. So it is possible to affirm that the branding attractiveness of the microbreweries is a driver for the consumption of this beverage in Portugal, as a result of the differences between the importance attributed of this characteristic for the consumption of craft beer compared to the consumption of another alcoholic beverage were statistically significant (Appendix XVI).

H6

The group of craft beer consumers value "packaging attractiveness" in a superior way for the consumption of craft beer than for the consumption of another alcoholic beverage (Appendix XVII).

These differences are statistically significant because the P-value is 0.000, so H0 is rejected, which means that the packaging attractiveness of microbreweries is a driver for the consumption of this beverage (Appendix XVII).

To conclude, it was verified that the possible saturation with the large breweries supply and the regional identity are not a driver of the consumption of craft beer in Portugal. In turn, there is statistically significant evidence that the consumption of craft beer is guided by a desire to experience novelty, by a perception that it is an authentic beverage and because of the higher attractiveness of branding and packaging.

Research Question 3- How is craft beer perceived in Portugal?

This research question concerns the way that craft beer is perceived in Portugal both at the level of associations made to the beverage and its consumption, as well as for which are the substitute beverages of craft beer. Therefore, a variety of statistical analysis will be used to test the hypotheses referring to this research question, among which stand out in addition to descriptive analysis, the Mann-Whitney Test, the Sign Test and the Chi-Square Test.

H7

By descriptive statistics, it was found that, on average, consumers and non-consumers of craft beer considered craft beer as a high-quality beverage, however, it was found that this statement was stronger for craft beer consumers (Appendix XVIII).

Therefore, a test of Mann-Whitney was conducted to verify if the perception that craft beer is a high-quality beverage differed in a statistically significant way from whether the participants had already tried a craft beer or not. This test allowed to reject the H0 (P-value = 0.027) that there were no significant differences in the perception that craft beer is considered a high-quality beverage between consumers and non-consumers of craft beer. Therefore, it can be concluded with statistical significance that craft beer consumers consider this beer segment as a high-quality beverage in a superior way than non-craft consumers (Appendix XVIII).

H8

The use of descriptive statistics allows to notice that the craft beer consumption is more attached to a craft beer culture rather than to a specific brand for both consumers and non-consumers, being this statement more visible for craft beer consumers, in this way, it was

decided to perform a Mann-Whitney Test, to see if these differences were statistically significant (Appendix XIX).

According to Mann-Whitney Test, the H0 is not rejected, (P-value = 0.076), so the differences about the perception that craft beer consumption is more attached to a craft beer culture rather than a specific brand are not statistically significant between consumers and non-consumers (Appendix XIX). Hence, craft beer consumption is perceived in the same way, as a more attached to a craft beer culture rather than to a specific brand consumption for both consumers and non-consumers.

H9

To test whether the consumption of craft beer was marked by a desire to get drunk or not, the author opted to conduct a one sample Sign Test for a sample of N = 105, made up exclusively by craft beer consumers. In this way, a column was created composed only with the same value for the median. In this case, the value selected was the number "3", because it indicates a neutral level to a consumption moved by an intoxicating desire. So any value above this threshold indicates a consumption driven by that desire and a value below that threshold indicates precisely the contrary. In fact, according to these results, ninety individuals consider that craft beer is not consumed with an intoxicating purpose, ten attribute a neutral value to a consumption based on a desire to intoxicate the body, and only five considers that craft beer consumption is marked by an intoxicating desire (Appendix XX).

The P-value (0.000) allows us with statistical significance to reject the null hypothesis and to conclude that craft beer consumption is not marked by an intoxicating desire (Appendix XX).

H13 a, H13 b, H14, H15, H16

The analysis of the following hypotheses was carried out only by descriptive statistics, through confidence intervals (Figure 3), in order to determine if in average terms the craft beer consumers (N = 105) considered one of the four beverages as a substitute for craft beer consumption.

Figure 3- Competitors

Variable	Mean	SD	Lower Limit	Upper Limit	Meaning
Non-Craft Beer	2,98	1,1185	2,75	3,21	Neutral
Imported Beer	3,3	1,028	3,1	3,49	Neutral
Spirits	2,93	1,211	2,7	3,17	Neutral
Wine	2,73	1,068	2,53	2,94	Neutral

This table identifies that the participants do not look at the four alcoholic beverages presented as substitutes for the consumption of craft beer since none of them have an upper limit higher than 3.5 (agree) so we cannot say with a 95% probability that the real average is higher than 3.5. On the other hand, any beverage had a lower limit lower than 2.5 (disagree), so it is not possible to state with a 95% probability that the real average is lower than this value. Therefore, this analyze is inconclusive to ascertain the degree of substitutability between these four beverages and craft beer.

To summarize, although the analysis was inconclusive for the substitute beverages of craft beer, it was possible to verify that the consumption of craft beer is not associated with a desire for intoxication and that this beer segment is perceived as a high-quality beverage for both consumers and non-consumers; however this perception is statistically significantly higher for consumers. Both consumers and non-consumers perceive craft beer consumption as a consumption more attached to a craft beer culture rather than to a specific brand.

Research Question 4- What are the main barriers to consume craft beer in Portugal?

In order to test the hypotheses relative to the dissuading factors of higher craft beer consumption in Portugal, the author opted to use the sample which contained only craft beer consumers, since non-consumers were not questioned about this problem. Within this group, only the responses of the consumers who consider that there are barriers to the consumption of craft beer in Portugal are taking into account, N = 77 (Appendix XI). The conclusions that will be presented derive from the realization of Sign Tests for one sample, the non-parametric alternative to the one sample T-test, and whose variables do not need to be continuous or symmetric as mentioned by Gibbons and Chakraborti (2004).

Prior to the test, and because consumers were asked if they considered that there were impeditive factors of a higher consumption of craft beer, there were missing values for the variables "Price", "Bitterness", "Individual Packaging" and "Availability" for the respondents who did not consider having impeditive factors of higher craft beer consumption. Hence, it was decided to replace those values by zero.

H17

In this case, it was decided to analyze the masculine opinions of the feminine ones separately for two reasons. Firstly, to determine if there are differences between genders about the importance of the bitterness as a preventive factor of a higher craft beer consumption in

Portugal. Secondly, whether it can be considered as a deterrent to consumption for female consumers.

Males show that bitterness does not appear to be considered as a blocking factor of higher craft beer consumption. In fact, fifty two individuals suggest that bitterness is not a barrier to higher consumption of this beer segment, six respondents say yes, while nine attributes a neutral value to this characteristic (Appendix XXIV). Regarding H0, this one is rejected (P-value = 0.000), so bitterness isn't, with statistically significance, a restriction of a higher craft beer consumption for males (Appendix XXIV).

For the female respondents, it was verified that twenty individuals consider that it is not an obstacle of higher consumption, eleven believe that yes, while seven assigns an indifferent weight to this question (Appendix XXIV). The P-value (0.151) does not allow rejecting H0, so we cannot conclude that bitterness for female consumers is not an obstacle for a higher consumption of this beverage (Appendix XXIV).

H18

Individual retail packaging does not appear to be a barrier to higher consumption of craft beer in Portugal since the sign test indicates that there are seventy two negative differences (individual packaging importance <3), seventeen positive differences (individual packaging importance> 3) and sixteen ties (individual packaging importance = 3) (Appendix XXV).

The P-value (0,000) allows us to reject H0 and conclude with statistical significance that the median of the importance of the individual packaging is lower than the neutral value (Appendix XXV). Therefore, individual packaging cannot be considered as an obstacle for high craft beer frequency of consumption.

H19

In this case, the price appears to be a discouraging factor of higher consumption of this beverage, since 66 individuals, in a sample of N = 105, value this factor as an obstacle for higher consumption (XXVI). Nonetheless, it is necessary to verify if those differences are statistically significant, through a Sign Test, to conclude that price is indeed a blocking factor of a higher frequency of craft beer consumption.

The unilateral P-value is 0.0005, for that reason H0 is rejected, so there is statistically significant evidence to affirm that price is an obstacle of higher craft beer consumption in Portugal (Appendix XXVI).

H20

Craft beer is not a beer segment that can be found in every establishment, so this factor can be considered a dissuading factor of higher consumption of craft beer in Portugal. The results show that most consumers look at this factor as an obstacle to a more frequent consumption (Appendix XXVII).

The Sign test allows to reject H0 (P-value = 0.016), thereby there is statistically significant evidence to say that the lower availability of this beverage is a barrier to a more frequent craft beer consumption (Appendix XXVII).

4.3- Regression analysis

A regression was performed to have a deeper understanding of the data. As the assumptions for an OLS regression have not been fulfilled, the author opted just to made a logistic binary regression about the impact of higher importance attributed to certain characteristics, such as the desire to experience novelty, authenticity, regional identity, branding attractiveness, packaging attractiveness for the consumption of any alcoholic beverage would lead the individuals to be craft beer consumers. Additionally, the variable gender was also introduced in the model, since through the statistical analysis it was concluded that there were significant differences for the consumption of craft beer as a result of gender differences

The built model failed in the intention of explaining the predictors of the likelihood of being craft beer consumers, regarding some generic attributes relative to the consumption of any beverage alcoholic beverage. Firstly, it failed because Nagelkerke R Square is extremely low (0,232), so this model it's only capable of explaining 23.2% of the registered variances on being craft beer consumer. Secondly, apart from the gender variable, that is a demographic variable, only the novelty variable was considered statistically significant, P-value = 0,036. For that reason, only those two variables will be analyzed.

Figure 4- Regression analysis estimators

Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Novelty	0.57	0.272	4.393	1	0.036	1.769
Authenticity	0.07	0.328	0.045	1	0.831	1.072
Regional Identity	-0.179	0.271	0.436	1	0.509	0.836
Branding Attractiveness	0.192	0.31	0.383	1	0.536	1.212
Packaging Attractiveness	0.153	0.298	0.262	1	0.609	1.165
Gender	1.231	0.483	6.504	1	0.011	3.426
Constant	-1.596	0.83	3.694	1	0.055	0.203

For every one-unit increase on the desire to drink an alcoholic beverage based on the perception to experience the novelty leads to 1.769 times higher odds of being craft beer consumers, assuming everything else constant.

Assuming *coeteris paribus*, the odds of being a craft beer consumer are 3.426 times higher for males as opposed to females.

5- Conclusions

The following conclusions, despite having a significant focus on the quantitative approach, also take into account the insights gathered through the interviews with craft beer consumers and the Secretary-General of *Cervejeiros de Portugal*, Francisco Gírio.

The craft beer movement emerged in the United States in the '70s, having achieved great success in that country. Afterward, this concept has become international, with a particular focus on the European continent. Portugal is no exception, but the arising of this beer segment in this country took place somewhat later than in its European congeners. Therefore, craft beer is a recent phenomenon in the Portuguese panorama

According to the data obtained, it is verified that a very considerable part of the sample has already consumed craft beer, even if it was only once (Appendix VI).

Regarding the enjoyment level for this beverage, the respondents generally have a moderate appreciation (Appendix VII), but this value is closer to the high enjoyment level than the lower enjoyment level.

Nevertheless, the consumption of this beverage is still infrequent, which may indicate that there are some obstacles to a higher consumption frequency of craft beer in this country. In fact, more than 3/4 of consumers consider that there are blocking factors to higher consumption of this beverage (Appendix XI). In this context, the high price and the lower availability are highlighted, since there is no craft beer supply in every commercial establishment, and this beverage is still considered an expensive product. The issues of individual packaging and bitterness were not considered as preventing factors of a higher frequency of consumption, although the subject of bitterness was more relevant to the female audience, however in a not enough number to be considered as an obstacle to higher consumption. This was also verified with the descriptive approach, in which few interviewees considered bitterness as a barrier to a more frequent craft beer consumption.

Concerning substitute beverages, the investigation was inconclusive, since none of the four presented beverages was considered as a substitute for the consumption of craft beer. These results show that although the qualitative approach has indicated wine and spirits as the main substitutes for the consumption of craft beer in Portugal, their level of substitutability was not considered relevant in order to conclude that these two beverages are substitutes of craft beer in this country.

Regarding the main drivers of consumption, the regression presented shows that the consumption of craft beer should not be analyzed as a result of generic attributes to any

alcoholic beverage, but rather in comparison of the importance of these same attributes to the consumption of craft beer in relation to the consumption of any alcoholic beverage. In this way, it can be concluded that the consumers of craft beer attribute higher importance to the attributes "authenticity," "novelty," "branding attractiveness" and "packaging attractiveness" for the craft beer consumption in comparison with the valuation of these attributes for the consumption of any other alcoholic beverage. Regarding the saturation with large breweries supply, a chi-square test showed that there is no relationship between considering saturated with this offer and being a craft beer consumer, so this is not a craft beer consumption driver.

In terms of the perception of this beverage, both consumers and non-consumers have considered craft beer as a high-quality beverage, yet this perception has become even more visible for consumers. Therefore, it is natural that the consumption of craft beer is not intended to intoxicate the body, as will be for other beverages. Consumers and non-consumers see the consumption of craft beer as a craft culture based consumption rather than the consumption of a specific brand. Somehow, this result may be linked to a higher desire to experience novelty formulated by consumers of this beer segment, which leads to a continued search for new styles, new flavours, and new brands. These findings can also be associated with the lower frequency of consumption of this beverage, as it may be concluded that this sacramental vision leads to this beer segment being perceived as a beverage to be consumed only on special occasions, as was mentioned during the qualitative approach.

Concluding, regarding the association between craft beer consumption and socio-demographic variables, there was no association between higher income and consumption of craft beer, neither between being millennial nor consuming this beverage. The only association that was determined was between gender and being craft beer consumers, in this case, with a predominance of male consumption.

6- Limitations and Future Research

The first limitation of this dissertation, regards the possible confusion of this concept with similar approaches of the large breweries, as the qualitative analysis display, because although the definition of craft beer was made explicit in the survey, it is natural that there may have been some misunderstanding on the part of respondents.

Both samples demonstrated not to be large enough, especially the quantitative one, due to the author's time constraints, since the normality of the distribution of the variables was not assured, therefore non-parametric tests were conducted, recognized by offering less powerful conclusions in comparison with parametric tests (Martins, 2011; Marôco, 2011).

The distribution of the survey through the social media author's platforms could also be considered as a limitation since it restricts the sample to the researcher´s network, which may bias the results. Therefore, the sample is biased in terms of age with a large share composed of millennials respondents, which might skew the presented conclusions. Additionally, another bias that may distort the importance of regional identity for craft beer consumption, because, almost half of the sample is from the Lisbon district, where it is inferred that the regionalist sentiment is inferior to other regions of the country, as can be observed by the results of the second question of the regionalization referendum of 1998 (Mapa oficial nº4/98, 1998).

In terms of income, the author acknowledges that the salary intervals were incorrectly defined by its fault, which may have biased the findings. So, for similar future researches, more intervals for higher amounts of income should be added.

It was not possible to conclude which beverages are considered a substitute for craft beer consumption. Therefore, the author recommends a higher sample and the inclusion of more beverages than presented in the survey.

For future research, it would also be interesting to carry on a similar study to this for the segment of special beers in order to verify if the conclusions are similar to the present study. Moreover, it would also be interesting to carry out a study centred on the strategic implications of the craft breweries movements for their success, since the literature focuses on its majority about the consumer's theory rather than the producer one.

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Appendices

Appendix I- Interview with Francisco Gírio - Secretary-General of *Cervejeiros de Portugal*

Interview Script

Context- This interview arises in a master's thesis elaboration context about craft beer in Portugal, and more specifically about consumer's profile, the main drivers of consumption, how this beverage is perceived by the population and the possible existence of barriers to more frequent consumption of this beverage. Therefore it will help the author to understand better the craft beer panorama in Portugal. This interview is based on a careful research process conducted in several academic articles, and *Cervejeiros de Portugal* contribution will be essential for a better understanding of the national reality, due to the almost null existence of data related to this beer segment in Portugal.

Theme- Analyze the evolution of craft beer segment in Portugal, prospecting its future trends, and at the same time understanding what are the main drivers of this beverage emergence in this country and the existence of obstacles to higher craft beer consumption in Portugal.

General Goals

● Know how *Cervejeiros de Portugal* define craft beer in Portugal

● Know how has been the evolution of this beer segment in Portugal

● Know what are the main drivers of craft beer consumption in Portugal

● Know how the Portuguese population perceives this beverage

● Know if the consumption on the retail segment is perceived in a different way than the consumption outside

● Know what are the substitute beverages of Craft beer

● Know what are the leading players of this beer segment in Portugal

● Know what is the market share of craft beer in Portugal

● Know if there are barriers to higher consumption in Portugal

● Know what are the future trends about this segment in Portugal

Questions

1-The analyzed literature considers that for a beer to be considered as a craft one, three criteria need to be verified simultaneously: being independent, traditional and small, with some contradictions regarding the concept of small. In the opinion of *Cervejeiros de Portugal*, what are the criteria that define a beer as a craft one?

2- How do you analyze the evolution of the craft beer segment in Portugal?

3- What are the main drivers behind the consumption of craft beer in Portugal?

4- How is craft beer perceived in Portugal?

5- Is there a difference in consumption profiles between the consumers of craft beer on retail and in breweries/bars/ restaurants?

5.1- If yes, what are those differences?

6- What are the substitute beverages of craft beer consumption in Portugal?

7- What are the leading players of this beverage in Portugal?

8- What is the market share of this segment in the global market of beer in Portugal?

9- There are barriers to higher consumption of craft beer in Portugal?

9.1- If yes, what are those barriers?

10- What are the future trends for this beer segment in Portugal?

11- Is anything that you want to add about this topic?

Appendix II- Qualitative Interviews
Interview Script

Context- Two pilot tests were carried out to verify the feasibility of the interview. In the result of that, the formulation of the questions was changed due to the suggestions made by the participants of this test.

This interview follows a semi-structured model, because it is based on a rigid basis, but gives the interviewee space to reflect on the concept under analysis, leading to the arising of new ideas during the conversation.

Regarding the sample, this one obeys to a deliberate format, in order to perceive how consumers and non-consumers perceive craft beer, and also to give the possibility to listen to individuals from different ages and regions

Theme- Comparison of consumption motivations between craft beer and non-craft beer and how both beer segments are perceived

General Goals- To perceive how craft beer is perceived by different types of consumers using non-craft beer as a comparison, perceiving the characteristics that stand out in both beer segments and in which contexts are both consumed, in order to ascertain the degree of substitutability between the two goods. Additionally, it is intended to understand if the interviewees consider the existence of obstacles to higher craft beer consumption, and in this case, what are those barriers.

Questions

1- How do you classify your enjoyment for non-craft beer?

2- How do you classify your enjoyment for craft beer?

3- What are the three main things that you associate with non-craft beer consumption?

4- What are the three main things that you associate with craft beer consumption?

5- In which context do you consume non-craft beer?

6- In which context do you consume craft beer?

7- Do you have any favourite craft beer brand?

8- How do you define the craft beer concept?

9- In your opinion, what is the primary substitute beverage of craft beer?

10- Do you believe that exist some barriers to higher craft beer consumption?

11- If yes, what are those obstacles?

12- Is anything that you want to add about this topic?

13- Age

14- Gender

15- Place of birth

Appendix III- Online Survey
Introduction

Olá, sou aluno do mestrado de Gestão com especialização em Estratégia e Empreendedorismo na Católica Lisbon School of Business and Economics, e estou neste preciso momento a escrever a minha tese de mestrado sobre a cerveja artesanal em Portugal. Os meus principais objectivos prendem-se com compreender quem são os consumidores desta bebida em Portugal, quais as motivações inerentes ao seu consumo, a forma como esta bebida é percepcionada pela população e por fim averiguar se existem factores impeditivos de um consumo mais frequente desta bebida. Por conseguinte, caso seja português ou tenha o estatuto de residente permanente em Portugal, gostaria de contar com a sua contribuição. O questionário tem como único propósito o de responder às questões formuladas anteriormente, sendo que a confidencialidade das respostas está por mim assegurada, e nunca ser-lhe-á requerida a sua identificação. A duração prevista é de aproximadamente cinco minutos. Qualquer dúvida que lhe surja, por favor, não hesite em contactar-me através do seguinte endereço de email: sergiofsmmachado@gmail.com.

Bem-haja,

Sérgio Macahdo

Question 1- A cerveja artesanal é descrita como uma cerveja produzida em pequenas quantidades, de forma independente das grandes cervejeiras, respeitando os métodos tradicionais e inovando ao nível dos estilos e dos sabores apresentados.

Já consumiu cerveja artesanal, nem que tenha sido uma única vez?

○ Sim

○ Não

Question 2- Por favor, indique a sua frequência de consumo de cerveja artesanal

○ Apenas consumi uma única vez

○ Menos de uma vez por mês

○ Uma vez por mês

○ 2 a 3 vezes por mês

○ Pelo menos uma vez por semana

Question 3- Por favor, indique o seu nível de apreço por cerveja artesanal

○ Nenhum

○ Ligeiro

○ Moderado

○ Bastante

○ Muito

Question 4- Relativamente ao consumo de **uma bebida alcoólica**, classifique quanto à importância dos seguintes factores.

Características	Nenhuma	Ligeira	Moderada	Bastante	Muita
Experienciar algo novo	○	○	○	○	○
Autenticidade	○	○	○	○	○
Identidade Regional	○	○	○	○	○
Atractividade do Branding	○	○	○	○	○
Atractividade do Packaging	○	○	○	○	○

Question 5- Relativamente ao consumo de **cerveja artesanal**, classifique, por favor, quanto à importância dos seguintes factores.

Características	Nenhuma	Ligeira	Moderada	Bastante	Muita
Experienciar algo novo	○	○	○	○	○
Autenticidade	○	○	○	○	○
Identidade Regional	○	○	○	○	○
Atractividade do Branding	○	○	○	○	○
Atractividade do Packaging	○	○	○	○	○

Question 6- Classifique, por favor, quanto ao nível de concordância com as seguintes afirmações, numa escala de 1-5 (1- Totalmente em desacordo, 2- Relativamente em desacordo, 3- Nem concordo nem discordo, 4- Relativamente de acordo, 5- Totalmente de acordo.

Question 6.1- Considero-me saturado com a oferta das grandes cervejeiras

Percepção	1	2	3	4	5
Afirmação 6.1	○	○	○	○	○

Question 6.2- A cerveja artesanal é uma bebida de qualidade superior

Percepção	1	2	3	4	5
Afirmação 6.2	○	○	○	○	○

Question 6.3- Mais do que um consumo de uma determinada marca de cerveja artesanal, existe um consumo baseado no conceito

Percepção	1	2	3	4	5
Afirmação 6.3	○	○	○	○	○

Question 6.4- A cerveja artesanal é consumida com o intuito de embriagar

Percepção	1	2	3	4	5
Afirmação 6.4	○	○	○	○	○

Question 7- Classifique, por favor, quanto ao grau de substituibilidade das seguintes bebidas para o consumo de cerveja artesanal

Bebidas	Nenhum	Ligeiro	Moderado	Bastante	Muito
Cerveja não artesanal	○	○	○	○	○
Cerveja estrangeira	○	○	○	○	○
Bebidas espirituosas	○	○	○	○	○
Vinho	○	○	○	○	○

Question 8- Considera haver factores impeditivos de um maior consumo de cerveja artesanal?

○ Sim

○ Não

Question 9- Classifique, por favor, quanto à importância dos seguintes factores para uma menor frequência de consumo de cerveja artesanal

Factores impeditivos	Nenhuma	Ligeira	Moderada	Bastante	Muita
Preço	○	○	○	○	○
Amargura	○	○	○	○	○
Disponibilidade	○	○	○	○	○
Packaging individual (retalho)	○	○	○	○	○

Question 10- Indique, por favor, a sua idade.

○ 18-29

○ 30-39

○ 40-49

○ 50-59

○ > 60

Question11- Indique, por favor, o seu género

○ Masculino

○ Feminino

Question12- Indique, por favor, a composição do seu agregado familiar

○ 1

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

Question13- Indique, por favor, o rendimento do seu agregado familiar

○ < 1000

○ 1000-1999

○ 2000-2999

○ 3000-3999

○ 4000-4999

○ > 5000

Question14- Indique, por favor, a sua naturalidade (Distrito ou Região Autónoma)

○ Açores

○ Aveiro

○ Beja

○ Braga

○ Bragança

○ Castelo branco

○ Coimbra

○ Évora

○ Faro

○ Guarda

○ Leiria

○ Lisboa

○ Madeira

○ Portalegre

○ Porto

○ Santarém

○ Setúbal

○ Viana do Castelo

○ Vila Real

○ Viseu

○ Outra

Appendix IV- Sample Characteristics (N = 138)

Demographic Variables	Values	Frequency	Percentage
Age	18-29	76	55.1%
	30-39	25	18.1%
	40-49	18	13.0%
	50-59	14	10.1%
	> 60	5	3.6%
Gender	Male	78	56.5%
	Female	60	43.5%
Household	1	11	8.0%
	2	14	10.1%
	3	37	26.8%
	4	45	32.6%
	5	25	18.1%
	6	5	3.6%
	7	1	0.7%
Income	< 1000	5	3.6%

	1000-1999	24	17.4%
	2000-2999	22	15.9%
	3000-3999	28	20.3%
	4000-4999	26	18.8%
	> 5000	33	23.9%
Place of Birth	Aveiro	3	2.2%
	Beja	7	5.1%
	Braga	1	0.7%
	Castelo Branco	3	2.2%
	Coimbra	6	4.3%
	Évora	1	0.7%
	Faro	3	2.2%
	Guarda	1	0.7%
	Leiria	5	3.6%
	Lisbon	76	55.1%
	Oporto	8	5.8%
	Santarém	10	7.2%
	Setúbal	4	2.9%
	Viana do Castelo	1	0.7%
	Vila Real	2	1.4%
	Viseu	2	1.4%
	Other *	5	3.6%

*- *People born in former Portuguese territories (Angola, Mozambique, Macau, etc)*

Appendix V- Craft beer consumers

Have you ever tried craft beer?	Frequency	Percentage
Yes	105	76.1%
No	33	23.9%
Total	138	100.0%

Appendix VI- Consumption Frequency*

Consumption Frequency	Frequency	Percentage
Once in my life	18	17.1%
Less than once per month	52	49.5%

Once per month	29	27.6%
2-3 times per month	3	2.9%
Once per week or more	3	2.9%
Total	105	100.0%

Question just for craft beer consumers (N = 105)

Appendix VII- Enjoyment Level*

Enjoyment Level	Frequency	Percentage
None	8	7.6%
Slight	18	17.1%
Moderate	32	30.5%
Quite	28	26.7%
Much	19	18.1%
Total	105	100.0%

Question just for craft beer consumers (N = 105)

Appendix VIII- Drivers of Craft beer consumption*

Driver	Mean	SD	Lower Limit	Upper Limit	Meaning
Novelty	4.07	0.841	3.87	4.28	Agree
Authenticity	3.84	0.687	3.67	4.00	Agree
Regional Identity	3.04	1.021	2.80	3.29	Neutral
Branding attractiveness	3.57	1.118	3.29	3.84	Neutral/Agree
Packaging attractiveness	3.06	1.009	2,79	3.33	Neutral

Question just for craft beer consumers (N = 105)

Appendix IX- Perceptions

Perception	Variable	Mean	SD	Meaning
Saturation Large breweries	Consumers	2.83	1.147	Neutral
	Non-Consumers	2.39	1.116	Disagree
High-quality	Consumers	3.98	0.961	Agree
	Non-Consumers	3.67	0.816	Agree
Concept Consumption	Consumers	4.11	0.836	Agree
	Non-Consumers	3.88	0.820	Agree

Intoxicate	Consumers	1.61	0.915	Disagree
	Non-Consumers	1.82	0.727	Disagree

Appendix X- Substitute Beverages*

Craft Beer Substitutes	Mean	SD	Lower Limit	Upper Limit	Meaning
Non-Craft Beer	2,98	1,1185	2,75	3,21	Neutral
Imported Beer	3,3	1,028	3,1	3,49	Neutral
Spirits	2,93	1,211	2,7	3,17	Neutral
Wine	2,73	1,068	2,53	2,94	Neutral

* Question just for craft beer consumers (N = 105)

Appendix XI- Existence of blocking factors of higher craft beer consumption*

Existence of blocking factors	Frequency	Percentage
Yes	77	73.3%
No	28	26.7%
Total	105	100.0%

* Question just for craft beer consumers (N = 105)

Appendix XII- Hypothesis 1

In this case, the goal was to verify if the consumption of craft beer would be caused by saturation with the supply of large breweries. In this way, after it, through descriptive statistics was understood that although there were differences according to the saturation level between consumers and non-consumers, none of them agreed with the statement "I feel saturated with the large breweries supply."

Saturation	Mean	SD	Meaning
Consumers	2.83	1.147	Neutral
Non-Consumers	2.39	1.116	Disagree

Hence, to verify if the saturation with the large breweries supply was a driver of the consumption of craft beer, a Mann-Whitney Test was performed, to understand if those differences were statistically significant.

H0: There are no differences between being saturated with large breweries supply between craft beer consumers and non-consumers.

H1: There are differences between being saturated with large breweries supply between craft beer consumers and non-consumers.

Test Statistics	Saturation
Mann-Whitney U	1352
Wilcoxon W	1913
Z	-1.958
Asymp. Sig (2-Tailed)	0.050

As P-value is equal to 0.05, the null hypothesis cannot be rejected, so the differences are not statistically significant to conclude that this variable is a craft beer consumption driver.

Appendix XIII- Hypothesis 2

The Wilcoxon Test was used to verify the existence of statistically significant differences about the valuation of the "novelty" attribute for the consumption of craft beer in comparison to the valuation of the same attribute for the consumption of any alcoholic beverage in a sample of $N = 105$, made up exclusively of consumers of craft beer.

Ranks	N	Sum of Ranks
Negative Ranks	12 a	319
Positive Ranks	56 b	2027
Ties	37 c	
Total	105	

a- *Novelty for alcoholic beverages consumption < Novelty for craft beer consumption*

b- *Novelty for craft beer consumption > Novelty for alcoholic beverages consumption*

c- *Novelty for craft beer consumption = Novelty for alcoholic beverages consumption*

The results indicate a tendency on the part of the consumers of craft beer to value more the novelty issue for the consumption of craft beer than for the consumption of any alcoholic beverage.

H0: There is no difference between the valuations of "novelty" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

H1: There is a difference between the valuations of experience the "novelty" attribute for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

Test Statistics [b]	Nov. for Craft beer - Nov. for alcoholic beverage
Z	- 5.391[a]
Asymp. Sig. (2-tailed)	0.000

a- *Based on negative ranks*

b- *Wilcoxon Signed Ranks Test*

Analyzing the tests statistics table, it is clear that H0 is rejected because the existing differences are statistically significant. For that reason, the desire to experience the novelty is a craft beer consumption driver, since craft beer consumers value much more this attribute for this beverage consumption than for any other.

Appendix XIV- Hypothesis 3

The Wilcoxon Test was used to verify the existence of statistically significant differences about the valuation of the "authenticity" attribute for the consumption of craft beer in comparison to the valuation of the same attribute for the consumption of any alcoholic beverage in a sample of N = 105, made up exclusively of consumers of craft beer.

Ranks	N	Sum of Ranks
Negative Ranks	16 [a]	475.5
Positive Ranks	41 [b]	1177.5
Ties	48 [c]	
Total	105	

a- *Authenticity for alcoholic beverages consumption < Authenticity for craft beer consumption*

b- *Authenticity for craft beer consumption > Authenticity for alcoholic beverages consumption*

c- *Authenticity for craft beer consumption = Authenticity for alcoholic beverages consumption*

There is a higher weight attributed to the issue of authenticity for the consumption of craft beer than for the consumption of any other beverage by the craft beer consumers.

H0: There is no difference between the valuations of "authenticity" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

H1: There is a difference between the valuations of "authenticity" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

Test Statistics [b]	Aut. Craft beer - Aut. Alcoholic beverage
Z	-2.692 [a]
Asymp. Sig. (2-tailed)	0.003

a-   Based on negative ranks

b-   Wilcoxon Signed Ranks Test

The P-value is lower than 0.05, for that reason the H0 can be rejected, so it is possible to conclude that the perception of authenticity is a driver for the consumption of craft beer compared to the consumption of any alcoholic beverage.

Appendix XV- Hypothesis 4

To verify the existence of statistically significant differences about the valuation of the "regional identity" attribute for the consumption of craft beer in comparison to the valuation of the same attribute for the consumption of any alcoholic beverage, a Wilcoxon Test was conducted beverage in a sample of N = 105, made up exclusively of consumers of craft beer.

Ranks	N	Sum of Ranks
Negative Ranks	15 [a]	263.5
Positive Ranks	22 [b]	439.5
Ties	68 [c]	
Total	105	

a-   Regional Identity for alcoholic beverages consumption < Regional identity for craft beer consumption

b-   Regional Identity for craft beer consumption > Regional Identity for alcoholic beverages consumption

c-   Regional Identity for craft beer consumption = Regional Identity for alcoholic beverages consumption

In this case, the difference about the importance of regional identity as a driver for craft beer consumption and for any alcoholic beverage seems to be more tenuous.

H0: There is no difference between the valuations of "regional identity" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

H1: There is a difference between the valuations of "regional identity" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

Test Statistics b	RI Craft beer - RI Alcoholic beverage
Z	-1.412 a
Asymp. Sig. (2-tailed)	0.158

a- Based on negative ranks

b- Wilcoxon Signed Ranks Test

As a result of the P-value higher than 0.05, the null hypothesis cannot be rejected, so the differences are not statistically significant, so the regional identity is not a driver for craft beer consumption in comparison to the consumption of any other alcoholic beverage.

Appendix XVI- Hypothesis 5

A Wilcoxon test was also used to find out if the differences between the importance of branding attractiveness to the consumption of craft beer and any other alcoholic beverage could indicate that this attribute would be a driver of craft beer consumption.

Ranks	N	Sum of Ranks
Negative Ranks	21 a	663
Positive Ranks	44 b	1482
Ties	40 c	
Total	105	

a- Branding attractiveness for alcoholic beverages consumption Branding attractiveness for craft beer consumption

b- Branding attractiveness for craft beer consumption Branding attractiveness for alcoholic beverages consumption

c- Branding attractiveness for craft beer consumption = Branding attractiveness for alcoholic beverages consumption

Craft beer consumers value considerably more the importance of the branding attractiveness to craft beer than to another alcoholic beverage.

H0: There is no difference between the valuations of "branding attractiveness" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

H1: There is a difference between the valuations of "branding attractiveness" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

Test Statistics [b]	BA Craft beer - BA Alcoholic beverage
Z	-2.753 [a]
Asymp. Sig. (2-tailed)	0.006

a- *Based on negative ranks*

b- *Wilcoxon Signed Ranks Test*

Analyzing the table, it becomes clear that the existing differences are statistically significant, so it is possible to conclude that branding attractiveness is a driver of the consumption of craft beer, since the weight attributed to this factor is considerably higher than the weight attributed to the same factor for the consumption of any other alcoholic beverage.

Appendix XVII- Hypothesis 6

To test if packaging attractiveness can be considered as a craft beer consumption driver, it was decided to perform a Wilcoxon test to determine if the differences between the valuation of this attribute for the consumption of craft beer was statistically significantly higher than the valuation of the same attribute for the consumption of any other alcoholic beverage.

Ranks	N	Sum of Ranks
Negative Ranks	20 [a]	424
Positive Ranks	42 [b]	1529
Ties	43 [c]	
Total	105	

a- *Packaging attractiveness for alcoholic beverages consumption < Packaging attractiveness for craft beer consumption*

b- *Packaging attractiveness for craft beer consumption > Packaging attractiveness for alcoholic beverages consumption*

c- *Packaging attractiveness for craft beer consumption = Packaging attractiveness for alcoholic beverages consumption*

The results evidence a tendency to value this characteristic in a superior way for the consumption of this beer segment than for another alcoholic beverage.

H0: There is no difference between the valuations of "packaging attractiveness" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage by craft beer consumers.

H1: There is a difference between the valuations of "packaging attractiveness" for the consumption of craft beer in comparison with the valuation of the same attribute for the consumption of another alcoholic beverage, by craft beer consumers.

Test Statistics [b]	PA Craft beer - PA Alcoholic beverage
Z	-3.930[a]
Asymp. Sig. (2-tailed)	0.000

a- *Based on negative ranks*
b- *Wilcoxon Signed Ranks Test*

The performed test shows that the differences are statistically significant, P-value is lower than 0.05, so packaging attractiveness is a driver of consumption of craft beer in Portugal, compared with its lower importance for the consumption of another alcoholic beverage.

Appendix XVIII- Hypothesis 7

High-Quality Beverage	Mean	SD	Meaning
Consumers	3.98	0.961	Agree
Non-Consumers	3.67	0.816	Agree

Descriptive statistics show that consumers and non-consumers perceive craft beer as a high-quality beverage. Furthermore, it was noted that this perception was higher for the group composed of craft beer consumers. Subsequently, a Mann-Whitney Test was performed in order to verify whether those differences were or not statistically significant.

H0: There is no difference between the perception that craft beer is a high-quality beverage between craft-beer consumers and non-consumers

H1: There is a difference between the perception that craft beer is a high-quality beverage between craft beer consumers and non-consumers.

Test Statistics	High-Quality Beverage
Mann-Whitney U	1317.5
Wilcoxon W	1878.5
Z	-2.208
Asymp. Sig (2-Tailed)	0.027

Analyzing the table, it's possible to see that H0 is rejected, since P-value is 0.027, so it can be concluded that the perception that craft beer is a high-quality beverage is statistically significantly superior for the group of consumers than for the group of non-consumers, although both groups agree with the statement that craft beer is a high-quality beverage.

Appendix XIX- Hypothesis 8

A similar procedure was used to test if the perception that craft beer consumption is more attached to a craft beer culture rather than to a specific brand.

Concept Consumption	Mean	SD	Meaning
Consumers	4.11	0.836	Agree
Non-Consumers	3.88	0.82	Agree

The descriptive statistic once again indicates that both are in agreement with the statement, albeit consumers present a higher level of agreement with the statement than non-consumers. Consequently, a Mann-Whitney Test was conducted to verify if the differences are statistically significant.

Test Statistics	High-Quality Beverage
Mann-Whitney U	1402.5
Wilcoxon W	1963.5
Z	-1.775
Asymp. Sig (2-Tailed)	0.076

The results show that it is not possible to reject the null hypothesis, so the differences between consumers and non-consumers are not statistically significant, to assert that consumers agree more with the statement than non-consumers.

Appendix XX- Hypothesis 9

To test whether the consumption of craft beer was marked by a desire to get drunk or not, the author opted to conduct a one sample Sign Test for a sample of $N = 105$, made up exclusively by craft beer consumers. In this way, a column was created composed only with the same value for the median. In this case, the value selected was the number "3", because it indicates a neutral level to a consumption moved by an intoxicating desire. So any value above this threshold indicates a consumption driven by that desire and a value below that threshold indicates precisely the contrary.

Ranks	N
Negative Ranks	90 [a]
Positive Ranks	5 [b]

Ties	10 c
Total	105

a- *Intoxicating desire < Median (3)*

b- *Intoxicating desire > Median (3)*

c- *Intoxicating desire = Median (3)*

The results indicate that consumption is not driven by a desire for intoxication, since in a universe of 105 individuals; only five indicate that this desire drives consumption.

H0: The median of a craft beer consumption moved by a desire to get drunk is equal than 3

H1: The median of a craft beer consumption moved by a desire to get drunk is lower than 3

Test Statistics	Intoxicating - Median
Z	-8.618
Asymp. Sig. (2-tailed)	0.000

Appendix XXI- Hypothesis 10

For the following hypothesis, it was tried to analyze if there was an association between the millennial variable and the variable "being a craft beer consumer." Therefore, a Chi-Square Test was performed. Nevertheless, firstly a dummy variable had to be created in which the value "1" was attributed to the individuals between 18-29 years old and 30-39 years old, and the value "0" for the individuals with higher age.

	Craft beer Consumers		
Millennial	**Yes**	**No**	**Total**
No	26	11	37
No %	70.3%	29.7%	100%
Yes	79	22	101
Yes %	78.2%	21.8%	100%
Total	105	33	138

Descriptive statistics tell that the percentage of millennials consumers of craft beer is higher than that of non-millennial consumers. However, in order to be able to affirm that there is a statistically significant association between the two variables in question, it is necessary to look at the Chi-Square Test results.

H0: There are no associations between being millennial and consume craft beer

H1: There are associations between being millennial and consume craft beer.

Chi-Square Test for H10	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	0.940 a	1	0.332
Likelihood Ratio	0.912	1	0.340
Linear-by Linear Association	0.933	1	0.334
N of Valid Cases	138		

a. *0 cells (0.0%) have expected count less 5. The minimum expected count is 8.85.*

The results do not give the possibility to conclude that there is a statistically significant association between the two variables since H0 is not rejected because Pearson Chi-Square P-value is substantially higher than 0.05.

Appendix XXII- Hypothesis 11
To test if the craft beer consumer is a high-income person, a Chi-Square Test was carried out in order to verify if it exists an association between the two variables.

	Craft beer Consumers		
Income	Yes	No	Total
High-Income	66	21	87
High-Income %	75.9%	24.1%	100%
Low-Income	39	12	51
Low-Income %	76.5%	23.5%	100%
Total	105	33	138

Looking to the table, it seems that there is no relationship between the two variables because the percentage of people with higher income who consumes craft beer is very similar to the percentage of people with lower income who consumes craft beer in Portugal.

H0: There are no associations between having a high-income and being a craft beer consumer

H1: There are associations between having a high-income and being a craft beer consumer.

Chi-Square Test for H11	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	0.07 a	1	0.936
Likelihood Ratio	0.07	1	0.935
Linear-by Linear Association	0.06	1	0.936

N of Valid Cases	138

a. *0 cells (00.0%) have expected count less 5. The minimum expected count is 12.20.*

The Chi-Square Test results show that the null hypothesis cannot be rejected, so there is no association between having a high income and being craft beer consumer.

Appendix XXIII- Hypothesis 12

The same procedure was used to investigate if there was a greater preponderance of male individuals as craft beer consumers in relation to female individuals.

Craft beer Consumers

Gender	Yes	No	Total
Male	67	11	78
Male %	85.9%	14.1%	100%
Female	38	22	60
Female %	63.3%	36.7%	100%
Total	105	33	138

At first glance, there seems to be a male preponderance of consumption. Although, to verify if these differences are statistically significant to affirm that there is an association between gender and craft beer consumption, a Chi-Square Test needs to be performed.

H0: There are no associations between gender and being a craft beer consumer

H1: There are associations between gender and being a craft beer consumer.

Chi-Square Test for H12	Value	df	Asymp. Sig. (2sided)
Pearson Chi-Square	9.490 a	1	0.002
Likelihood Ratio	9.498	1	0.002
Linear-by Linear Association	9.421	1	0.002
N of Valid Cases	138		

a. *0 cells (0.0%) have expected count less 5. The minimum expected count is 14.35.*

The results of the Chi-Square Test give the possibility to reject the null hypothesis, showing that there is indeed an association between gender and being a craft beer consumer, in this case between being male and being a consumer of this beverage.

Appendix XXIV- Hypothesis 17

As the hypothesis indicates that bitterness is a barrier to higher craft beer consumption, especially for female individuals, the author has chosen to perform a Sign Test for one sample for both the female audience and the male audience. For this purpose, a column named Median was created, composed exclusively by the value "3" since this is the level of the indifference of the importance of bitterness as a higher craft beer consumption obstacle. Therefore, all values above this threshold represent individuals who consider bitterness as a barrier to a high consumption frequency, and in turn, all values lower than this threshold represents the contrary.

Ranks	N
Negative Ranks	20 [a]
Positive Ranks	11 [b]
Ties	7 [c]
Total	38

a- *Female Bitterness < Median (3)*
b- *Female Bitterness > Median (3)*
c- *Female Bitterness = Median (3)*

The results indicate that most of the females do not consider the high bitterness level of these beers as an obstacle to a higher frequency of consumption; however, there is still a number with some expression that sees in this variable a barrier to higher consumption.

H0: The median of Bitterness level for females as a blocking consumption factor of craft beer is equal to 3.

H1: The median of Bitterness level for females as a blocking consumption factor of craft beer is lower to 3.

Test Statistics	Female Bitterness - Median
Z	-1.437
Asymp. Sig. (1-tailed)	0.076

The results of this test do not give the possibility to reject the H0, so it is not possible to conclude that the higher bitterness content present in craft beer is not considered as an obstacle to higher consumption of this beverage.

The same procedure was used to verify if males consider the bitterness content present in this beverage as a blocking consumption factor.

Ranks	N
Negative Ranks	52 a
Positive Ranks	6 b
Ties	9 c
Total	67

a- Male Bitterness < Median (3)
b- Male Bitterness > Median (3)
c- Male Bitterness = Median (3)

In the case of male individuals, the vast majority do not look at bitterness as a barrier of craft beer consumption in Portugal, because in a universe of 68 individuals, only six consider bitterness in that way.

H0: The median of Bitterness level for males as a blocking consumption factor of craft beer is equal to 3.

H1: The median of Bitterness level for males as a blocking consumption factor of craft beer is lower to 3.

Test Statistics	Male Bitterness - Median
Z	-5.909
Asymp. Sig. (1-tailed)	0.000

Sign Test permits rejecting the H0 because P-value is lower than 0.05, so it is possible to conclude with statistically significant evidence that bitterness is not perceived as an obstacle for craft beer consumption for males.

Appendix XXV- Hypothesis 18

The Sign test was also used to determine if the individual packaging would be a discouraging factor of higher consumption of craft beer in a similar way to the previous hypothesis testing but without split female opinions from male opinions.

Ranks	N
Negative Ranks	72 a
Positive Ranks	17 b

Ties	16 c
Total	105

a- *Individual Packaging < Median (3)*
b- *Individual Packaging > Median (3)*
c- *Individual Packaging = Median (3)*

The results indicate that the individual packaging does not appear to be a barrier to the consumption of craft beer in Portugal.

H0: The median of Individual packaging as a blocking consumption factor of craft beer is equal to 3.

H1: The median of Individual packaging as a blocking consumption factor of craft beer is lower to 3.

Test Statistics	Individual Packaging - Median
Z	-5.724
Asymp. Sig. (1-tailed)	0.000

The Sign Test allows rejecting the H0, concluding in a statistically significant way, that the individual packaging in the retail segment is not an obstacle for more frequent consumption of this beer segment.

Appendix XXVI- Hypothesis 19

To test the hypothesis of the price be considered as a barrier to more frequent consumption of craft beer in Portugal, it was decided to conduct a Sign Test, in a similar procedure to the last one hypothesis.

Ranks	N
Negative Ranks	31 a
Positive Ranks	66 b
Ties	8 c
Total	105

a- *Price < Median (3)*
b- *Price > Median (3)*
c- *Price = Median (3)*

Price appears to be a blocking factor of higher craft beer consumption in Portugal, but to assert with statistical significance, it is necessary to observe the results of the Sign Test.

H0: The median of price as a blocking consumption factor of craft beer is equal to 3.

H1: The median of price as a blocking consumption factor of craft beer is higher than to 3.

Test Statistics	Price - Median
Z	(3.452)
Asymp. Sig. (1-tailed)	0.001

The results allow rejecting H0 and conclude with statistical significance that price works as an obstacle to more frequent consumption of this beverage in Portugal.

Appendix XXVII- Hypothesis 20
To test the hypothesis that the lower availability of this beverage, since it cannot be found in every establishment, consisted in an obstacle to higher craft beer, a one sample Sign Test needs to be performed, in an identical way to the one carried out for the two previous hypotheses.

Ranks	N
Negative Ranks	37 a
Positive Ranks	59 b
Ties	7 c
Total	105

a- *Availability < Median (3)*
b- *Availability > Median (3)*
c- *Availability = Median (3)*

Availability seems to be a dissuading factor of a higher frequency of consumption of this beverage, although it is necessary to verify with statistical significance that in fact, this factor constitutes an obstacle to higher consumption of craft beer in Portugal.

H0: The median of availability as a blocking consumption factor of craft beer is equal to 3.

H1: The median of availability as a blocking consumption factor of craft beer is higher than to 3.

Test Statistics	Availability - Median
Z	(2.143)
Asymp. Sig. (1-tailed)	0.016

The P-value allows rejecting the null hypothesis, which indicates with statistical significance that the lowest availability of this beverage is a blocking factor of craft beer consumption in this country.