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"BE SOCIAL OR BE GOOD. THE PERFORMANCE OF ITALIAN MICROBREWERIES"

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INTRODUCTION

The **purpose** of this analysis is to test which are the determinants that have a positive association with the performances of the companies that belong to a specific Italian industry. The determinants chosen can be classified into two clusters the quality and the social attitude which are respectively related to the "be good" and the "be social" company dimensions. Given that the quality is a relative concept, the research decides to analyse three different groups of measures of product quality: the product offering that came directly from the strategic companies' choices, the customers' quality perception that represents a source of subjective quality evaluation and the expert advisors' opinion, which is an objective quality evaluation. From an opposite prospective the social media attitude could be expressed as the companies' sensibility with respect the internet arena that can be manifested by the company through the social media presence, the participation and the relationships with customers. The main objective of this study is to investigate if the quality and social attitude have a positive association with the corporate performances and to understand if it is more important for a firm to "be good or be social" in order to provide companies some useful guidelines for their long term strategy and maximize their efforts.

The idea to start this research comes from the **lack of a similar analysis** in the literature and the need for both companies and researchers to deeper understand how the quality and social media influence the company performance and to analyze which are the two determinants' boundaries. Until this moment, the majority of authors were more focused on studying the quality effects on the performance, rather than analysing in concrete the real consequences of the use of social media platforms in the daily companies' activities.

Recently the number of readings talking about social media has proliferated, but the majority of authors were just focused on describing theoretically the social media's advantages and disadvantages rather than studying in concreate its impact on the company performance. Some authors have pushed the social media application beyond its limits introducing it to new and unexpected study fields, but up to this point none has ever developed a systematic analysis on the social media impact on the overall company performance and especially none has ever tried to include both quality and social media variables in one analysis.

This research inserts itself in the already existing discussion about the social media and the quality opportunities, but at the same time it wants to suggest a new path of analysis. By statistically investigating the consequences of being social on the performance respectively on the average revenues growth and on the average EBITDA/revenues, this research drops the

barriers between two study fields: one more qualitative related to the the social media strategy and one more quantitative related to the performance measurement.

The industry chosen to test this challenging purpose is the **brewing industry** and the reasons are related to the peculiarity of this market. The brewing industry is in continuous evolution towards the improvement and it has experienced always new trends making it an interesting case of study. The reasons why this research is applied to the brewing industry are related to the need to have heterogeneity in the sample both in the product quality, in the social media attitude and in the performances, to access which variables are associated with superior results. Indeed, the brewing industry is not consolidated or static and therefore it is possible to access many differences among the members. Indeed, this industry is characterized by the existence of a consolidated group of industrial breweries and a huge number of emerging microbreweries, which are able to differentiate themselves from standardized industrial breweries offering unique craft beers. The existence of two groups of products with differences in terms of quality such as craft and industrial beers could be an interesting point of analysis in order to access if the difference in quality is associated with the performances. In addition, it is possible to identify many differences among the industry members in the social media presence and participation and it could be interesting to access if the difference in the social attitude is associated with the performances.

In order to lead the reader towards the research, the reading is divided into **five chapters**. The first chapter is dedicated to the literature excursus about the performance determinants and their impact on the company performance. In this chapter, the research introduces a preliminary framework that is going to be used along the entire reading and it is the cluster division: the quality ("be good") and the social attitude ("be social"). In the second chapter, the research introduces the purpose of the analysis highlighting the main hypotheses that are going to be studied and the industry that has been chosen. A deeper analysis of the industry is contained in the third chapter where the research decides to present some useful information about the average market size, the product quality, the demand for beer and the product promotion. In the forth chapter, instead, the empirical analysis starts. After having described the sample creation and the reasons behind the strategic choice of that variables, the research continues performing descriptive statistics and other preliminary tests. In order to make the results presentation as clear as possible, it was chosen to use the determinants distinction to lead the readers among the statistical results. Last but not the least, in the fifth chapter, the research tests the quality and the social attitude's impact on the overall performance and the analysis of two main performance indicators (average revenues growth and average EBITDA/revenues) are displayed with the results. The two cluster distinction has been used

also in this chapter, but, for expository simplicity, results have been listed following the two previously reported performance indicators analysed.

This research is based on the assumptions that the social attitude and the quality are **fixed characteristics** for a company and the willingness to be present and participate in the social media arena or to produce beers with superior product attributes does not change within a short time period. Given that are not expected any variations in the social media attitude or in the quality of products, the research used the 2015 social media data and quality data respectively as a proxy of the average social attitude and of the average quality.

The research provides **empirical evidence** that both the quality and the social media variables have an association with the performances. More in detail, the quality variables have a contradictory effect on the average revenues growth given that the average customers' product evaluation (expressed through the overall average rating) stimulates revenues while, the product offering (expressed through the number of beers) inhibits the revenues. At the same time the quality variables have a positive association with the average EBITDA/revenues ratio and this result highlights that offering products with higher product attributes improves the performances by reducing the operating costs' impact on the revenues. Also the social attitude variables have a contradictory effect on the average revenues growth given that being present on Facebook is positively associated with the average revenues growth, while the company participation (expressed through the number of contents shared) has a negative association. This data provides evidence that it is not just important being present on social media, but it matters also the participation and the quality of the participation activity. The same data suggests that the Facebook presence has a positive association on the average EBITDA/revenues ratio and this data clearly highlights that the social media presence could be useful to not just to save money, but to optimize the marketing investments.

Combining together the quality and the social attitude variables, it emerges that the quality association with the performance prevails. This data could suggest that even if be good is not good enough, companies should invest in their product quality first and then stimulate the customers' interest towards the company's products. It could appear that be present on the social media and participate actively do not substitute the product quality, but instead it could just intensify the product opportunities.

Going beyond the empirical results, this research aims to offer a new and unexpected path of analysis suggesting usefulness of the social media adoption also in the mainly quantitative science such as the performance measurement.

1 THE PERFORMANCE IN THE FOOD AND BEVERAGE INDUSTRY

1.1. THE PERFORMANCE DETERMINANTS

The world Food and Beverage industry was estimated worth 4,731 billion $ in 2013 (Parbonetti, A., Menini, A., 2015) with an average growth of 6% over the past four years, so it should not be surprising the great public interest around it. This industry is very important in Italy and because of the strong traditional food culture and the geographic richness, it enables this country to produce a wide variety of high quality products. In 2013 the Italian Food and Beverage revenue stream was about 120,000 €, with a CAGR of +6.7% over the past four years. Moving to a more deeply analysis, it is possible to notice that the performances across the Food and Beverage industry were different in terms of growth (Graph 1): alcohol and beverage products experienced the lowest growth over the period, while the wine bottles grew the most. From another prospective, all product clusters presented a low marginality with a median value of 5% and performances on average decreasing over the past four years.

Graph 1 - Differences in the performance across product clusters
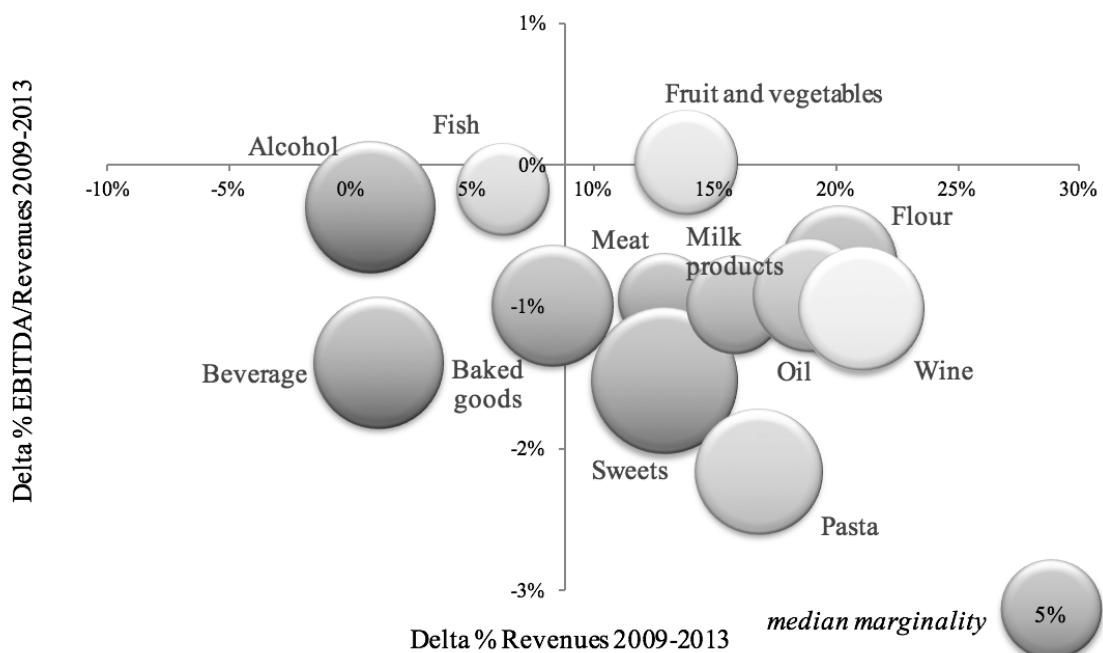
Source: Parbonetti, A., Menini, A., (2015)

Traditionally the Food and Beverage sector is very concentrated in Italy and in 2013 things were not different: the majority of revenues (the 54% over the total amount) were earned by the 2% of companies (Graph 2), representing the proportion with a dimension higher than 100 million € (Parbonetti, A., Menini, A., 2015). The previously reported data shows an interesting relation between sales and dimension, but people could ask themselves what are the real determinants of the results of this industry.

Graph 2 – Company distribution per dimensional cluster
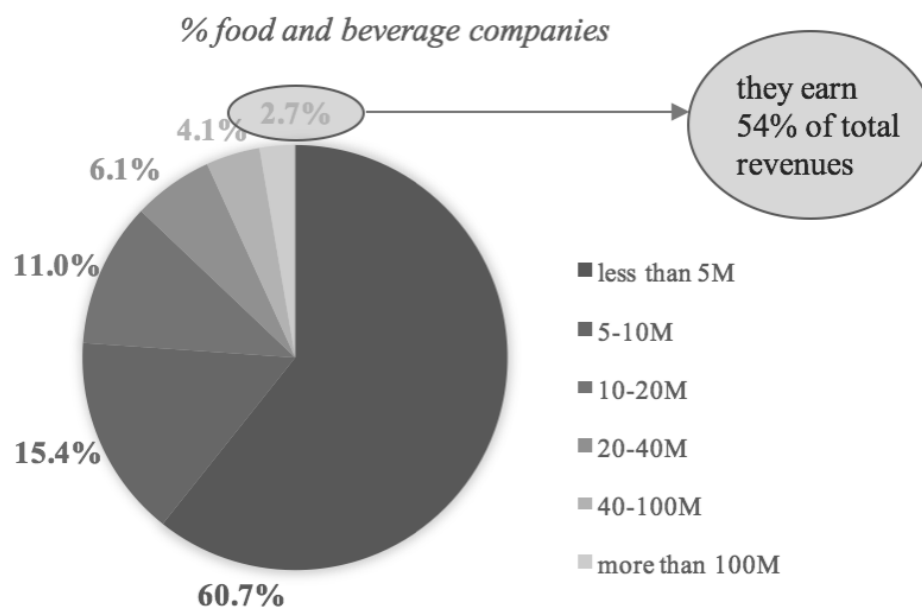
Source: own creation with data coming from Parbonetti, A., Menini, A., (2015)

Many authors tried to explain performances using as variables the company size, the age, the innovation rate, the export, the concentration rate of the sector, but, until now, none has taken into account the opportunities that the technological development has created through internet such as customers and companies' social media participation.

1.2. THE CONSUMERS' DESIRES

The Food and Beverage industry is continuously evolving trying to adjust to the demanding environment and these changes may affect its performance. People needs and desires are changing, sometimes they know exactly what they want forcing companies to satisfy them and this process is commonly called demand-pull, while other times companies are able to

forecast consumers' desires and provide to them the right product or the service. The later process is called technology-push because the innovation directly comes from the producer and consumers never imagined the outcome. From the previous example is clear that new trends could emerge both from people desires and from company imagination.

The literature has deeply studied the innovation process, paying attention to the ones directly coming from clients, and five new **consumer-driven categories** were identified as the outcome of modern major changes in the Food and Beverage industry: wellness, indulgence, ethnicity, value and convenience (The Halo Group, 2006).

Currently people have started to think to the impact of what they eat on the health and this is the reason why the wellness trend has emerged. An increasing number of consumers purchase natural and organic products ordinary, although few years before these types of food were just consumed by a niche market segment. People that buy organic products look for meat coming from animals grown and processed with no antibiotics or hormones and vegetables produced without using "synthetic fertilizers and pesticides" or other artificial methods (Shafie, F. A., & Rennie, D. 2012, p.360). Whereas consumers searching for natural products are even more concerned about what they eat and they look for food that does not contain any artificial or synthetic ingredients such as chemical flavours, colours or preservatives. Both organic and natural consumers perceive these categories of products as more genuine, rich of natural elements, such as vitamins or minerals, able to enhance their health and their quality of life.

According to a Gdoweek report in Italy in 2015 the domestic organic market is estimated worth 2.1 billion € distributed among the large retailers (40%), professional retailers (35%) and the remaining percentage (25%) is supplied by local markets, pharmacy and e-commerce (Gdoweek, 2015). In the wellness category are also included allergen-free, vegan, medical and functional foods. In fact, there is a growing proportion of the population with specific allergies that look for products that do not contain the ingredients that create them a bad health reaction. It is worth notice that the gluten-free is a fast growing emerging trend that provides professional alternative products for people affected with celiac disease. The vegan consumers, instead, are those who do not want to eat animals or animal-based products, because they perceive ethical or wellness problems associate with that consumption. The last, but not the least are medical and functional foods. The first category is recommended for those who have a medical disease and prefer to be cured with natural ingredients rather than chemical ones, the second one is for athletes searching for structural and functional benefits and they regularly ingest sports drinks, teas, vitamin-laced snack food and energy bars during their training sections.

According to many authors, the "health is an invisible product characteristic", therefore should "be inferred from more concrete intrinsic and extrinsic cues" (Brunsø, K., Fjord, T. A., Grunert, K. G., 2002, p.22) and could be transmitted through the communication.

The indulgence category goes beyond the physical nutrition needs (the intrinsic value) and people who buy these products aim to fulfil spiritual needs. Some of them care to sustain small and medium-sized firms promoting the social and the environmental sustainability, others want to fulfil hedonic desires acquiring gourmet food and search for new restaurant experiences, while the last group look for artisan hand-made food. The first category of people is interested in the human impact on the earth and is concerned of one or more than one of the following topic: social consciousness, environmental concerns, animal welfare and labour treatment. The second group is interested in the experiential components of the food and it is willing to pay for sensory attributes. This kind of customers look for rare products and unique combinations served with aesthetic attributes in a well-finished restaurant. An interesting example is the extreme cuisine where taste, texture and technique are pushed to their limits to create a multi-sensory experience. The last group of people avoids industrial products and prefer high quality and hand crafted food, because they recognize in these goods a greater value and they are willing to pay more for them.

Ethnic people demand for bolder tastes and desire to experiment with new cuisines such as Chinese, Japanese, Mexican, Vietnamese, Korean, Indian and many others. This trend is the result of globalization process, thus people eating these cuisines are both natives and foreigners representing the acceptance of the cultural diversity.

Value consumers buy products perceived value priced. In this category people search for the economic convenience in food which is considered a commodity. The born of private label with lower price compared with common brands highlights the people' dichotomous desire to save money not giving up the quality. Modern people may prefer to save money where it is perceived useless and relocate them to more important expenses, aware of the fact that economic resources are limited and scarce. From the companies prospective, they can charge a lower price to consumers because of economies of scale that are attainable thanks to the large number of retail stores where private label products are sold.

Today people are more and more busy because of daily activities, and sometimes they have no time and strengths to cook or buy fresh food. Convenience people look for products that are already available and that make the consumption easier, because partially or fully prepared: an example could be frozen or dehydrated food. Therefore, it is clear that this trend emerges from the people desire to save time and effort.

It is important to highlight that companies must be aware of the existence of many trends inside the Food and Beverage industry and they should exploit them incorporating few elements in the value proposition. Although, to give consumers what they want is just a predictable way to obtain a superior performance, companies should also be able to identify future possibility and offer innovative products to clients.

1.3. THE QUALITY

The growing competitiveness forces firms to think out of the box searching for new strategies to survive to the competition and obtain superior performances. Usually there are two main strategies: differentiation and cost leadership.

Some companies pursued cost reduction strategies to provide consumers competitive goods with a standard quality, others attained sustainable competitive advantages going to the opposite direction and basing their success on the superior attributes of products or services.

Precisely enhancing the quality attributes, companies are not just able to differentiate themselves from competitors, becoming clearly identifiable, but also to satisfy the deepest consumers' desires.

The Modena balsamic vinegar is an example of how the product quality could be a differentiation factor, even in the dressing sector (Mattia, G. 2004). From centuries, the Modena balsamic vinegar has respected specific production rules that enable companies to produce a distinctive product and to differentiate it from competitors. The unique characteristics of this balsamic vinegar are the result of vines cultivated, processed and matured for at least 12 years in the Modena area. The outcome is a dark brown, intense and shiny dressing with a notable density and a characteristic taste. Indeed, to identify this specialty as agro-food patrimony and to ensure quality to consumers, this product was certified under the EU's protected designation of origin (PDO) procedure. The balsamic vinegar is an example of **product differentiation based on quality**, but it is also rich of intangible characteristics because it is strictly connected its traditions and the Modena territory.

Another interesting case of differentiation that is worth to analyse is how Mutti S.p.a has distinguished itself in the tomatoes industry. Mutti S.p.a. is an Italian tomato processing company based in Parma, with a long family history in the canning industry and leader of the market. Its strategy is to offer consumers the best tomatoes in terms of raw materials and production process, but without sacrificing the social and the environmental sustainability.

Building close relationships with farmers and paying them more than the competitors do not just assure high quality product, but it stimulates also social sustainability in the agricultural market. Moreover, collaborating with WWF Mutti promotes the respect of nature and collaborates to save the Earth by minimizing the carbon and the water footprint in its production process. According to what Starvish M. reported in 2014, none believed that someone could create a brand in tomatoes, a commodity, but Mutti could (Starvish, M., 2014).

This is an interesting example of how the food is not perceived anymore as a commodity and people search for intangible attributes besides the quality. It is acknowledged that the real world offers many examples of products that are entered in the consumers' minds thanks to emotional and physical attributes becoming beloved brands.

The quality is a common concept that is used many times by consumers in their daily life and given that this word has been used many times in this research it is required to define it. Many authors analysed this topic inside their studies and they all agreed that the quality is a complex notion partially because there is **no a unique and clear definition** of the term and partially because it is influenced by many dimensions.

For example, Juran J. M. and Godfrey A. B. (1999) discussed the meaning of the term providing a distinction between a 'positive' and a 'negative' connotation.

The positive meaning is oriented to income and using the sentence "quality means those features of products which meet customer needs and thereby provide customer satisfaction" (p.26), the author focused its attention on the ability of the company to attract and retain consumers fulfilling their needs and giving them higher satisfaction. Therefore, he also sentenced that "products with superior features are able to secure superior income, whether through higher share of market or through premium prices" (p.29). The author also highlighted that higher quality could be provided just with higher investments.

The negative connotation, instead, is related to cost control. When he said "quality means freedom from deficiencies, freedom from errors that require doing work over again (rework) or that result in field failures, customer dissatisfaction, customer claims" (p.26), he meant that controlling the production process is a costly activity, but it can have positive consequences sparing higher future costs related to do over what already done. Managing the production processes and defeating as many errors or variances from conformance to specification as possible, the company can also reduce the possibility of consumer dissatisfaction and complaints.

Also Cardello A. V. (1995) investigated the quality concept and declared that "food quality is a consumer-based perceptual/evaluative construct that is relative to person, place and time" (p.163). He meant that the quality perception changes according many external factors such as the context and consumer expectations. The context influences consumers' perception through food and non-food factors: the first factors are related to the simultaneous presence of other meals and drinks that could influence the overall product evaluation, the seconds are related to social and physical environment stimulus. Moreover, regarding the consumer expectations, they play an important role in the quality perception because, according to past experiences and credence, people create some mental expectations that must be fulfilled to ensure the satisfaction, otherwise they will not appreciate it.

Even if food quality is a "relative concept that is grounded in the perceptions of the average consumer" (Cardello, A. V., 1995, p.164), people have tried to define it using system of expert judges able to evaluate products and give a sort of **objectiveness to the concept**. In the Food and Beverage industry there are many examples of product ratings provided by experts based on the product degustation and on the overall experience such as the Michelin stars in the restaurant industry, 'Guida Vini d'Italia Gambero Rosso' reward in the wine industry or 'Guida Birre d'Italia Slow food' in the brewery industry. The diffusion in every industry of silver palates able to evaluate the product quality, in a world where the number of product has proliferated and the quality is not immediately accessible, rises from the need to develop a method to guarantee an objective quality evaluation and create a sort of ranking among the participants. Therefore, these judges are more and more become the arbiters of Food and Beverage quality.

No matter the research of an objectiveness in the quality evaluation, the food quality is a **subjective concept** related to the sensory quality perception and to other not sensory attributes. There are many cues affecting the individual quality impression and they include for examples "price, product composition characteristics, packaging, brand, manufacturer, store image, advertising, word-of-mouth reports and past purchase experience" (Jacoby, J., Olson, J. C., & Haddock, R. A., 1971, p.570). Some of them could be classified as objective attributes, others could be defined as emotional ones.

To represent the quality components, Espejel J. et al. (2005) distinguished between intrinsic and extrinsic attributes. **Intrinsic attributes** are related to the physical aspect of the goods and allow an objective measurement of their quality, while **extrinsic** ones are connected with the product characteristics, but they are not strictly part of it. For example, the literature defines the alcohol content and the product characteristics as intrinsic product cues, while, for instance, examples of extrinsic attributes are packaging, price, brand name, advertising, seal

of approval and corporate name (Idoko, E. C., Nkamnebe, A. D., Ireneus, N. C., & Okoye, V. I., 2013).

Packaging could be defined as the materials to transport, storage and sale goods. It may be viewed as an integral part of the product and the first point of contact with the brand, so it is fundamental for a company to plan the product presentation as a whole. In the alcoholic beverage industry companies can customize every parts of the product, included the plastic case, the bottle, the label (front, back and neck) and the cork. They can choose size, colour, design and shape to differentiate their brands, to reinforce the product positioning, to underline the uniqueness of the drink and to catch consumers' attention in the process of selection.

The price is one of the most analysed key features. Therefore, its importance derives from the fact that it is one of the 4Ps of the marketing mix, which companies could exploit in their business, and it is directly involved in the revenues stream generation, as main component of the revenues together with quantity. The price is an important cue when other cues available are limited. Effectively during the purchasing phase people could not taste the product experiencing the quality, so the price, as first objective information, is used by consumer to compare different products based on the price and people make the choice according to the perception about the specific product price positioning. The literature has demonstrated that there is a relation between price and quality and more in specific Jacoby J. et al. (1971, p.570) assessed that "high-priced brand is perceived to be of higher quality than the medium and low priced brands".

Idoko E. C. et al. (2013) helped us to remind Kotler's definition of brand name according to which it is "a name, term, sign, symbol or design or a combination of these intended to identify the goods or services of one seller or group of sellers, and to differentiate them from those of competitors" (Idoko, E. C., Nkamnebe, A. D., Ireneus, N. C., & Okoye, V. I., 2013, p.3). The brand provides benefits both to consumers and to firms. It allows companies to be immediately recognisable among competitors and charge a price premium. From the other side, consumers are able to navigate more easily among brands and choose their favoured one obtaining reassurance about the quality, the origin or other characteristics not immediately identifiable. Jacoby J. et al. (1971) in their article analysed also the relation between price and brand name, and they said that while the effect of price is not significant, awareness of the brand name influences quality perception.

The advertising is a tools of marketing communications that enable companies to generate brand awareness, increase the interest about a product, create positive associations and spread word-of-mouth about it. Advertising, if follows what the marketers aim to communicate to

customers and potential ones, helps the company to induce into consumers' minds the creation of a specific brand image.

The seal of approval represents a minimum acceptable standard that a regulatory body gives about the quality of a product. As technology goes on, also the minimum conformances evolves and new standard emerges.

Corporate name is a secondary attribute that gives indirectly reassurance to consumers about a specific product. Many companies use to connect the name of a new product with the corporate name to take advantage of the strong corporate identity and transfer the consumers' confidence to the new one. Although this strategy is not the only alternative to extend, the range of products and other companies prefer to create independent brand name, providing the same trustworthiness. In both cases the corporate name, even if not explicitly included in the brand name, is reported in the label and provides consumers guidance in their choices.

The alcohol content is the quantity of alcohol (ethanol) contained in a specific good. In beverages it is expressed as a percentage of the total volume and usually in beers the alcohol by volume (from now on it would be abbreviated in 'abv') is higher than 0.5% up to 15%. The alcohol content is a key determinant in the beverages because it has impact on the purchasing decision: for the domestic consumption people usually choose low abv value, while for recreational purposes spending time with friends they prefer higher alcohol percentages.

According to what reported by Idoko E. C. et al. (2013), the product characteristics are related to the consumer's value and satisfaction. The product quality is not absolute, but relative and this means that it derives from the consumer's perception. People usually face troubles when they choose new product because there is information asymmetry and they cannot assess the quality until they buy and they test the products, so to reduce the possibility of make mistakes they try to compare different products available in the market. The food and beverages characteristics could be objectives such as colour, density and uniformity, others are more subjective such as taste and aroma. Sensory characteristics are often difficult to identify when tasted.

The literature provided many examples of analysis about the product quality and the researches focused on the different attributes of the quality. In addition, usually authors test their theories on different industries and one of the most significant contribution to research about the customers' quality perception is due to Allison R. I. and Uhl K. P. (1964). Through their experiment they demonstrated that consumers are not able to distinguish beer taste in blind test and they are neither able to identify their favourite brands among the sample of six bottles of beer. Once proved that consumers are not able to recognize unlabelled beers based

on their tastes, the authors highlighted that the brand identification that is possible through packaging components has effect on the specific beers evaluation. Indeed, consumers that drink beers labelled tend to increase their favourite beers ratings and decrease the others no matter the previews taste perception, this phenomenon is due because of consumer loyalty effect. This empirical research does not provide just a demonstration that sensory attributes are difficult to distinguish, but also he proves that the differentiation of beer is not just the result of physical differences, but also of brand awareness and image.

Today the competition in the Food and Beverage industry is extremely high and it is difficult for a brand to differentiate itself based on the quality attributes, so to recall the Seth Godin's work (2004), **sometimes be good is not good enough**. To succeed in the market and not be ignored by consumers overloaded by the number of similar offers, a brand should be phenomenal, counterintuitive, exciting and remarkable in a word a "Purple Cow".

1.4. THE TECHNOLOGICAL IMPROVEMENTS

Internet is transforming the Food and Beverage industry. New technologies such as social media and mobile devices are accelerating the rate of change providing companies with new opportunities to run their businesses, but also exposing them to new areas of risk and vulnerability.

Thanks to the technological evolution, companies have changed the way of doing marketing (Kotler, P., Kartajaya, H., & Setiawan, I., 2010). Many years ago, marketing 1.0 was the only solution and consisted in a "push strategy": firms used to produce standardized goods with no alternative in shape or in colours, and they just tried to sell products to everyone that would buy them. With the technological improvement, marketing 1.0 has become useless. Today consumers have become smarter, they know what they want and they able to compare different offerings thanks to the simplicity to obtain information in the internet arena. For this reason, firms have become consumer-centric starting to differentiate their production and promoting different alternatives for different customers. Marketing 2.0 was born, but still customers were seen as passive actors. It is just with marketing 3.0 that firms start to consider people as whole human being, addressing consumers' deepest needs, they look for functional, emotional and spiritual fulfilment. The rise of marketing 3.0 is also called the "values-driven era" (Kotler, P., Kartajaya, H., & Setiawan, I., 2010, p.4) because companies start to think how they can contribute to the world and they incorporate high values in their value propositions.

Even if not every company has changed following the technology wave, the shift from marketing 1.0 to marketing 3.0 was possible thanks to **social media**. Social media is growing faster than any other technology before. As a McKinsey Global Institute report highlighted the "broad-cast radio took almost 40 years to reach an audience of 50 million, and TV still took more than a decade", while "both Twitter and Facebook made it in less than a year" (Figure 1) (Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D. 2012, p.5). According to the same authors, Pinterest is the fastest growing social media platform and it would perhaps have the highest record speed.

Figure 1 : Social technologies have been adopted at record speed
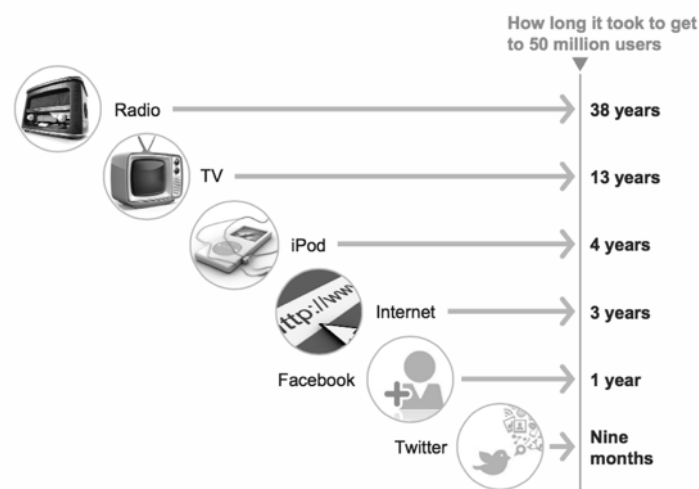
Source: Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., (2012), p.5

New wave technology has opened the door to the diffusion of computers and mobile phones among the population, because of lower cost of devices, while the rise of competition in the telecommunication has lowered the cost of Internet. The born of the new technology has created opportunities unimaginable few decades before pushing the connectivity and the interactivity beyond their limits.

According to Kottler P. et al., we are living in the "**age of participation**" (Kotler, P., Kartajaya, H., & Setiawan, I., 2010, p.5). Through the internet arena people are free to "express themselves and collaborate with others". People can use in many ways social media platforms: they can share feelings, thoughts and opinions, create contents and describe experiences, they can become brand advocate sharing positive comments about specific

brand, decide to participate to the discussion or just listen, it is up to them the choice. They can also decide to collaborate with companies giving them feedback about products and helping them to develop new ones (co-creation), or they can cooperate with others consumers participating in the development of open-sources software, contributing with ideas in the crowdsourcing platforms or with money in the crowdfunding. The increase in consumers' participation and collaboration is a signal that their role has changed. Consumers are no more passive actors. For this reason, many authors have started to define them as "prosumers" been both producers and consumers of digital contents (Kaplan, A. M., & Haenlein, M., 2010, p.66). For this reason, companies should no more underestimated them. Consumers are useful resources if listen and well managed, otherwise they can generate problems.

1.5. THE ONLINE REVIEWS

What emerges from the literature is that the **consumer empowerment** is a reality, therefore companies must become aware of this phenomenon and develop the capability to manage it and exploit it. Although consumers alone are weak, when they collaborate and they join into a community they become stronger than any firm. The collective power of consumers is built on the ability to establish networks among them and its strength depends on how many people are involved in the communication. Indeed, even if one-to-one and one-to-many relationships are effective in influencing others, what makes consumers so strong in the modern internet era are the many-to-many conversations, thanks whom people can interact with their community and spread powerful messages.

Many authors have tried to quantify the network effect, but each one concentrated its attention on a specific type of network. For example, David Sarnoff calculated the value of a broadcast network, which is classified as a traditional one-way instrument because the communication flow is unilateral. He discovered "the value of the network rises proportionally to N, the number of users" and saying this he highlighted that the more the people view or listen to a specific communication, the more this message is powerful (Ferguson, R., & Hlavinka, K., 2006, p.293). From a different prospective, Robert Metcalfe estimated the value of the connections that could arose between one individual and another in a network involving n people and common examples of one-to-one or transactional network could be e-mail and instant messaging. According to his estimations the value depends on "the number of possible connections that can be made" and it can be calculated as "n(n − 1)", roughly, n^2 (Hendler, J., Golbeck, J., 2008, p.14). The main David P. Reed's contribution

was instead the discover of the third and the most valuable network: the many to many or the group-forming network, which allows members to create online communities with whom establish and maintain daily interactions (Reed, D. P., 2001). According to the author, its value "increases exponentially, in proportion to 2^n" as the number of user involved increases (p.24). Even if with different results, the three authors agreed that there is a positive relationship between number of participants and network value.

It is worth noticing that the word-of mouth (from now on it would be abbreviated in 'WOM') is not a new phenomenon. People have always talked each other to share experiences and opinions, but until a few years ago they could only talk to a limited amount of people (mainly friends, neighbours and co-workers) with whom they had strong relationship. Thanks to the technological improvement, now consumers can interact with a huge number of consumers, even if they do not know them personally (Nieto, J., Hernández-Maestro, R. M., & Muñoz-Gallego, P. A., 2014). For this reason, the literature has introduced the concept of electronic word-of-mouth (eWOM) to represent the new form of communication promoted by the web (Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A., 2009). The result is that internet has greatly empowered consumers.

Now customers can easily **access peer-generated product information**, coming from all over the world, and test the product quality before purchasing the good and experience its taste. Effectively people trust their peers (horizontal relationships) rather than companies (vertical relationships), thus, when they need to make a purchase with a high risk associated, due to the possibility to make wrong decisions, they search for recommendations. "Community feedback cycle" represents the process through which consumers initially obtain information from the market, but after having experienced the product quality, they provide their own evaluation reinforcing previous consumers' judgements or giving a completely different feedback to guide future choices (Evans, D., & McKee, J., 2010). In this way, consumers become proactively part of the system both as sources and users of information and this process is visible in the following figure (Figure 2). Therefore, user-generated contents are a form of many-to-many collaboration useful to reduce information asymmetries, between consumers and companies, and able to influence a product adoption and its success.

Figure 2: The community feedback cycle
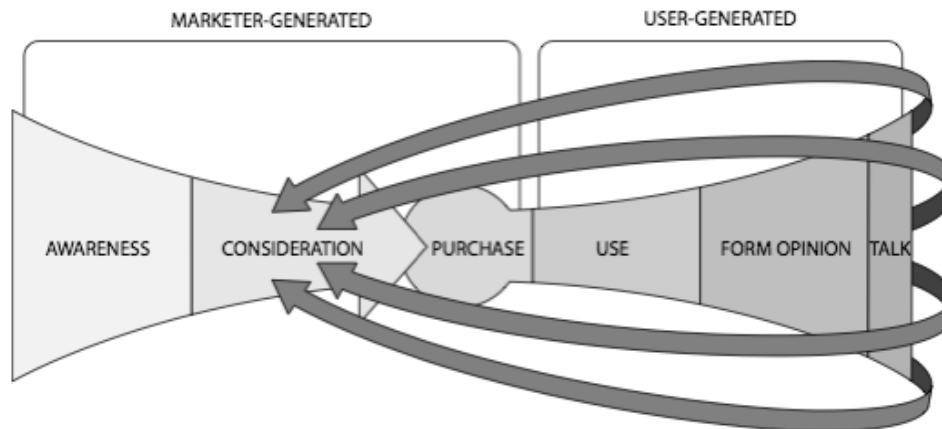
Source: Evans, D., McKee, J., (2010), p.27

According to the literature, people can choose among many **information sources**. To provide a framework to analyse the different information sources, Senecal S. and Nantel J. (2010) reported in their article the Andreasen's classification that divided information sources as: impersonal advocate, impersonal independent, personal advocate and personal independent. The previous classification is based both on the identity of the source that provides the information ('personal' or 'impersonal') and on the connection with the company (high in 'advocate' or null in 'independent'). According to the authors two other aspects are important and should be take into consideration when an information source is analysed. The first is the type of relationship that the source wants to establish which could be personalized or non-personalized communication according if it is addressed directly to a specific individual, and the second is the types of websites in which the information is accessible and the websites could be classified as sellers, commercially linked third parties and non-commercially linked.

The information flow is not just a passive stream of contents from the company to their clients or from peer to other users, consumers are active actors both when they search for specific contents, both when they receive messages. Even if this is not visible, every day consumers evaluate the **trustworthiness** of sources and the reliance of the contents that are in front of them and for doing so they use all the available information about the specific source. When they face not credible sources they reject them or when they get in touch with information provided by the company or other non-neutral users they discount them. This means that an information selection always happens in the consumers' mind both in terms of which source trust or not, both in term of with information consider or not.

According to the literature, "consumers do not give equal weights to positive and negative product reviews" and the weight depends on consumption goal (Zhang, J. Q.,

Craciun, G., & Shin, D. 2010, p.1340). Authors discovered that if the goal is associated with the promotion, people are influenced most by positive comments, if the goal is the prevention negative reviews are more persuasive than positive ones. Therefore, even if companies could think that negative reviews are dangerous, these may be very helpful and firms should not censor them. For example, some studies highlighted that "products with controversial reviews could stimulate a huge amount of discussions among consumers that will eventually be translated into product sales", thus firms should not eliminate negative feedbacks, but keep them at a moderate level (Shao, K., 2012, p.37). Some authors demonstrated that negative reviews are important drivers for the performance of companies (Kim, W. G., Lim, H., & Brymer, R. A., 2015), indeed negative feedbacks could be useful information sources to discover mistakes and learn from them. Through the web, firms can get in touch with dissatisfied consumers trying to convert them to a loyal customer or remain up-to-date on market desires and trends. Therefore, companies should learn how to manage negative online comments and allocate financial resources for regularly respond to negative online comments. The literature highlighted that many firms think that they could take advantages of the online reviews, manipulating the overall rating by introducing fake positive comments to affect the consumers' willingness to buy their products and increase sales. What companies do not consider is that consumers are able to identify reviews manipulation and they not just nullify firms' efforts not acquiring products, but they also see this behaviour as a trust violation becoming less disposed to have relation with these brands.

An additional characteristic of the word-of-mouth is that reviews could "be noisy and difficult to interpret" (Luca, M., 2011, p.2), because the opinions are subjective and the number of reviews is considerably growing. The information overload is the consequence of the huge amount of reviews available for the public and the quantity of material contained (Park, D. H., & Lee, J., 2009). People that experiment the information overload need to balance the desire for additional details and the difficulty to process additional info, because they have cognitive limits and the activity is time consuming. Park D. and Lee J. discovered that consumer involvement is a key moderator and they meant that when people are "highly involved with a product" they "are more likely to engage in thoughtful and effortful processing of persuasive arguments" (2009, p.390). Thus, to exploit this phenomenon, companies should facilitate consumers' usage. They can do this organizing information for presenting the most persuasive reviews (Zhang, J. Q., Craciun, G., & Shin, D., 2010), creating a standardized format for making the consultation easier, showing a summary with key statistics or limiting the number of reviews visible per page (Park, D. H., & Lee, J., 2009).

The literature discovered that also the behaviour towards communication changes when people use traditional instruments or the web. Eisingerich A. B. et al. (2015) found that consumers are generally less likely to offer positive reviews in internet rather than in face-to-face interaction, and this is due to two different factors: from one side people are afraid to expose themselves to social judgements in the internet arena, but from the other they are more sensitive to self-enhancement motives.

In addition, the product and the consumer characteristics have an impact on online consumer reviews effectiveness (Zhu, F., & Zhang, X. 2010). If a product is not popular, customers can find difficulties to obtain information about its quality, and traditional sources such as friends, family, neighbours are not useful. In these specific cases, online reviews made by people who tried the products are fundamental sources of information.

Also the consumer characteristics matters and people with higher web experience are more internet friendly and would be more likely to access online reviews before buying a specific product. They can easily find many recommendations from multiple sources, but they may face information overload and doubt of the trustworthiness of information sources.

Social media platforms are powerful instruments, but not every company is aware of what they are and what are their potentiality. According to many authors "having a strong social media presence in business is no longer a plus but a requirement" (Kimani, E., 2015, p.104), thus companies should learn how to compete in this new technological arena.

1.6. THE SOCIAL MEDIA LANDSCAPE

Before describing how technologies have changed the way that companies run their businesses, it should be useful to talk about social media, the result of the web 2.0 transformation, provide a definition and some key characteristics. Even if Facebook is the most popular social network platform, with 1.49 billion of people active each month[1], "there currently exists **a rich and diverse ecology of social media sites**" that differs in terms of "scope and functionality" (Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S., 2011, p.242). The technological development has proposed to users a rich offering of online platforms characterized by different tools and inside this variety they can find, in every moment, exactly what they want or what they need. Through these websites, people can organize their daily activities, search for information or pursue their passions, but their

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[1] *Data available on the Facebook page https://www.facebook.com/zuck?fref=ts and published 28 July 2015*

success does not depend on the availability of different instruments, but above all on the handiness of use and on the immediate accessibility, despite where consumers are.

The complexity of the social media landscape finds order in the Conversation Prism structure (Figure 3) an evolving infographic that captures the state of social media in a specific time. The first version was developed in 2008 by Brian Solis as a management tool to help companies to see the whole internet opportunities. As the web evolves, the Conversation Prism has changed through the consecutive versions modifying its aspect, the social media categories and the social media platforms there enclosed. Therefore, this instrument mirrors the years in which it has been developed and as a snapshot, it describes the different competitive landscapes. The Conversation Prism includes both leading and promising networks and organizes them by how people use them.

Figure 3: Social media Conversation Prism

Source: http://www.conversationprism.com/

As a prism separates white light into a spectrum of colours, the name contains the desire to catch the collective wisdom (metaphorically the white light) and separate conversations in the way they are grouped (Solis, B., 2013). It is important to remember that the Conversation Prism is just one of the several instrument used to classify social media.

More in general the literature uses to classify social media according to their scope:

- social networking sites (e.g. MySpace, Facebook) are used by general masses and their aim is to create connections among people,
- business networking sites (e.g. LinkedIn) are used by professionals to create networking relationships,
- blogs and microblogs (e.g. Twitter) are very common among people and they are used to share message or opinions,
- media sharing sites (e.g. YouTube, Flickr, Instagram) are based on the creation and the exchange of users' contents, both videos and photos, that become available in internet after they are published,
- virtual worlds (e.g. Second Life) are multiplayer online platforms based on simulated environment where people can interact with other users and make different activities,
- open source software communities (e.g. Mozilla, Linux) are platforms where users collaborate in the development of software,
- reviews and ratings websites (e.g. Amazon.com, Yelp, Tripadvisor) are sites where people share experiences and opinions about the product quality,
- social marketplace (e.g. Groupon) represents a platform that aims to connect demand with offer,
- collaborative websites (e.g. Wikipedia, 20lines) are based on the users' collaboration and contents are available for everyone,
- crowdfunding platforms (e.g. Rocket Hub, Indiegogo, Kickstarter) that helps individuals to raise money online to transform their ideas into reality,
- and many other platforms.

Many authors defined the social media, but it is worth reporting the Mangold W. G. and Fauldswork D. J. research. These authors defined social media as "the **new hybrid element** of the promotion mix" meaning that social media enables both the traditional B2C communication in which companies talk to their customers and a new C2C interaction where people talk to one another (Mangold, W. G., & Faulds, D. J., 2009, p.357). Internet has become a mass media vehicle for user-generated contents, thus managers must accept that they are no more responsible for the information about their products in circulation.

Even if firms cannot control the communication among consumers, they can influence the conversations. To shape the discussions, companies have many instruments and they can use them jointly or alone. First, because consumers like to network with people who have the same interests, firms can create communities of like-minded individuals to simplify the connection among people and stimulate the opinion sharing. Then, they can create contests to engage customers or they can inspire positive brand feelings providing additional information. A different solution is to stimulate the users' reaction in spreading a controversial message or to commercialize an exclusive product such as a limited edition. Then, managers can leverage emotional connections by embracing social causes to arrive to customers' spirit, tell memorable stories or design products considering colours, shapes, sizes, packaging and other factors to catch the people's attention.

Firms should deeply understand the social media characteristics and potentiality to decide where allocate resources and efforts to accomplish their marketing strategy. To identify in which activities each site is used and correctly planning future moves, companies can use the "seven social media building blocks". This framework uses a honeycomb structure composed by seven different functional traits: identity, conversations, sharing, presence, relationships, reputation, and groups (Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S., 2011). The websites based on the identity functional building blocks allow user to reveal their identities and disclose consciously or unconsciously objective personal information such as name, gender, age, profession and subjective ones such as thoughts and feelings. The conversations block, instead, allows users to express themselves and facilitates conversations within the communities. In these specific platforms, people can search for like-minded individuals with whom interact or they just see in these websites a way to be heard and promote social causes. Without the sharing blocks, social media platforms are just about connections among individuals, but with them people connect each other exchanging, distributing and receiving contents. Therefore, social media platforms "consist of people who are connected by a shared object" and through videos, texts and images users can interact each other (p.245). The presence building block allows consumers to know if their friends are accessible in the online platform, see if they are available to interact or obtain information about there they are or where they have been. The websites based on the relationships block allow users to create and maintain stable relationships with other members, and these interactions can be based on formal or informal agreement. The reputation functional building blocks, in its place, can have different meanings: sometimes it is a matter of trust because consumers look at the reliance of information provided and they

base it on users' experience, in other cases, instead, they look at contents trustworthiness. The group is the seventh and the last block and it represents the extent to which consumers are able to create and join into communities.

Kietzmann J. H. et al. (2011) have applied the seven building block to four different social media: Facebook, LinkedIn, Foursquare and YouTube, discovering interesting issues. Even if the majority of websites has found a balance among the different blocks, according to a Gene Smith theory they "tend to concentrate on three or four primary blocks" (p.249). After having made the analysis, authors discovered that the four websites base their strategy on a different combination of functional traits. For example, LinkedIn bases its strategy on the information disclosure and users can generate relationships with members confronting their status (identity, relationships and communication), while YouTube concentrates itself on videos exchange and users communicate each others and form communities (sharing, conversation, group and reputation). Foursquare, instead, is based on the possibility to see if other users are accessible, sharing personal information and creating relationships (presence, identity and relationships). Last, but not least Facebook is known as the more complex social media because, even if it is based on people interaction, it presents the higher number of activities: people can share personal information, find friends, communicate with them and share their status (relationships, presence, identity, reputation and conversations).

1.7. THE SOCIAL ATTITUDE

Companies are just starting to understand all the possibilities that the web can offer, but many of them seem to be "more focused on making noise" about their brand and products rather than "on understanding and participating in the conversations already going on about them on the web" (Gillan, P., 2010, p.7).

Being present in the social media arena can create numerous **advantages**, just to name few they can establish brand presence, build brand awareness, find new customers, attract talented employees, conduct brand intelligence and market research, and they can do this with relatively low cost budget. According to a McKinsey & Company report, many companies have started to take advantage of the more widely known social media applications, by creating corporate profiles for their brands and companies (Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., 2012). Through this presence, they know that they can have access to millions of potential customers, all over the world, communicate with them in near real-time and develop brand awareness. Usually when companies open a profile in a

social media platform, they think that be present is enough to obtain followers or they just publish promotional messages with the purpose to push sales. To generate attention and stimulate the public interest some companies have decided to create and share high quality contents that could represent corporate values while promoting product awareness, but consumers always look for something more. Thus, users want to be involved in the discussion and they want to be surprised or even entertained by the shared contents, so they reward firms that proactively engage consumers and the ones that create connections beyond products, creating value for the community as a whole, not just for themselves (Ernest & Young, 2011). Sometimes what organizations miss is that social media are more than a formidable marketing vehicle able to increase the market share, the web is relevant along the entire value chain (Figure 4) (Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., 2012).

Figure 4: social media create value along the entire value chain
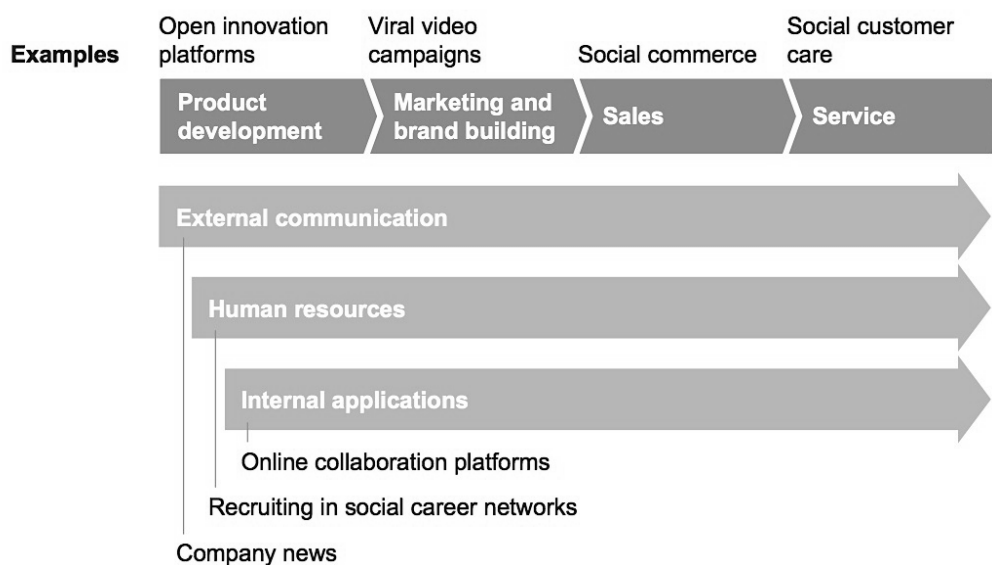
Source: Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., (2012), p.9

The web enables companies to interact with consumers and establish "two-way conversations", meaning that it is not just the companies that want to address potential consumers, but also users can have the will to talk with the firms (KPMG, 2011).

In addition, through social media, organizations can understand customers' needs and obtain feedback from clients. This can have impact in the product development function because companies can generate innovation ideas, advance their product development and invent future products. Indeed, negative comments posted online gives the company the opportunity

to publicly demonstrate empathy by answering complaints.

Further information that a firm could obtain from the interaction with users are market research and customer insights, because they can gather opinions about competitors and obtain their perceptions about the market (McKinsey Global Institute, 2012).

Moreover, the web could offer an online e-commerce platform where sell products directly to the final consumers, avoiding the main structural costs of a physical shop and increasing the margin on that products (Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., 2012).

In addition, the connectivity can help companies in the post-sale services allowing the creation of customer management platforms and they increase the consumers' satisfaction through this "servitization" (Neely, A., 2008).

The technological improvement has also offered to companies a new communication tool, which gives them the opportunity to publicize corporate news and manage external crises.

The web could be used also in the human resources function. Through internet, firms can obtain information about possible new workers, directly interact with them through the platform and attract new talented people, in this way making easier the recruiting process.

The last function where the connectivity is used is the internal applications and it facilitates the interactions between employees in different locations.

It is commonly acknowledged that the technological innovation has enabled companies to make things that they did before in a new and more effective way. To balance the need of communication occurring in real-time and through multi-channels with the need of controlling the message, today many firms allow employees to interact with customers and teach them both how to do it and the values they should transfer. In these moments, employees are free to interact with users and the company monitors continuously employees' behaviour, making later additional corrections.

"Unlike traditional media that are often cost-prohibitive to many companies, a social media strategy does not require astronomical budgeting" leaving the company free to reach and engage people through multi-channels way (Hanna, R., Rohm, A., & Crittenden, V. L., 2011, p.8). Even if "most social media sites are free" companies should include in their budgets additional even if "minimal costs" (Kirtiş, A. K., & Karahan, F., 2011, p.264) counting costs related to advertising such as pay per click, cost of designer, expert advice just to name few. The pay per click cost (e.g. Google AdWords, Facebook pay per click) is an expense related to the cost to publicize a specific content and the expense is calculated on click-through rate, the percentage of people clicking on it. The additional costs are connected with the costs to

develop a company website or the profile into a social media platform and the cost to hire an expert to manage the communication.

From what said before, what emerges is that "participating in social media has become a business imperative" (KPMG, 2011, p.2). In 2011, the world percentage of social media adoption among companies was about 70%, but it considerably changed according industries. The lowest industries were the private and the public sector with respectively 59,2% and 67,2%, and moving from the bottom to the top it is possible to notice many sectors with a quite stable social media adoption, but the highest result was 76% in the retail sector. According to the respondents, the 80% of companies in the sample has experienced significant returns in using social media (KPMG, 2011, p.8) and, even if these benefits usually outweigh the risks, companies should also consider to deal with **disadvantages**.

It is commonly acknowledged that the technological development offers new opportunities, but companies can face also many threats and bad consequences by its usage.

For instance, listen and participate in the social arena require time and resources, because companies have to deal with the huge amount of data now available about consumers. "The challenge for organisations is to identify which bits of data in those millions of social interactions are relevant to them" and the process is usually time consuming, so many firms have decided to invest in software able to analyse the text and sentiment of web helping them to save time (Ernest & Young, 2011, p.14).

Furthermore, as the competitive arena has changed, companies should take care to respect new regulations, related to the conditions of use of the new social media platforms, in addition to the traditional laws concerning media rights, advertising activities and users' rights. An example of users' rights is the privacy, but companies must find the right balance between respect of laws and need of information.

Moreover, customers are becoming more and more worried about sharing their private data because they feel to lose their control and they are afraid of how they could be used against them. Therefore, when they do it, they want to have a return for their loss in privacy because they are aware of the potential value of their data to organisations (Ernest & Young, 2011).

In addition, being aggressive with advertising and product promotion can have a negative impact on consumers which could prefer not to have any relationship with that brand (Bolotaeva, V., & Cata, T., 2010)

A supplementary risk is related to the possibility of abuse of these instruments, spending excessive time chatting about nonwork-related topics or damaging other employees with personal critics (McKinsey Global Institute, 2012). Under the purpose to manage this risk,

some companies use to forbid nonwork conversations or censor critical opinions, while promoting face-to-face exchanges.

According to an Ernest & Young research (2011), the social media usage will favour the brave companies and the winners will be those able to adapt themselves, willing to take few risks to succeed. Even if the research affirmed that companies are starting exploiting new technologies, their adoption rate lags behind consumers' adoption, meaning that the consumers' penetration is higher than the companies' one in every social platform (Figure 5) (McKinsey Global Institute, 2012). Although the present situation, this gap is expected to decrease.

Figure 5: Adoption of social technologies within firms lags far behind consumer one
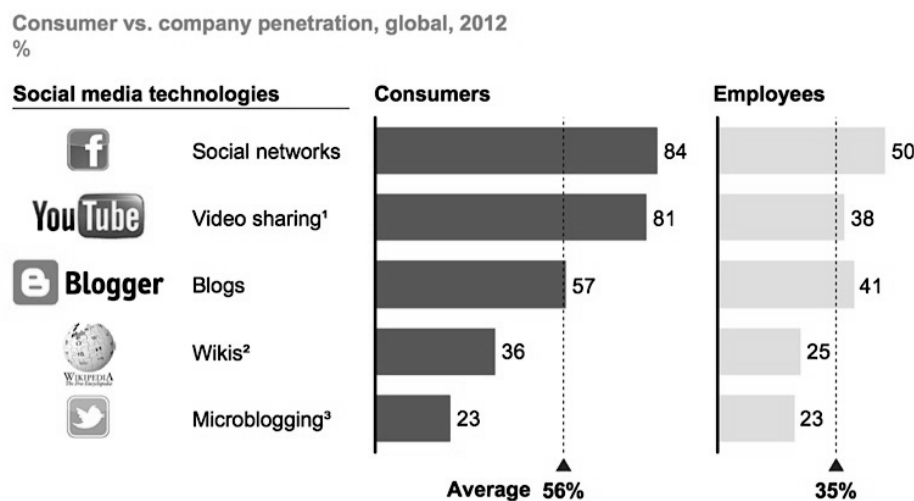
Source: McKinsey Global Institute, (2012), p.25

To compete in the market arena, many companies have tried to use a high number of social media platforms, while others have decided just to focus on one medium, but neither of the two strategies is optimal. Be present on multiple channels allows the company to reach more users, but interact with them is expensive and time consuming and the communication through many platforms could be not effective in all of them. From the opposite prospective, just to concentrate on one social media decreases considerably the number of potential users reached, but allows companies to pay attention to messages delivered and conversations entertained.

Hence, firms should find the right balance between reach (number of potential customers in the network) and richness (the contents that the company is able to communicate), paying attention to be present and active where the target segment is.

In addition, it is not just the number of social media used that is decisive, but instead the "integration is the key" for the success (Kaplan, A. M., & Haenlein, M., 2010, p.65). After having chosen in which websites to compete by considering the "diversity across the types of social media" (Smith, A. N., Fischer, E., & Yongjian, C., 2012, p.102) and each potentiality, companies must integrate the communication plan among the different platforms and be coherent with the firms' values and other offline communications.

It is generally acknowledged that social media can offer great opportunities to companies, but it is true that not everyone can exploit the same value. A McKinsey Global Institute research highlighted this topic by illustrating how the **value creation** differ across industries (McKinsey Global Institute 2012). The following image summarizes the potential value in the y-axis, the ease of capturing that value in the x-axis and the market size as the sphere dimension (Figure 6). According to this research the industry with the higher potential value is the education, while the software and internet's value could be most easily captured, but at the end, once a firm should consider where to compete, it must also the relative size of GDP contribution and choose the best trade-off between the three variables.

Figure 6: Potential value and ease of capture vary across sectors
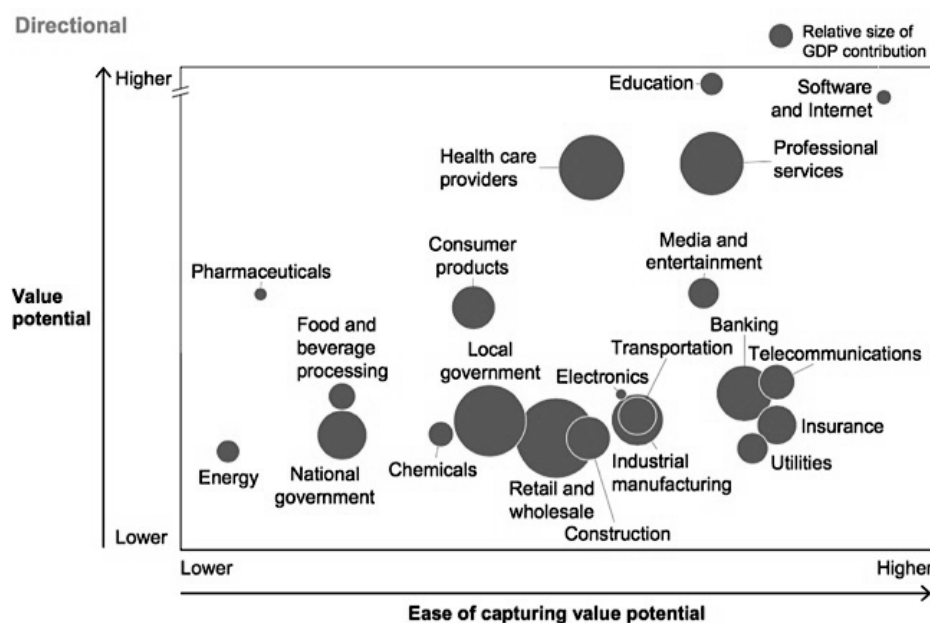
Source: McKinsey Global Institute (2012) p.22

The potential value that a company could obtain using social technologies depends by the fundamental characteristics of the industry it belongs, and the authors of the research discovered that companies possessing one of the following characteristics experienced higher returns using new technologies:

- have "a high percentage of knowledge workers",
- be heavy relied "on brand recognition and consumer perception",
- have the "need to maintain a strong reputation to build credibility",
- use "a digital distribution method for products or services",
- or offer "experiential or inspirational product" (p.21).

From the opposite side, the ability to capture that value depends on the company's capability to transform the organization and the culture to take advantage of this change. The McKinsey Global Institute research (2012) suggests that organizations with externally oriented and innovative cultures or the ones with internal policies that allow a free information flow, have found it easier to capture value.

The literature stated that "those who make the effort" to compete in social media arena "are often richly rewarded, both on average and on the level of individual companies" (Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., 2012, p.14) and later the research is going deeper in the economical and financial consequence of being social.

1.8. THE IMPACT ON THE PERFORMANCE

The technological improvement has created new opportunities, but up to this point, the research was just focused on presenting **the determinants of the performance**. In the next pages, the research is going to study how the product quality, the online reviews and the social attitude have effect on the performance. What emerged from the literature is that these three factors affect the company's results, but they do it in different ways.

Considering that consumers have specific needs and requests, the more a company is able to meet these desires, finding the right mix of intrinsic and extrinsic features, the more it will be able to attract and retain consumers. Therefore, product quality attributes are used by many firms as a differentiator factor to defeat the competition and firms that enhance quality attributes are able to experiment higher sales, while the effect on the costs is ambiguous.

Given the high amount of varieties available on the market and considering that the quality is difficult to access before the purchase and even after the consumption, online reviews and recommendations have become one of the main information sources of customers. Indeed, the system of reviews based on rating provided by peers currently helps customers to reduce information asymmetries and choose among different products. Doing so reviews with higher rating indirectly boost sales of companies.

From a different point of view, acting in the social media arena can provide many benefits to companies: participating can increase brand awareness, facilitate the recruiting process, inspire product development, reinforce customer satisfaction and last, but not least stimulate sales.

In the following paragraphs, the research is going to analyse deeper how each determinant has effect on the performance.

1.9. THE QUALITY IMPACT

The quality is an intricate concept, there are many product features, both internal and external, that a company could exploit to differentiate its value proposition and the literature does not provide a unique definition. Recalling the positive and negative connotation of quality proposed by Juran J. M. and Godfrey A. B. (1999), enhancing the products attributes is a complex activity and companies can experiment both advantages and disadvantages. Thus, the impact on the company performance is not as simple as many people could think.

According to the positive connotation, offering products with superior features, able to satisfy specific customers' needs, can allow companies to attract new customers and **increase the sales**. The impact on the income can be mainly explained by two different causes: the higher volume sold or the higher price and the later could be achieved exploiting higher customers' willingness to pay. At the same time, the product differentiation is just possible through specific investments, "hence usually involves increases in costs" (Juran, J., & Godfrey, A. B., 1999, p.26).

The negative connotation, instead, highlights how companies can take advantage by investing in the product quality to defeat mistakes sparing future costs of customers' complaints and of work redoing, thus "higher quality usually costs less" (p.27). This second connotation could appear inconsistent with the previous one because it seems to create ambiguity on the effect of costs, but the two connotations are related to different companies' purposes and have different effects on the performances.

Traditionally the literature divides the costs coming from the negative connotation of quality into four categories: prevention, appraisal, internal and external failure (Nagar, V., & Rajan, M. V., 2001). Prevention costs are those "expenditures, such as equipment maintenance and design engineering" that allow companies to prevent "production of defective goods" and together with appraisal expenditures, whose purpose is to maintain the quality level stable by making formal tests, they represent the conformance quality costs

(p.497). Internal and external failure costs, instead, are "collectively called nonconformance costs" and they "reflect the costs of not meeting quality standards": internally by redoing the work previously done to correct errors or externally such as product replacements or components substitutions (p.497). Nagar V. and Rajan M. V. demonstrated that "both financial quality measures, such as external product failure costs, and nonfinancial quality measures, such as defect rates and on-time deliveries, are significantly associated with future sales" (p.512). Doing so, in some way, they created a *trait d'union* between the previous two quality's connotations and they highlighted that as the quality can attract new consumers, in the same way the variances from conformance to specification can distance clients to reiterate the purchase.

By making new investments the company can improve its performance and the Thatcher M. E. and Oliver J. R.'s work provided similar results (2001). Many authors studied the impact of the information technology investment on the economic performances, trying to demonstrate the existence of a positive relationship, but they instead obtained contradictory results. The fact that some studies found significant contributions while others either no contribution at all or negative contributions is called "IT productivity paradox" (Thatcher, M. E., & Oliver, J. R., 2001, p.18). To avoid this impasse, Thatcher M. E. and Oliver J. R. suggested to analyse previous results differentiating among the goals of increasing production efficiency, improving product quality and increasing productivity.

Production efficiency improvement happens when companies optimise the resources employed during the production process, thus minimizing the inputs used to obtain a given output. Through the information technology, firms can also achieve quality improvement by extending the range of products, offering innovative goods or improving pre-existing ones. Last, but not least the productivity improvement is the result of the ability to convert the value of inputs in high valuable outputs.

The authors demonstrated that "improvements in economic performance are realized by increasing the efficiency of production" and "by improving the quality of the products" (p.18). More in detail, improving the production efficiency has positive **impact on profits**, while reducing fixed overhead costs affects in the firm productivity. Furthermore, reducing the unit cost of manufacturing products increases the production efficiency, encourages "the firm to offer a better quality product to consumers" and allows them "to charge a higher price" (p.36). Together the quality improvement and the change in price affect the demand for good and increase profits.

Summarizing the previous readings, it is visible that many authors analysed the effect of quality on the performance and there is evidence that investments in quality have impact on sales and costs, while investing in information technology improves firms' profits.

1.10. THE ONLINE REVIEWS IMPACT

The number and the range of product available in the market have expanded and companies, to defeat the competition, have extended their offer to address specific consumers' tastes. At the same time, in the era of connectivity, also the information availability has proliferated and the literature has started to define the electronic word-of-mouth as "word of mouse", because the importance of the use of computer devices.

Actually, people have been present at the "explosion in the number, range, completeness, and generally availability of online reviews" (Clemons, E. K., Gao, G. G., & Hitt, L. M., 2006, p.1). This phenomenon was possible thanks to the technological development that has provided consumers with online platforms and has given them the possibility to exchange opinions and experiences.

Users' recommendations are "increasingly becoming an important source of information to consumers in their search, evaluation, and choice of products" (Hu, N., Koh, N. S., & Reddy, S. K., 2014, p.42) and everyone knows that in internet they can find what they are looking for. Effectively, there are social media platforms for every category: books (Amazon.com), tourism and restaurants (Tripadvisor), cameras (www.dpreview.com), app (Google Play, App Store), movies and video game (Metacritic), questions (Yahoo Answer), beer (beerhunter.com, ratebeer.com) and many others.

According to Clemons E. K. et al. (2006), there is a "relationship between information availability and product proliferation", even if this has not been enough studied (p.1). The majority of academic papers available on that topic just describes the word-of-mouth phenomenon, but there is also a growing interest in analysing the **effect of online reviews on sales**.

The nature of the relationship among word-of-mouth and sales is not univocal, according to Chevalier J. and Mayzlin D. (2006), some authors used reviews as a "driver of sales", highlighting a causal relationship among them, while other authors used reviews, for forecasting purposes, as "an early measure of a products success" (p.5)

Dellarocas C. et al. (2007), following the second tendency, studied the introduction of online reviews in forecasting entertainment good sales. Starting from the believing that online

reviews are a proxy of customers' word-of-mouth, they discovered that its introduction increases the forecasting accuracy. According to the authors, online reviews affect future sales in three different ways: first, the more the customers discuss a product the higher will be the product awareness (volume of rating), than "positive opinions will encourage people to adopt a specific product where-as negative one will discourage them" (valence) and, last but not least, "opinions spread quickly within communities, but slowly across them" (dispersion) (p.27).

Many previous studies explored the impact of the characteristics of online WOM on product sales and even if there are some controversial a majority of authors agreed that "the valence of WOM affects consumers' attitudes toward a product, while the volume of WOM affects consumers' awareness of a product, both of which affect consumers purchasing behaviour" (Shao, K., 2012, p. 32)

However, different online reviews platforms have different mode of operation, some of them provide ratings on the general quality and on the product attributes, while the others offer qualitative information in addition to quantitative ones. Numerical ratings are easier to analyse, but sometimes they do not offer enough information, while, from an opposite prospective, qualitative comment are fully informative, but they are time consuming and can be noisy. Usually researchers concentrate on "quantitative reviews characteristics such as valence, variance in ratings and volume of reviews", but "several researchers have acknowledged the importance of capturing the sentiments expressed in product reviews" (Hu, N., Koh, N. S., & Reddy, S. K., 2014, p.42). While numeric ratings use standardized scale, sentiments are not codified, so more difficult to pinpoint. In the comments, customers provide their feelings in addition to their experience, and the sentiments could be classified as positive, neutral or negative.

For dealing with the growing number of reviews and the high amount of information contained in the comments, Hu N. et al. (2014) created their own text data-mining instrument through which they were able to explain the **relationship among qualitative, quantitative ratings and sales**. They discovered that "ratings and sentiments may have different proximities to the final choice (sales)" (p.43). Indeed, the quantitative rating can provide to consumers a way to screen potential items among a high variety of products, while qualitative characteristics can be used to evaluate deeper the limited set and make the final choice. Therefore, "ratings and sentiments interact with each other in influencing sales" (p.43). More precisely, authors discovered that "the impact of numerical ratings on sales" is "mostly

indirect, through sentiments", while "impact of sentiments on sales rank is mostly direct" (p.47).

Other authors studied the effect of eWOM on the performances applying these theories to different industries: craft beer (Clemons, E. K., Gao, G. G., & Hitt, L. M., 2006), book (Chevalier, J. A., & Mayzlin, D., 2006), online retailer (Jamil, R. A., & Hasnu, S. A. F., 2013), restaurants (Luca, M., 2011), video game (Zhu, F., & Zhang, X., 2010), tourism and restaurants (Jeacle, I., & Carter, C., 2011), and each research presents unique and interesting results.

Clemons E. K. et al. (2006) discovered that in the brewery industry mean and standard deviation of ratings have a positive and significant relationship with sales growth, while number of ratings not. This result is coherent with the Hotelling model and authors concluded highlighting that offering differentiated beers, able to meet the needs of a specific niche market, is better than following a mass-production strategy with products able to meet every tastes, but that none would choose.

A different research was made by Chevalier J. and Mayzlin D. (2006) and, comparing the sales of a given book across two booksellers (Amazon.com and BarnesandNoble.com), they were able to demonstrate that "customer word-of-mouth has a causal impact on consumer purchasing behaviour" (p.23).

Jamil R. A. and Hasnu S. A. F. (2013), instead, analysing online characteristics collected from Epinions.com, found that reviews elaborateness, user's reputation and expertise are positively related to information usefulness, while the use of real photo is not significant in influencing the purchasing decision. Another important result is that the reviews valence shows an inverted U shaped relationship and this means that moderate reviews are perceived as more useful than extreme reviews (1 or 5 rating).

Changing again sector, Zhu F. and Zhang X. (2010) studied "the impact of online consumer reviews on product sales" in the video game industry and they discovered that the effect "depends on product and consumer characteristics" (p.144).

Also Luca M. (2011) studied this phenomenon, but he chose to analyse the effect of Yelp's reviews on the independent restaurant demand. He was able to demonstrate that "Yelp affects demand" (p.4) and "a one-star increase" in ratings "leads to 5-9 percent increase in revenues" (p.2).

Nieto J. et al. (2014) discovered, instead, that "customer ratings and the number of reviews positively" influence the "three performance measures" that they decided to analyse: establishment owner's satisfaction, profitability and establishment owner's market

perceptions (p.119). Furthermore, they discovered that "both price and advertising expenditures seem to influence business performance not just directly but also indirectly, through the number of reviews" (p.120).

Changing prospective, other authors decided to concentrate themselves on the effect of reviews manipulations on sales, first defining this practice and then studying the effect on sales. According to Hu N. et al. (2012), the reviews manipulation is a reality and online recommendations can be used as a free riding instrument. Indeed, rival companies can decide to manipulate ratings to depress competitors' evaluations or to boost their own, consequently influencing sales. Although these two negative behaviours, "the manipulation of ratings alone is not effective in influencing sales", because consumers are able to discover inconsistency and identify the presence of manipulations (Hu, N., Bose, I., Koh, N. S., & Liu, L. 2012, p.683). However, the manipulations, that are created using a "writing style that reflects the background of an individual", can be difficult to be discovered and thus they are able to "influence a consumer's purchase decision" (p.683). The only instrument, that consumers can use to protect themselves from slanted reviews and from the risk of making wrong purchasing decisions, is their instinct and they should follow it in deciding which reviews to believe.

To conclude, even if the previously reported papers applied the same theories on different industries, they all arrived to the same conclusion: online reviews have effects on the purchasing decisions and therefore on companies' sales.

1.11. THE SOCIAL ATTITUDE IMPACT

In recent years, social media has spread worldwide becoming very popular for social networking and content sharing among both private users and companies. Considering that "firms are increasingly using social media instruments" (Kirtiş, A. K., & Karahan, F., 2011, p.264) and in one year, from 2009 to 2010, the number of likes grew of +115% and the number of followers has more than doubled, it is generally acknowledged that it is worth to deeper understand the phenomenon.

Given the large public interest about the topic and the perceived big opportunities related to it, the literature about social media has exponentially increased and recently social media have been successfully exploited in new study fields.

For example, few authors used data coming from social media to predict the election results. Williams C. and Gulati G. (2008) used the Facebook's supporters available in the politicians' pages to forecast the share of voters for the next U.S.A Presidential Primaries (Williams, C., & Gulati, G., 2008), while Tumasjan A. et al. (2010) analysed data coming from Twitter mentions to predict in 2009 German federal election. In both cases, the outcomes were in line with the election polls, but contrary from it the web survey with social media was less expensive.

Another interesting example came from the use of Google Trends data in the prediction of present economic trends such as claims for unemployment, automobile demand and vacation destinations (Choi, H., & Varian, H., 2011). These results clearly highlight as the opportunities offered by social media are wider than people could thought.

Even if the number of readings has proliferated the majority of authors were just focused on describing theoretically the social media's advantages and disadvantages rather than studying in concreate the impact of social media on the company performance. Even thought there is universal agreement in the positive consequences related to the social media usage such as increase of brand awareness, boost in sales, improvement in customer satisfaction, access to new information sources and the possibility to monitor the market's trends, in the literature "the content that is generated from these websites remains largely untapped" (Asur, S., & Huberman, B., 2010, p.1).

Considering that just a small portion of authors has ever talked about profitability, an even smaller percentage of them has analyzed the effect on the performance.

It is generally acknowledged that "there is a **relation between use of social media and increase in sales**" (Bhanot, S., , p.12) because more visibility to potential consumers means higher chance to increase sales. In addition, according to Bhanot S. there is evidence that to invest early in the social media usage can generate higher returns and improve future opportunities.

Also Yu S. and Kak S. (2012) tested the relationship between social media and the corporate performance and they applied their studies to the use of social media in predicting the movie box-office revenues. According to the authors the data suggested that "there is strong correlation" between sales and "number of related blog posts", but it is difficult to predict the future just using the current blog mentions (Yu, S., & Kak, S., 2012, p.4). Even though there is correlation, just few researchers are active in the field of **predicting of sales** using social media. This is mainly due because there could be "delay between increase of blog mentions and increase in sales", making more uncertain the prediction, and because they have no access to accurate daily sales data. Other authors preferred to use social media mentions to study

actual product adoption and forecast potential one, exploiting the fact that extremely satisfied or dissatisfied consumers are more likely to express their feelings and evaluation.

Continuing with the quantitative analysis excursus, given that the literature has started to consider social media as a channel information source, the recent corporate finance studies have demonstrated a positive relationship between the networking and the **firm value**. Indeed, the disclosure level about corporate information is associated with the information asymmetry and the public disclosure of corporate information can have impact in the stock market value.

Some authors tried to verify the applicability of social media in the corporate finance study testing the social media effect on the performance.

Oh J. (2015) did it by measuring the effect of twitter mentions containing firm-specific information on the firms' abnormal returns, he arrived to the conclusion that "the firm's social media activity affects the performance in the market" (p.513). Moving from a short term prospective to a longer one, these public communications are just events in the life of a company, therefore they collaborate in the accumulated brand reputation and they have impact more in general in the long-term firm value.

Further contribution to the demonstration of the relationship between social media and business performance came from Paniagua J. and Sapena J. (2014). In their research, they considered if there was any link between the **average stock price** and respectively the number of Facebook likes and the Twitter followers. They found that both social media platforms considered showed a U shape and Facebook had a steeper curve than Twitter.

To be more precise, they "found a positive influence of social media on business performance, but only after a critical threshold of followers is reached" (Paniagua, J., & Sapena, J., 2014, p.720).

After this brief excursus, it is clear that the social media application had widen to new and unexpected study fields, but until now **a systematic analysis** on the social media impact on the overall company performance is **missing** in the literature.

Mattern F. et al. (2012) tried to create a conjunction between social media and economic performance and they did it analyzing how social media leverage drives business performance. Even if their research was focused on providing just concrete examples of how to investments in money, time and effort correspond benefits along the entire value chain, this could be seen as a first step for further systematic analysis.

Actually, the literature is more interested in studying a way to measure the **social media's profitability** to provide managers proper instruments to improve their decision-making process and correctly allocate resources.

According to Kaske F. et al. (2012) managers would invest in social media if "their firm's presence in social media would add value to the firm" (p.3898). Given that every investment implementation is based on a logic of economic convenience, managers usually evaluate in advance the long-term benefits coming from a specific project and realize just projects whose benefits overcome the costs.

According to the same authors, what already said is valid for social media investments and "firms will adopt more social media initiatives if they provide a sufficient return on investment" (p.3898).

The Return on Marketing Investment formula (ROI) is the most famous metric to calculate the return on investment of marketing activities and it is based on the following formula

$$ROI = \frac{\Delta CE - E}{E}$$

where the difference between the change in customer equity (ΔCE) and the marketing expenditures (E) are divided over marketing expenditures (Rust, R. T., Lemon, K. N. & Zeithaml, V. A., 2004, p.115). The previous formula already incorporates the discount of future cash flow, indeed the change in customer equity is a measure of customer lifetime value because it starts from the assumption that "customers are important intangible assets of a firm that should be valued and managed" (Gupta, S., & Lehmann, D. R., 2003, p.9).

Instead, the change in customer equity formula sums all the present and future customer lifetime values (CLV) that is going to be collected by the company within a 'T' year period and discount them using a 'd' discount factor. Furthermore, to calculate the grow in the value of customer lifetime value it is fundamental to make the difference between the value calculated with the number of customers after the investment (J) and the same value before the investment implementation (l).

$$\Delta CE = \Sigma_{t=1}^{T} \frac{\left(CLV_{j,t}^{avg} \times J_t\right) - \left(CLV_{l,t}^{avg} \times l_t\right)}{(1 + d)^t}$$

What emerges from the literature previously provided is that social media application has spread on different study fields going beyond the strategic and the marketing studied it has been used also in the stock market forecast. Doing so, the literature demonstrates that the social media activities increase both sales, the firm value and the average stock prices, but at

the same time it is expected that the social media activities have impact on the overall costs. Even if new aspects have been discovered thanks to modern researches a lot of things should still be understood and these are the considerations that inspire this specific research.

2 BE GOOD OR BE SOCIAL?

2.1. A NEW PATH OF ANALYSIS

What emerges from the literary excursus is clear, the majority of authors were more focused on studying the quality effects on the performance, rather than analysing in concrete the real consequences of the use of social media platforms in the daily companies' activities. This research inserts itself in the already existing discussion about the social media and the quality opportunities, but at the same time it wants to suggest a **new path of analysis**. By statistically investigating the consequences of being social on the performance, this research drops the barriers between two study fields: one more qualitative (the social media strategy) and one more quantitative (the performance measurement).

In concrete the **purpose** of this analysis is to test which are the determinants that have a positive association with the performances of the companies that belong to a specific Italian industry. The determinants chosen could be classified into two clusters: the quality and the social attitude (Figure 7).

Given that the quality is a relative concept, the research decides to analyse three different groups of measures of **product quality**: the product offering which came directly from the strategic companies' choices, the customers' quality perception which represents a source of subjective quality evaluation and the expert advisors' opinion, which is the most objective evaluation available.

From an opposite prospective the **social media attitude** could be expressed as the companies' sensibility with respect the internet arena that could be manifested by the company through the social media presence, the participation and the relationships with customers.

Figure 7: "Be good" and "be social" cluster division

PRODUCT QUALITY

- *the product offering*

- *the customers' quality perception*

- *the expert advisors' opinion*

SOCIAL ATTITUDE

- *the social attitude*
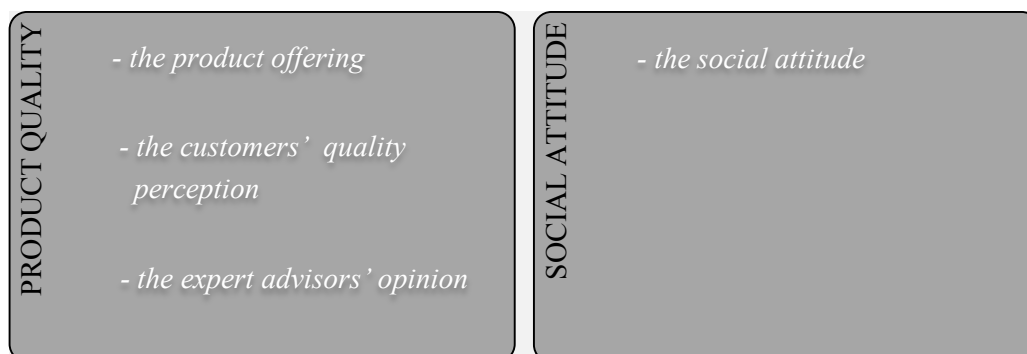
It is clear that both the 'be good' or the 'be social' dimensions, which are connected respectively to the product quality and the social media attitude, are independents one from each other and the research has previously considered any kind of overlapping to maintain the two cluster distinction. The main issue at this point was to consider or not the consumers' quality evaluation expressed through the review platforms as a hybrid element because both related to the quality perception and the social media usage. The dilemma was solved considering the deep nature of every variable, detaching them from the instrument used, therefore the primary purpose of the consumers' quality perception variable is to share their experience about the products and the online review platforms are just instruments. The same cluster division is contained in the title to clearly underline the analysis path that the research has followed.

2.2. THE HYPOTESIS

The research aims to study if the quality and social attitude have a positive association with the corporate performances and to understand if it is more important for a brewery firm to "be good or be social" in order to provide companies some useful guidelines for their long term strategy. More in detail the research is willing to test the two main hypothesis:

H_A – *The quality has a positive association with the company performance.*

H_B – *The social attitude has a positive association with the company performance.*

and the two later hypothesis could be explicated through different sub-hypothesis and above it is available a detail of the hypothesis about the three measures of product quality: the product offering, the customers' quality perception and the expert advisors' opinion, and other hypothesis about the social attitude.

As demonstrated by the literature, the product proliferation is a reality and to defeat the competition companies must carefully pay attention at many variables about their **product offering**. For instance, the product positioning should meet the specific expectations of their customers' target, the product extension should be balanced considering both the market desires and the production capacity, while the degree of product differentiation they should combine at the same time the consumers' satisfaction need and the risk of product

cannibalization. Therefore, the research hypothesizes to find a positive association between the following three variables and the performance:

H_{A1} – *The average product positioning has a positive association with the company performance.*

H_{A2} – *The product range has a positive association with the company performance.*

H_{A3} – *The product differentiation has a positive association with the company performance.*

It is generally acknowledged that customers have become more and more powerful and through their opinions they could be very influential in affecting peers' purchasing decisions. The average **customers' reviews** valence could be seen as a proxy of the perceived quality. Therefore, it is expected to find a positive association between the average reviews of a specific brewing company and its performance.

In addition, the research theorized there is a positive association between the count of ratings and the performance because higher number of reviews gives reassurance to consumers about the product itself and the trustworthiness of information. Indeed, the volume of ratings affects the consumers' awareness of the product and stimulate their purchasing decision towards it. The research thus hypothesizes:

H_{A4} – *The average ratings has a positive association with the company performance.*

H_{A5} – *The count of ratings provides additional information to customers and has a positive association with the company performance.*

Given that the quality attributes are difficult to access and their perception is usually subjective and influenced by many external factors, people tries to obtain objectiveness in the product evaluation and they do it by using a system of **expert advisors**. The judges with experience in a specific product quality provide a truthful quality evaluation and, by reducing information asymmetry, they stimulate the interest towards products judged. Consequently, the research hypothesizes:

H $_{A6}$ – The firm and the products' mentions in specific sectorial books have a positive association with the company performance

H $_{A7}$ – Being rewarded by experienced judges on specific product characteristic during a competition has a a positive association with the company performance

H $_{A8}$ – Being rewarded by experienced judges on the overall product quality during a competition has a positive association with the company performance

In addition, the literature has provided evidence that also the **social attitude** matters. Being present in the social media platforms can guarantee to companies an increase of brand awareness, but to obtain the most from these instruments companies should participate actively. Indeed, social media is not just about being present on the main social media platforms such as Facebook, Twitter, Instagram and YouTube, but it is also a matter of participation.

By sharing contents, companies can stimulate the customers' attention, entertain the community and involve actual and future clients. Given that people can choose which brand to follow, the number of followers of a company can be the result of brand awareness united with the quality of contents. Indeed, to follow a specific brand profile is not just a matter of brand loyalty, but also the result of engagement towards the contents posted which push users to follow a specific brand profile to receive the last contents updates.

Therefore, companies should become smarter and not just publicize their products, but also establish a direct communication with the crowd and stimulate the interest providing high quality contents. Just doing so companies can exploit advantages along the entire value chain with positive effects on the overall performance. Consequently, the research hypothesizes:

H $_{B1}$ – The social media presence has a positive association with the company performance.

H $_{B2}$ – The number of content shared has a positive association with the company performance.

H $_{B3}$ – The number of followers has a positive association with the company performance.

2.3. APPLIED TO THE BREWERY INDUSTRY

The industry chosen to test the previous hypothesis is the brewing one and the reasons are related to the peculiarity of this market.

The brewing industry is in continuous evolution towards the improvement and it has experienced always new trends making it an interesting case of study. Given the constant growth of global beer consumption, the number of brewery firms has spread and another peculiar characteristic of this industry is the **dichotomy** between emerging microbreweries and more consolidated industrial breweries.

Also the number of products offered has increased. Given that alcoholic beverages are not a matter of need but of desires, the emerging microbrewery are more and more proposing a new category of beer, the craft beer, addressing the specific need of whom wants something more from their drink and look for superior sensorial characteristics. Therefore, proposing craft beers made with high quality ingredients and innovative process, microbreweries are able to differentiate themselves from standardized industrial ones offering unique products. From the product differentiation derives the fact that microbreweries are also called 'craft brewery' given that they are the ones that offer craft beers.

The products' proliferation has created into people mind the need to access the quality before to buy beers and at the same time the amount of available information and the number of reviews have spread highlighting a growing interest in this specific industry.

Furthermore, because the brewing industry is **not consolidated and not static**, it is possible to access many **differences** among the members also in the use of social media.

Searching on internet, what emerged is that smaller brewery firms are usually and pay less attention on promoting their company through the web and the reader can experience lack of information. In many cases information such as corporate name and VAT identification code are missing in the company webpages, and in some cases the websites do not work or they do not have it.

In addition, it would not be surprising to say that the majority of breweries have not an integrated social media strategy and they use different names in different social media platforms without informing their clients of their existence through the company webpage or alternative links. It is not uncommon to find many Facebook pages talking about the same company and run by the same or a different subject, both internal and external from the organization. This way of running the online activities can nullify the marketing and

promotional efforts made, create confusion in the clients and make difficult the analysis of the crowd opinions.

Coexisting with them, there is also a good proportion of well-organized companies that believe in the advantages of the social media usage and have a structured marketing plan. These brewery firms are present and active in one or more social media platforms, in addition to the main company website, and they do not just use them as a vehicle of brand awareness, but they also exploit new opportunities exchanging information that goes beyond their products, communicating with clients, listening the crowd and learning from it.

To access if the social media attitude matters, it is fundamental to choose an industry that presented differences both in financial performances, in product quality and in social media usage and these are the reasons why this research is applied to this specific industry. The choice of this specific industry does not obstruct further analyses, indeed, to apply the same research to different sectors could provide important contributions also by accessing differences within results.

3 THE BEER INDUSTRY IN ITALY

3.1. THE GLOBAL BEER INDUSTRY

All over the world, the beer is one of the most favourite drink and "from 2004 to 2014, global beer production increased by about 37.26 million kilolitres (with a 24.2% increase)" (Kirin Holding, 2015). Data shows that, even with a soft contraction equal to 0.5%, in 2014 the total production "amounted to 191 million kilolitres" and its distribution was concentrated in Asia and Europe (Graph 3). According to the research, the two continents together counted about 61% of the global beer production and Asia remained the largest producing region for 6 years in a row. Even though this result, in 2014 Asia experienced a production decrease for the first time in 38 years and this was mainly due by the drop of Chinese and Thai productions.

Graph 3: Global beer production distribution
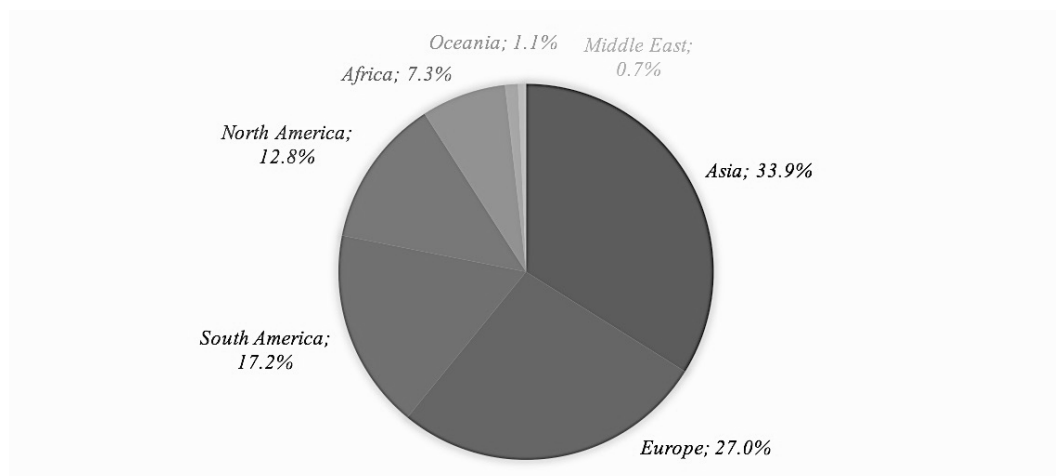
Source: own creation with data coming from Kirin Holing, (2015).

The distribution of beer consumption showed the same trend of the distribution of beer production with Asia as "the world's largest beer-consuming region" followed by Europe, South and North America (Kirin Holding, 2014). The same authors reported also the consumption of beers per country in 2013 and what emerged from the numbers is that China was the first consumer for 11 years in a row and it was followed by United States, Germany and the other emerging countries of BRIC area: Brazil, Russia and India in 4th, 5th and 15th positions respectively. Italy, in spite of its wine tradition, was in the 25th position, but although this important result it is not in the top 35th per-capita beer consumption by country.

3.2. THE ITALIAN MARKET

Assobirra, the Association of Beer and Malt Industries, whose aim is to promote a greater knowledge of beer and sustain a conscious consumption, provides every year an insight about the current Italian situation. The annual snapshot made by this association highlighted that in 2014 the Italian beer market was characterized by a total consumption of 17.7 million hectolitres, with an increase of +1.1%, and by a total production increase equal to +2%. At the same time, because of a higher amount of imports in respect to exports, the Italian trade balance was negative (Assobirra, 2014bis) (Graph 4).

Graph 4: Data synthesis of the 2014 Italian beer industry situation
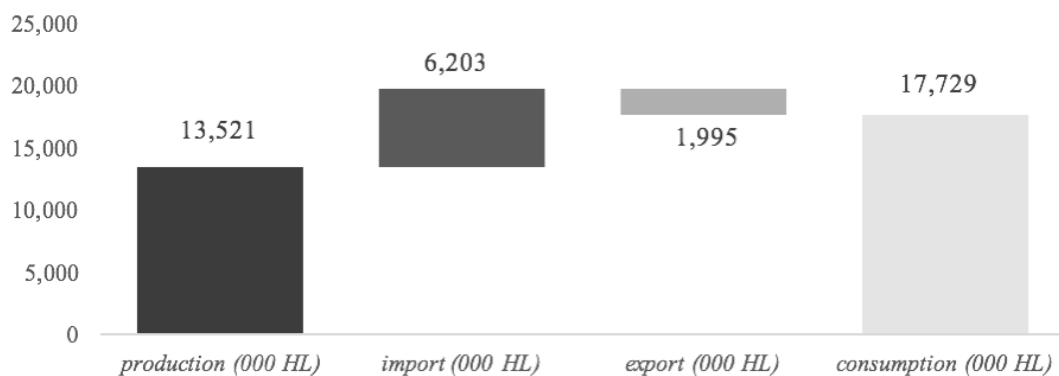
Source: own creation with data coming from Assobirra, (2014bis)

No matter these effects, the Italian consumption and production remained quite constant over the last ten years and recently the **per capita consumption** is going to return to the pre-crisis values with a 2014 per capita consumption equal to 29.2 litres (Assobirra, 2014bis) (Graph 5).

Graph 5: Per capita consumption 2008-2014 (litres/year)

Source: own creation with data coming from Assobirra, (2014bis)

The positive expectation about the beer industry are significant to explain the growing interest in this market, but the previous numbers should be analysed in a wider scenario looking to the general decrease in the Italian alcoholic beverages consumption. Indeed, in 2014 the population with more than eleven years drinking beer is the 63% and this percentage is slightly decreased if compared with the 63.9% of the population registered one year before (ISTAT, 2015).

According to the ISTAT annual report, the alcohol consumption decrease is mainly due by wine and in 2014 data observe a -1.1% decrease in the percentage of people drinking wine and -0.2% decrease of beer consumption (I numeri del vino, 2014) (Figure 8). The same organization reported that the number of Italians drinking alcohol at least one a year is gradually decreasing from 68.5% in 2009 to 63% in 2014. This phenomenon could be explained partially because different consumption habits or maybe because a change in the use of the disposable income.

Indeed, over the same period ISTAT reported a slight decrease of the percentage of occasional alcohol consumers (from 41.5% up to 41%) and a steep decrease in the percentage of daily ones (from 27% up to 22.1%), in addition the percentage of people that consume alcohol far from meals increased (from 25% to 26.9%) (ISTAT, 2015).

Furthermore, a different ISTAT research highlighted that the average Italian monthly expenses constantly decreased from 2,488€ in 2011 to 2,359€ in 2013 with a negative CAGR (2013-2011) equal to -2.6% and about the 19% of the monthly expenses is used for the food and beverage consumption (ISTAT, 2014). Therefore, it should not be surprising if the alcohol consumption in Italy is struggling.

Currently the Italian beer market is characterized by high concentration and there is a dichotomy between industrial beer-brewing companies and microbreweries. Indeed, in 2013 the eight multinational beer-brewing groups (Heineken, Birra Peroni, Carlsberg, Birra Forst, Birra Menabrea, Birra Castello, Hausbrandt, Anheuser-Busch InBev,) produced the 73.1% of total beer hectolitres produced in Italy (Assobirra, 2014bis).

In addition, it is generally acknowledged that the beer consumption is characterized by a high seasonality. Even if this product is consumed all over the year, in the summer period, when the weather in Italy is hot and people like to drink cold beverages, companies reach the highest peak in sales with almost 44.77% of total income earned from May to August (Assobirra, 2014bis) (Figure 9).

Figure 8: % of drinkers on total Italian population (once per year)
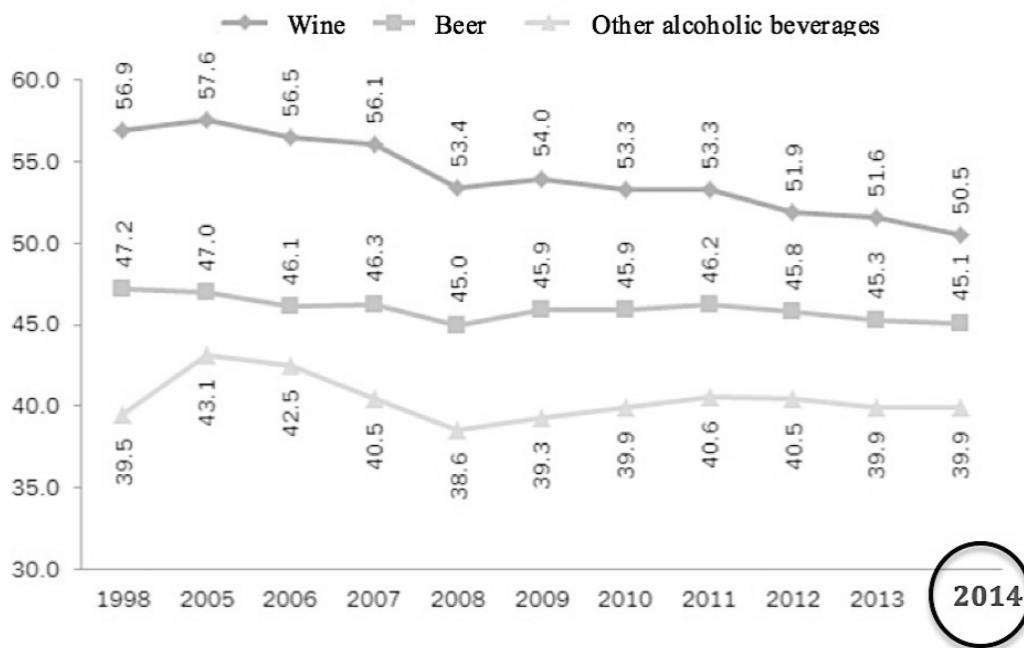
Source: data coming from I numeri del vino (2015)

Figure 9: The beer seasonality effect
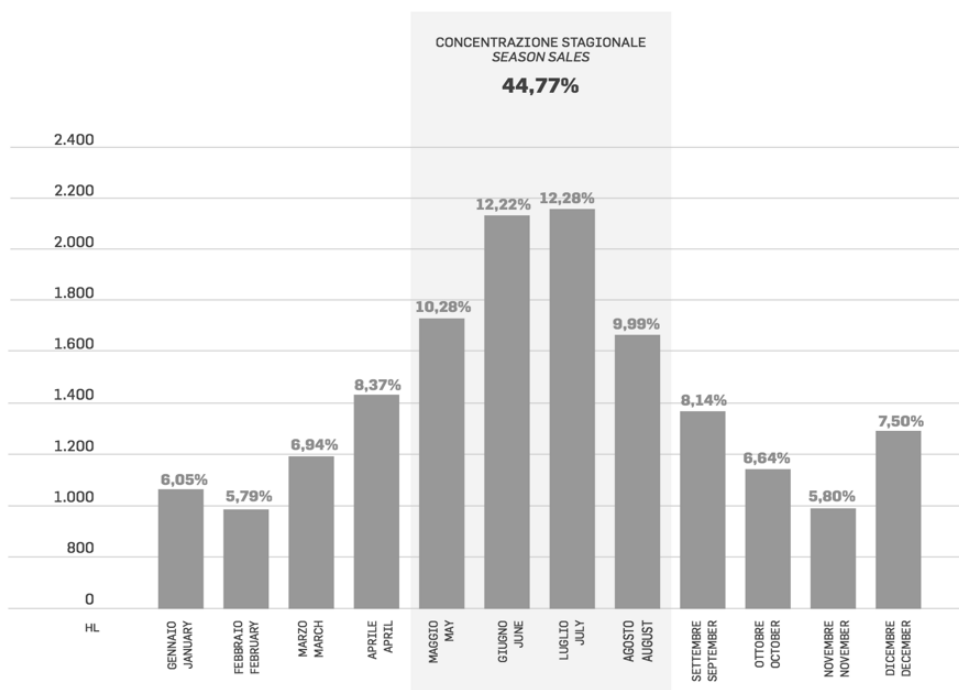
Source: Assobirra, (2014bis)

People have been present at **many important shifts** in the beer market that have completely transformed transforming the industry rules, but changes continue to occur and at the same time they force companies to adjust themselves to survive and offer new opportunities. Therefore, companies must be aware of the importance to remain update and to get in touch with the market, because just in this way they can react to present changes or to forecast future trend.

Actually data show that there has been a change in the proportion of household consumption in respect to the outside one and understanding the reasons behind this trend companies can exploit the present situation addressing specific offers to the 59.7% of the population who prefers drinking their favourite beer at home (Assobirra, 2013).

Even if recently the beer per capita consumption has remained essentially stable, people have changed their preferences shifting towards cheaper products. Indeed, while the premium market segment "dropped by over 3.5%" and the "specialty beers went down by almost 2%", this benefitted lower-priced beers such as mainstream, private labels, not alcoholic and economy beverage (Assobirra, 2013, p.11).

Another important aspect that the companies should manage is the tax burden. In fact, the Italian excise is one of the highest in Europe, three times the German one and additionally, in October 2013, "the government decided to raise excise on beer by 15% over 15 months" with a further increase scheduled for 2015 (p.24). This decision is going to hurt the industry causing a decrease in the consumption, because of the high number of product substitutes and the elasticity of demand for beer by price, which "is equal to 0.5 euro cents for consumption outside the home and to 1.2 euro cents for consumption at home" (p.24). This excise decision at the end will not just affects the brewing industry, but the entire production chain included retail distribution, bars, restaurants, agriculture and packaging industry, causing a loss of jobs and a decrease in GDP.

Companies must be aware that the proportion among male and female consumers had changed. Considering that today "6 women out of 10 drink beer, are familiar with it and appreciate it", beer-brewing firms should start to invest in this new segment (p.39).

No matter the competition and the industry transformations, in 2014 the numbers of microbreweries has grown with a CAGR (2005-2014) equal to +28.3% arriving to 443 companies while the brew pubs are 147 and have grown with a CAGR (2005-2014) equal to +11.1% (Assobirra, 2014bis, p.20).

3.3.   THE HISTORY OF BEER

Even if the majority of people does not know it, the beer is a thousand-year old product and the "brewing has been a human activity ever since the beginning of urbanization and civilization" (Meussdoerffer, F. G., 2009, p.1).

The history of this beverage is "bound up with the beginning of agriculture" (Gretton, J. F., 1929, p.356) and it dates back to 4000 B.C. in Mesopotamia, when the Sumerians discovered it macerating water and barley bread. At the time the product was rough, completely different from the beverage it is possible to appreciate today, and it was assimilated to a food rather than a drink because its nutritional benefits. The most common Sumerian name of beer was "*ser-bar-bi-sag*" which could be translated as the beer that helps you seen things more clearly and, because of the high alcohol content, people used to drink it slowly.

The beer was known also by Babylonians and they developed the modern brewing production process, even if it was more simple and rough than the actual one.

Egyptians discovered the beer just in 3100 B.C., they obtained the knowledge from the Babylonians and they call it *henqet*. At that time the beer "was not only used as a beverage", but it was part in sacrifice rituals (Gretton, J. F., 1929, p.357) and historians discovered that King Ramses III offered 466,303 jugs of beer for sacrificial reasons. In the ancient Egypt, "all ranks of society, male and female", drank beer and it was the "drink of choice for both festive and ordinary dining occasions" (Poelmans, E., & Swinnen, J. F. M., 2011a, p.4). The beer was common in many practices also as a "therapeutic purposes" (Rosso, A. M., 2012, p.251). Egyptians transmitted their knowledge to the Greeks and in their turn they taught the Romans the art of brewing.

Greek people had "prejudice against the beer" consumption because they associated it with uncultivated barbarians, and these prejudices were absorbed by Romans (Meussdoerffer, F. G., 2009, p.8). The beer was not appreciated by all Romans, even though this beverage was popular in rural environment, in Rome people continued to prefer the wine. Also northern population has a long tradition of brewing, so when Romans invaded the Britain, they learned how to improve the beer quality and they started to appreciate it.

After the Roman Empire collapse, many troubles spread all over Europe. During the Middle Ages "the church acquired a predominant position" and monks were not just able to conserve the main knowledge developed during Roman times, included brewing, but they also improved the beer production and create new beer varieties (p.9). During the Middle Ages the beer was the product most consumed from North to South Europe. In the North the alcoholic

beverage was consumed by all social classes as the main contributor to people calorie needs, while in the South, even if the favourite beverage remained the wine, common people that could not afford it drunk beer because made with boiled water it was healthier in respect to not boiled one.

The brewing process has remained quite constant all over centuries, but there are other fundamental steps in the beer evolution that should be highlighted. The hopped beer was discovered thanks to monks, which introduced hops instead *gruit* mixture, but the ones that were able to perfectly balance its use to preserve longer the product were Germans in the XIII century. Until that moment, in Europe the brewing process was a domestic activity and beer was consumed directly by who had produced them, but in the XIV century, after the born of hopped beer with longer conservation time, the process gradually changed from a family-oriented activity to an artisan one, with pubs and monasteries brewing their own beer for mass consumption.

In addition, it is worth to remember the *"Reinheitsgebot"* regulation (literally the "purity law") instituted in 1516 in Bavaria, maybe the oldest food regulation still in use today (Poelmans, E., & Swinnen, J. F., 2011a, p.5). Originally, the law allowed companies to use in their beer production process just barley, hops and water, but later, with the yeast discover by Louis Pasteur in 1857, the law started to permit also the use of yeast to prevent the souring of beer. "The first step towards scientific brewing was the adaptation of measuring devices to the specific needs of the brewers" (Meussdoerffer, F. G., 2009, p.31).

During Early Modern Times, when the Europeans discovered the New World they brought beer with them, thinking that water was polluted, and they "introduced beer brewing methods in the territories they conquered" even if natives were already producing a sort of beer (Poelmans, E., & Swinnen, J. F., 2011b).

The Industrial Revolution allowed people to improve the brewing production process and, through the introduction of steam engine and the use of the thermometer and hydrometer, brew-masters increased its efficiency. Indeed, the hydrometer introduction transformed the way how beers were brewed, allowing brewers to calculate the yield coming from different malts. To avoid wastes and optimize the production, they usually chose the malt with lower fermentable material, the pale, and they added small quantities of coloured malt to achieve the colour desired.

3.4. THE MODERN HISTORY IN ITALY

Italy has a thousand-year old **tradition of beer**, even if the quantity produced and consumed has always been low. From 1800 an organized beer industry emerged, mainly supported by German beer-brewing companies (e.g Dreher, Wührer, Paskowski, Metzger, Von Wünster), that decided to expand their boundaries producing and selling alcoholic beverages in Italy, and by some emerging Italian companies that decided to differentiate their range of products from ice to a complementary good such as beer (e.g Peroni, Menabrea, Forst, Fabbrica di Birra e Ghiaccio Moretti) (Assobeer, 2014, p.37).

In 1890, in the peak of Italian beer production, there were 140 factories producing 161,000 hectolitres[2].

The World War I had a negative impact on the beer production because the difficulty to supply barley when conflicts blew up all over the Europe, but when the war ended the consumption rapidly returned to previous normal values and in 1910 just 58 factories were able to produce 1,157,024 hectolitres.

In 1925, the production continued to boost reaching the value of 1,569,000 hectolitres and the same happened for the per capita consumption, which achieved the record of 3.5 litres. This consumption was very low if compared with the 150 litres per capita of wine, but vintners started to fear the beer industry boom and were able to force the Italian Government to approve the *"legge Marescalchi"*. This law, behind the purpose to protect the agriculture, hided the will to obstruct the beer expansion forcing beer-brewery firms to introduce 15% of rice in the ingredients and worsening the final beer quality.

In addition, the law aggravated the tax burned and complicated the beer commercialization, causing an immediate beer consumption drop both because of the worse beer taste and because the higher price per bottle which made this product not affordable by their target of consumers, the masses with low wages. Researches report that in 1930 the beer production was 672,325 hectolitres, concentrated in just 45 factories because the others were forced to close, and the beer consumption per capita drop to 1.6 litres.

The beer consumption tried to recovery in 1940, but this try was frustrated by the World War II and the difficulty to obtain provisions of ingredients. It was just in 1950, that the beer production and consumption were able to reach the pre-war levels.

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[2] *Data available in the web page http://www.mondobirra.org/storiaitaliana.htm*

In the past decades, the growing result of that market attracted the attention of big multinational beer-brewing groups (e.g Heineken, SABMiller, Anheuser-Busch InBev, Carlsberg) and new microbreweries emerged. Today this dichotomy still exists.

Since then, always new records were achieved and the beer culture started to spread among the Italians which started to consider the beer as a noble product at the same level of wine and it was no more associated with a summer beverage, as it was before.

In spite of the positive trend experienced, the modern crisis started in 2008 has deeply affected the industry causing a consumption drop, but a new recovery is expected and the proliferation of events focused on the beer able to attract the public interest is a signal of recovery.

3.5. THE INGREDIENTS AND THE PRODUCTION PROCESS

The quality is the result of ingredients used and of the production process. Even if the "beer is a highly differentiable product" (Clemons, E. K., Gao, G. G., & Hitt, L. M., 2006, p.4-5), the product composition is quite similar among the varieties of beers. It is commonly acknowledged that the basic **ingredients of beer** are water, malt, hop and yeast, but the quality is the results of the selection of high-end ingredients with the add of unconventional ones.

More in detail for one hectolitre of beer are required 500 litres of water, 16 kg of cereals, 0.8 kg of yeast and 0.3 kg of hops (Assobirra, 2014bis). Even if the majority of people does not think about it, the water is the beer main ingredient because it represents more than 90% of the alcoholic beverage and from it the overall product quality derives. Hops, instead, is the flavouring agent used by master-brewers in all style of beer, however the amount of hops changes according to the varieties. Hops is available dried and pelleted and it could be used at the start of the process, but also added later to give additional aroma and colour to the liquid. The third ingredient is the barley is the grain that is malted as a source of starch. Starches and sugars extracted from barley create alcohol when combined with yeast. Precisely, the extraction of the sugars is obtained by soaking in water the grain, allowing it to germinate and then drying it. The last ingredient is the yeast, which is responsible for fermenting the sugars and creating alcohol. It also influences the colour and the flavour of the beer and it effects the alcohol content. Yeast could be filtered out of beer after fermenting, or could be left to add cloudiness.

The previous four ingredients are introduced subsequently in the the **brewing production process**, but in different production phases which are visible in the following figure (Figure 10).

In the malting phase, the barley is steeped in water until it germinates and it is dried before entering in the milling phase. At this point, the malted barley is grinded and the malt starches are transformed into fermentable sugars by adding hot water, the liquid here produced pass through the lauter tun, but it is just in the work kettle that the liquid is boiled and the hops are added. Than in the whirlpool tank the boiled wort is blended to remove the spent hops and the hopped wort separated in this way is cooled. After the whirlpooling and cooling phases, the liquid goes through a basic process called fermentation where the yeast is added to the hopped wort to breaks down sugars into ethyl alcohol and carbon dioxide gas. After having been fermented, the beer need to rest in a container to mature and develop flavours for few weeks up to months, and then, if it is required, the liquid is filtrated. With the filtration usually the beer develops its own taste, so the transformation is ended. At this point, it needs just to be bottled, packaged, adding the cork and the label, and delivered to the final consumers.

Figure 10: the brewing production process

Source: http://www.chromacademy.com/chromatography-and-beer.html
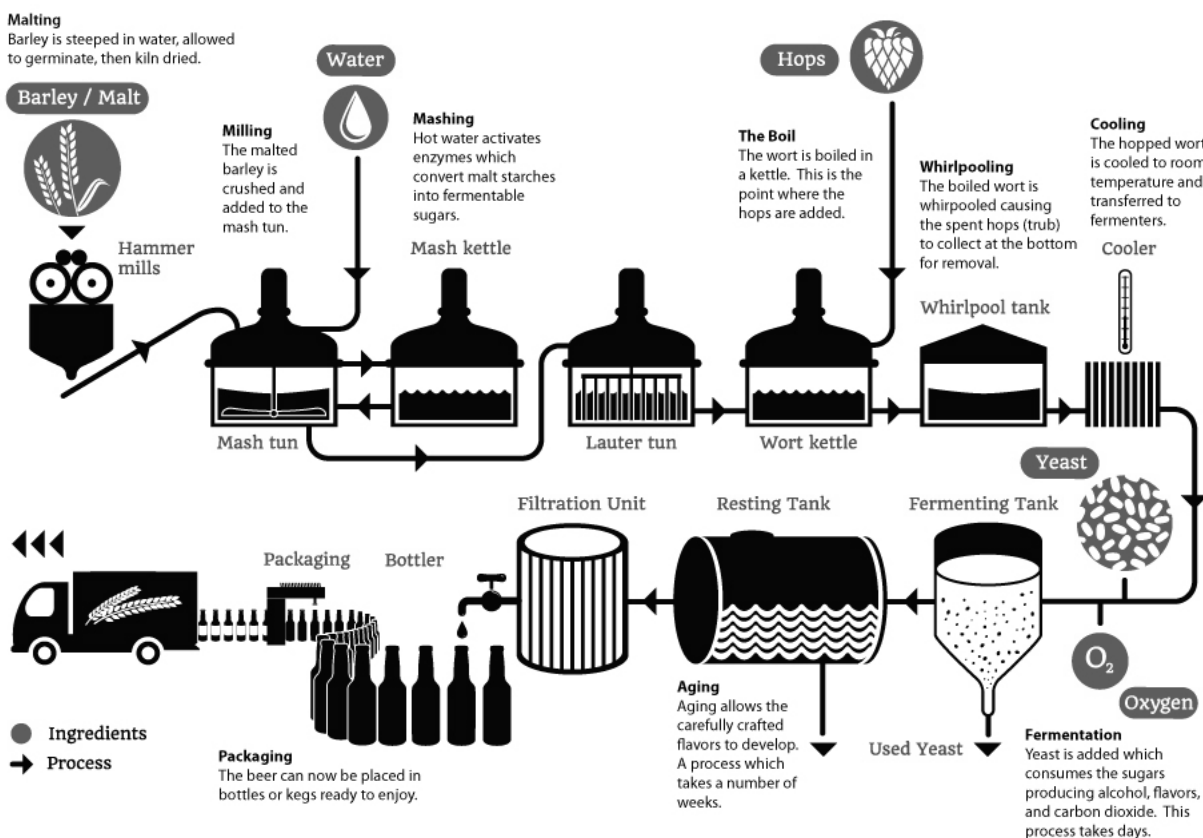
The **differences among industrial and craft beers** come from the differences in the quality of ingredients used and in the production process phases. While multinational companies use industrial brewing process and their beer composition is perfectly known by the company, craft beers are produced just by microbreweries in a small number of pieces, because of production capacity limits and less labour force, and the chemical composition can quite change given the uniqueness of the products. Furthermore, industrial beers are always pasteurized and filtered to guarantee a longer and easier conservation, but this is not true for microbreweries. Among craft beers there could be differences in the production process which is the result of master-brewers' creativity, both in ingredients and in the production, and, because it is forbidden to use preservatives, craft beers must respect a strict conservation method using the cold chain and they have smaller conservation time.

These differences of course have impact on the final product and even if industrial beers are sold in higher amount, there is a growing interest for craft beer among the beer lovers, because they appreciate their tastes and they perceive higher quality.

3.6. THE DEMAND FOR BEER

During the production process the master-brewer is free to create unique products with unique flavours and appearance just by adding other ingredients. As the literature suggests, "by controlling other factors, beers can vary in both measurable (colour, alcohol content) and hard to describe dimensions (flavour, aroma and palate)" (Clemons, E. K., Gao, G. G., & Hitt, L. M., 2006, p.4).

The Italian beer production has been rewarded worldwide for the quality of its beers and because able to offer unique tastes. The most famous beers are the ones made with unconventional products such as pumpkin (e.g. Pimpi by B.A.V), basil (e.g. Genova by La Superba), honey (e.g. Melita Birra Al Miele by La Gastaldia) or chestnut (e.g Castagnasca by Busalla), and the ones made with unconventional production process such as barley wines obtained with aging beer in *barrique* (e.g Sedicigradi by Birra del Borgo) or in a barrels of peaty Islay whiskey (e.g. Xyauyù Fumé by Baladin). Thus, it is clear that the number of types of beer, that could be created, are unlimited as unlimited are the parameters in the game.

It is commonly acknowledged that the beer is a complex product and it has multiple classification: according to style, alcohol by volume, price and size.

Usually the beer is classified by styles which, in turn, are defined according to the fermentation process: top (e.g. Mild Ale, Bitter Ale, Stout, Porter, Weizen, Blanche, Belgian

Ale, Alt just to name few), bottom (e.g. Lager, Pilsner, Bock, Doppelbock, Dunkel, Dortmunder) and spontaneous fermentation (e.g. Lambic, le Geuze le Faro e le Kriek).

According to Assobirra (2014), the Italian law (Legge 1354/1962), instead, classifies the beer using five categories based on the alcohol by volume:

- non-alcoholic beer <1.2%
- light beer 1.2%-3.5%
- normal >3.5%
- special beer >5%
- double malt >5.8%.

From a different prospective, people can choose beer according to bottle or can size such as 15cl, 25cl, 33cl, 50cl, 66cl or 75cl, and even if the dimension is a free choice of the producer, the introduction of smallest sizes is significant because it represents the companies' willingness to adapt to consumers' needs.

Another classification that could be made is based on the price. Distinguishing higher positioning products able to give higher margins (such as specialty or premium beers) from cheaper products (such as main stream, economy and private label) companies are able to differentiate consumers among their willingness to pay, increasing the number of clients and extracting from them the higher price.

The differences in products' features such as taste, alcohol by volume, price or size are the direct consequences of the fact that people have different preferences for beer, thus that alcoholic beverage is "a horizontally differentiated product" (Clemons, E. K., Gao, G. G., & Hitt, L. M., 2006, p.4).

The great Italian **interest in the beer consumption** could be inferred through the number of times that people search the specific word 'beer' or '*birra*' (if translated in Italian) on Google Search and the weekly mentions that the word could reach which could be analysed through social media intelligence platforms.

Google trend is a public web facility of Google Inc., based on word tapped on Google Search, and the following graph was obtained analysing the number of times that people searched for the key word '*birra*' from January 2008 up to October 2015 (Graph 6). The outcome shows the existence of a certain seasonality also in the way people look for beer, not just in the consumption, as highlighted before through the Assobirra 2014 annual report. In fact, from May to September the number of researches about the beer increases considerably in respect to other periods of the year and it reaches the peak always in the month of July. These results are the consequence of higher public interest for beer and this could be caused both by higher

desire due to the weather conditions, by the release of new products or by the higher frequency of beer advertising campaigns. Of course choosing for this specific analysis an Italian word '*birra*' in respect to an international one could restrict the results obtained eliminating the crowd whispers coming from different part of the world, but this choice could also help companies to focus just on specific market and understand their specific needs.

Talkwalker, instead, is a social media intelligence software that gives companies the opportunity to listen the crowd, understand their sentiments towards the brand and identify the consumers' demographics. More in detail, searching for the conversations that contained the word '*birra*' through Talkwalker website the research obtained 50,598 mentions posted between October 8th and October 14th, with an overall engagement of 367,792 comments and a potential reach of 12,572,150,651 of people that could read such discussions. The sentiment of the comments was mainly neutral (57.1%) or positive (25.8%), but even if just a small proportion expressed negative feelings (17.1%) through these comments the company can learn from their mistakes. Through Talkwalker companies can get access to the demographics of people talking about that topic, and in this case both male and female consumers converse about beer, even if with a small difference 50.7% men and 49.3% women.

Graph 6: Google trend research – key word '*birra*'

Source: data coming from https://www.google.com/trends/
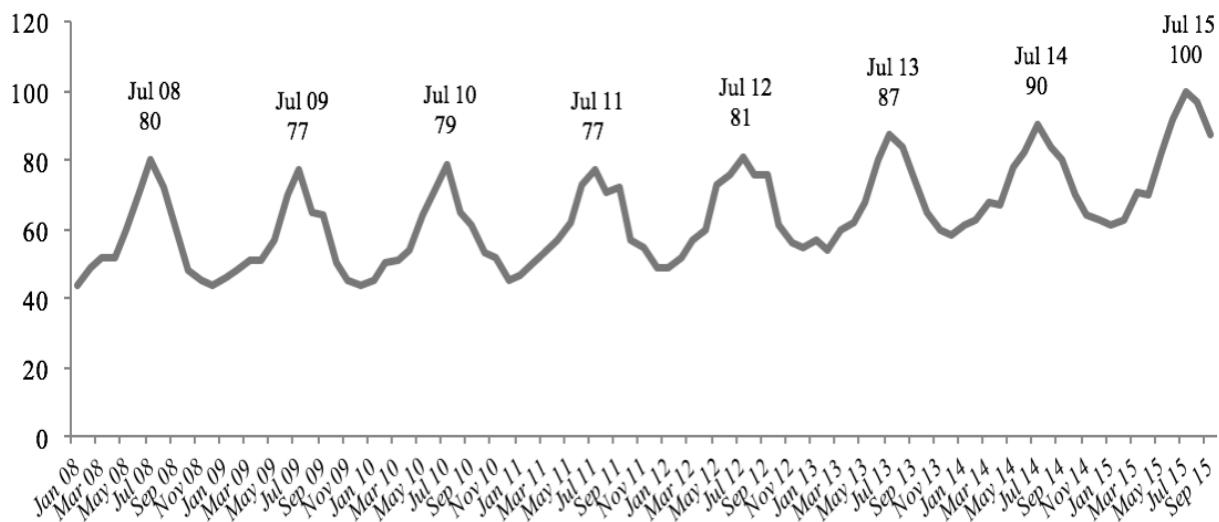
3.7. THE BEER PROMOTION

Even if some authors defined advertising as a quality extrinsic attribute, everyone would agree saying that there is a strictly relationship between advertising and people purchasing decisions. Given that the purpose of every company is to sell its products to make this they use different advertising campaigns to attract people attention and to differentiate themselves from competitors.

Therefore, each **advertising campaign reflects the time** in which it was created, so looking backward Italian historical posters campaigns, people could remember the lifestyles and the habits of that ages. For example, the first posters published in 1929, with naive simplicity, tried to promote daily beer use both focusing on the qualities attributes and the main benefits, and they did this exploiting humour. The results were advertising campaigns with simple, but effective slogans and two of them could be translated as 'who drinks beer live up to one hundreds years' and 'who does not drink beer is wrong'[3].

As the society evolved, in the fifties, thanks to the television invention, the TV slogans started to publicize the equation according which beers are closely linked with wonderful women, having both impact on women that wanted to be awesome and on men who strived for that stereotype. The refrains such as 'blonde or brunette as long as it is beer' were advertised by beautiful women such as Milly Carlucci, Philippa Lagerbach and Adriana Sklenarikova just to name few, and in this way marketers were able to attract men for sure. A further step up to the modern beer promotional campaigns was possible thanks to Renzo Arbore who was able to attract young and adults with the same irony, and at the same time to promote the alcoholic beverage highlighting how it could be consumed at home and with friends.

In the nineties, the testimonials changed, but the promotion styles remained quite constant and, together with the beauty myth, they focused on the young positioning highlighting that drinking beer keeps people young. To gather people together, marketers started to use the music as message of liberty that frees people from the chains of the daily life and joins ethnicities instead of dividing, always developing new promotional campaigns to maintain constant the consumer interest towards the brand.

The fact that the promotional campaigns reflect the evolution of the society is also represented by the new Assobirra advertising called '*birra, io t'adoro*' (which could be translated as 'I love you beer') which was all concentrated on women that drink beer because they are the growing proportion of the population (Assobirra, 2014, p.32).

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[3] *Slogans available in Italian language in the webpage www.mondobirra.org/pubblicita.htm*

Today many companies actively operate in favour of environmental and social sustainability, reducing engine emissions, water and carbon footprints or promoting a responsible consumption of alcoholic beverages. At this purpose, Assobirra is concentrated in conducting campaigns to sensitise the public opinion to the effects and the risks of alcohol abuse and wants to deliver the simple message: "drivers, pregnant women and minors must not consume alcohol" (Assobirra, 2013, p.40).

'Too young to drink' is another interesting campaign created by Fabrica, the Benetton's communication research centre, whose aim is raise awareness to the risks of drinking in pregnancy such as Fetal Alcohol Spectrum Disorders (FASD) because alcohol can hurt the baby's organs. The idea that have made this International campaign viral among the internet is to photograph new-borns, modify the photo, and create a new image by introducing the baby inside a bottle of alcohol. Through these photos Fabrica was able to strike people attention and raise opposing emotions such as compassion and kindness for the future life that could born, but also fear, pain and anger for what drinking and self-importance could cause him. Indeed, the strength of this image is to create such contrast between the beauty of the image, made by vivid colours, and the fragility of a human body. 'Too young to drink' campaign is an example of how the web is a powerful instrument that can spread a message beyond the traditional limits, thus the possibilities in the hand of companies are unimaginable.

3.8. THE BEER CULTURE

The beer is a thousand-year old product and in Italy its history is as long as the wine one. All over the centuries the two alcoholic beverages have coexisted, therefore it is not right to say that there is no a brewer tradition in Italy. Nevertheless, the Italian soil and the weather were favourable in the wine cultivation and, because the beer was for many centuries affected by common biases because associated with the Northern populations, the wine was the favourite Italian beverage. As time went by consumers started to become familiar with that beverage and they more and more appreciate it.

The born of microbrewery firms has facilitated the **growth of beer culture**, partially because microbreweries have attracted new customers through craft beers, providing high varieties of products in contrast with the standardized industrial quality, but also because are the first promoters of events whose aim is to teach beer values, spread their passion and encourage high-end beer consumption.

The beer universe has enlarged including new domain such as beer service and culinary combinations.

Even if there is a growing proportion of Italians which prefer to drink their favourite beers at home, in pubs, bars and restaurants the appearance is as important as the beer taste. Indeed, the product service could ruin an excellent beer.

To guarantee the correct quality of craft beers it is fundamental to respect the expiration date, which is closer than in the industrial beverages, and conserve the bottle in a fresh and dry place far from light sources. In addition, the bartender must know exactly how to serve a beer both in the case of tapping and of bottle opening to endorse the product quality, spreading the aroma without create too much or to less foam. Also the temperature is fundamental in the service and the bartender must adapt it according the beer style: 6 C° for light ones but it could arrive up to 15 C° for the strongest beers.

In addition, it is worth to notice that there is a growing interest in the glass used to serve the beverage. Indeed, the glass is not just a container for the liquid and the foam, whose aim is to protect the beverage from the oxidation, but it is also an instrument to enhance the taste and the aroma of beers. The pint is the most common glass of beer that consumers can find in a bar, but the experts know that every kind of beer and every occasion require the proper glass. The Snifter glass is perfect to enhance strong aromas, the Stange is more appropriate for delicate beers, but if the purpose is the celebration the mug is the best choice.

In addition, there is a growing attention for the culinary combinations and beer-brewery firms are more and more concentrated on providing information to customers about how to enhance the beer quality by combining it with food. The golden rule used when experts choose the culinary combination is the affinity between beer and food: light meals with light beers, substantial food with robust beers, and white meat with golden yellow beer, red meet with amber reds and brown meat with dark beer.

The beer universe is more and more wide and inside it also university courses has emerged whose aim is to build future generations of brewers that want to invest in their future. It is worth to report three common examples of brewery courses in Italy: '*Unibirra*' is a master degree to become beer expert, '*Accademia delle professioni Dieffe*' is a professional course to become craft brewer and in Perugia it exists also a degree to become technical brewer.

4 THE STATISTICAL EVIDENCE

4.1. THE SAMPLE

The research is willing to study the effect of the product quality and the social attitude clusters on the performance and as a whole the research analyses four different determinants of the performance: the product offering, the customers' quality perception, the expert advisors' opinion and the social media attitude. Given that these determinants are different one from each other, the information was extracted from different sources: Aida, Ratebeer, Slow food, Unionbirrai, Facebook, Twitter, Instagram, YouTube and Talkwalker.

The initial sample was collected from Aida database and it was composed by 245 companies, which are registered according to the Italian law as '*società per azioni*' with the acronym 's.p.a' or '*società a responsabilità limitata*' with the acronym 's.r.l'. The dataset was obtained in May 2015 using the ATECO 2007 code 1105 ('*Produzione di birra*'), which corresponds to the beer production, to select the sample and collecting from the same source the economic results registered from the year 2013 to the 2009. The database was later updated the 30th October 2015 to include also year 2014 financials.

Although, the obtained data was incomplete and presented many missing values, identifiable thanks to the word '*n.d.*' or the number zero. Therefore, it was necessary to refine the sample by quitting the problematic companies, but choosing just the firms with no missing values in sales would not be the best solution, because many data would be lost, therefore a coherent plan was required. In addition, the sample presented another main issue that was fundamental to fix: the corporate name available from the database not always corresponded to the commercial name.

The company names mismatch problem was related with the fact that the sample was composed by a high amount of small companies not well structured and organized. The majority of them did not care about the information provided in the website and sometimes both VAT number (identification code) and the corporate name were missing.

The **main guidelines** that lead the research are the availability of economic data and the recognisability of the firm. Indeed, it was both important to have at least two years of performance results to have economic and financial data to compare and at the same time to identify exactly the firm, because the commercial name was fundamental to collect the data required to test the three performance determinants. The plan was first to filtrate the number

of companies choosing just the ones that had available results, then, when the sample was reduced and polished from useless firms, to identify the commercial name behind the society. Especially the second activity was time consuming because many of them used a different and not related commercial name.

Some company names were easily deductible from the name they have used to incorporate themselves, others were obtained searching the term on Google and when necessary by filtrating the result with the word '*birrificio*' ('brewery company' in Italian) or the province where the company was incorporated. Nevertheless, in the most demanding cases that could not be solved in the previous ways because the absence of a working websites or because homonymy troubles, it was necessary to use the VAT number to obtain from other online database additional information such as complete address and exploit that information to identify the firm.

At the sample, it was chosen to not to include retailer firms that do not produce beers (e.g Birra Classe S.R.L.), bottling centres with no brewery production (e.g C.I.S.P.A. Centro Imbottigliamento Siciliano Prodotti Alimentari S.R.L.), cooperative companies for which it was not available the final beer brand label (e.g Consorzio Italiano Produttori Dell'orzo E Della Birra Soc. Coop) and more in general companies for which it was not possible to verify their identity (e.g Industrie Platano S.R.L.). The later choice was the direct consequence that even if all performance results were available the absence of the company name does not allow the research to test the other analysis. If none knows if the community talks about that company's beers, or if it is present on social media platforms or if it has been rewarded by judges for its quality the financial observation is useless.

After having performed all the required activities, the final sample is composed by 135 firms and eleven independent variables that are going to be presented in the next paragraphs. The Appendix 1 could provide a quick overview of the research sample. In the Appendix 1 is available a list of the dependent variables considered with the main information such as variable cluster, meaning and the calculation.

This research is based on the main assumptions that the social attitude and the quality are **fixed characteristics** for a company and the willingness to be present and participate in the social media arena or to produce beers with superior product attributes does not change within a short time period. Given that are not expected any variations in the social media attitude or in the quality of products, the research could use the 2015 social media data as a proxy of the average social attitude and the same considerations are worth for the quality variables.

4.1.1. THE PRODUCT OFFERING

The research aims to study the product offering looking to the product range, the positioning and the degree of differentiation and in the beer industry these three dimensions could be represented by three beer's measures: the number of beers, the average abv beer positioning and the abv standard deviation of beers (Figure 11).

Figure 11: Product offering variables

- The product range

- The positioning

- The degree of differentiation

- The number of beers

- The average abv beer positioning

- The abv standard deviation of beers

THE VARIABLES
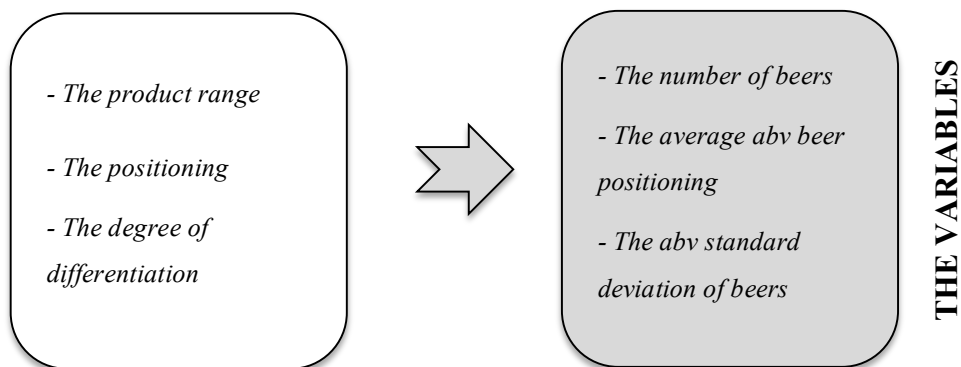
The information was obtained from Ratebeer one of the most famous reviews platforms for beer lovers who are willing to exchange experiences, give and read recommendations about products. In addition, this platform offers many useful information about the beer produced by the brewery companies on the database such as number of beers offered and their abv value. The data were collected approximately from the 3rd June 2015 to 7th July 2015 and this review website was chosen because of the amount of information available and the trustworthiness of them. Indeed, it ensures the reliability of information thanks to the clear rule code, the use of Bayesian mean, which guarantees a protection against ratings corruption, and the indefatigable work of many beer's enthusiasts always looking for updates from the brewery world.

Collecting the number of beers and their abv value on Ratebeer rather than collecting this information through each company websites allowed the research to obtain, with less effort, data easily comparable and create a complete database. Given the huge amount of beers reviewed in the database and the indefatigable work of many beer's enthusiasts, the number of beers knew could be seen as a good proxy of the number of beers commercialized in a specific moment. Otherwise, looking one by one each company websites, there would be many missing values due to the lack of information or the research could incur in not adjourned information or to not comparable ones due to the possibility to present the product

offering in different ways, for example by listing all the beers name or just presenting the macro beer groups.

The product range represents **the number of beers** offered by beer-brewery companies and the data were obtained summing all the beers classified for a specific brewery. Given that the research is willing to study the effect of the beer quality and the social attitude on the performance, it was necessary to include in the research just beers produced and commercialized by a specific brewery to create a direct connection between established quality and social media efforts. This direct relation would be missing if were included also beers produced with the technology of a brewery, but commercialized and advertised using the strategy of a second beer-brewery company. From this issue it came from the decision to include in the research just the beers produced and commercialized according to the will of the company.

In a beer-brewery firm, the positioning could be interpreted as the **average abv beer positioning** as the alcohol by volume is one of the most common way to classify beers. Indeed, the abv is representative in defining the beer style, which is strictly related with the product attributes and the beer taste. The average abv positioning was calculated computing the mean of the abv value of all the beers classified for each beer-brewery company and the same data were used to compute the abv standard deviation of beers offered.

The **abv standard deviation of beers** could represent the the degree of differentiation of a specific brewery which could be seen as the variety of beers offered in terms of abv and it represents a measure of dispersion. Therefore, as a mean abv value would express that the company offer on average medium alcoholic beers, the high standard deviation of abv highlights that the company could offer beer highly differentiated while a low value instead underlines that the company is more focused on a specific alcoholic beverage degree.

4.1.2.   THE CUSTOMERS' QUALITY PERCEPTION

The research decides to study the customers' quality perception looking to the consumers' interest towards the company's products and the overall brewery quality evaluation, thus in the beer industry these two dimensions could be represented by two beer's measures: the average count of rating for beer-brewery company and the overall average rating (Figure 12). Also the variables related to the customers' quality perception were extrapolated from Ratebeer approximately from the 3rd June 2015 to the 7th July 2015.

Figure 12: Customers' quality perception variables
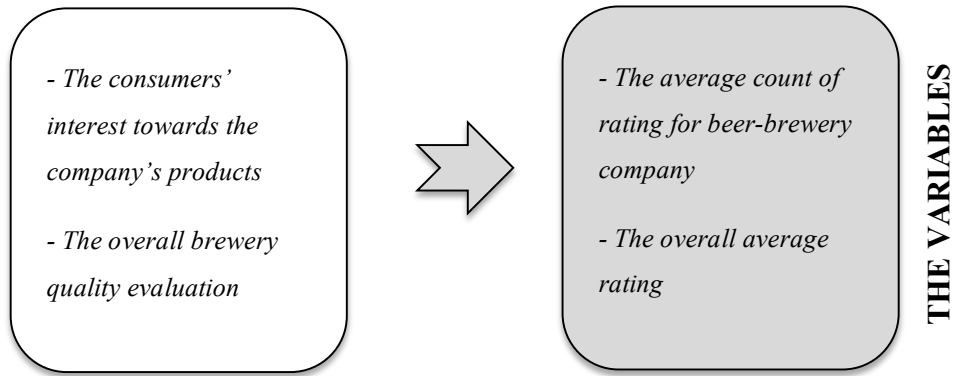
The **average count of rating** per beer of beer-brewery company could be seen as a good proxy of consumers' interest towards the company's products, given that rating usually corresponds to at least one product purchase. The average count of rating per beer was computed summing all the reviews available for the beers belonging to the specific company and dividing the total count of rating for the number of beers in the company's portfolio. The average count of rating per beer represents also a measure of information trustworthiness giving customers more credit to products' recommendations with higher count of reviews. Furthermore, considering that people who are more willing to provide reviews are usually fully satisfied or not at all, the higher count of ratings per beer hides a higher interest in communicating and sharing the experienced beer quality.

The overall brewery quality evaluation, instead, could be interpreted as the **overall average rating**. The overall average rating could be computed making the mean of the weighted rating of each beer reviewed that belongs to a specific beer-brewery company. The beer's weighted rating is the variable most strictly connected with the beer's quality, because it represents the customers' overall product evaluation and it is computed using the Bayesian mean of all qualified ratings. As expressed in the website, Ratebeer calculates the value using the same Bayesian estimate formula used by the Internet Movie Database for calculating average ratings and this formula could be summarized as follows:

$$weighted\ rank\ (WR) = (v\ /\ (v+m))\ *\ R + (m\ /\ (v+m))\ *\ C$$

where 'R' is the rating value, 'v' is the count of votes, 'm' is the minimum votes required to be listed in the Ratebeer's top beers list and 'C' is the midpoint of the scale. The overall average rating is a good proxy of customers' perceived company quality because it is computed by Ratebeer using just effective ratings already tested for incongruences.

Even if people could argue that online reviews are not representative of the normal population because it is assumed that younger people use social media, this is not anymore true. As expressed by the McKinsey Global Institute report (2012) "the appeal of social technologies has spread to a wide range of users" and, even if the young adults and the teenagers are the most enthusiastic users, the older targets' interest has grown at incredible speed becoming a mass instrument. Thus, people should not consider social media as a domain just for young people anymore and it is possible to reasonably assume that reviewer are representative of the normal population.

4.1.3.   THE EXPERT ADVISORS' OPINION

The research wants to study the expert advisors' opinion looking to different degree of quality evaluation such as the expert' interest towards the company's products, the beer quality and the overall quality of a brewery. In the beer industry these three dimensions could be represented by the following variables: Slow food mention, Slow food special notion and special brewery reward (Figure 13).

Figure 13: Expert advisors' opinion variables
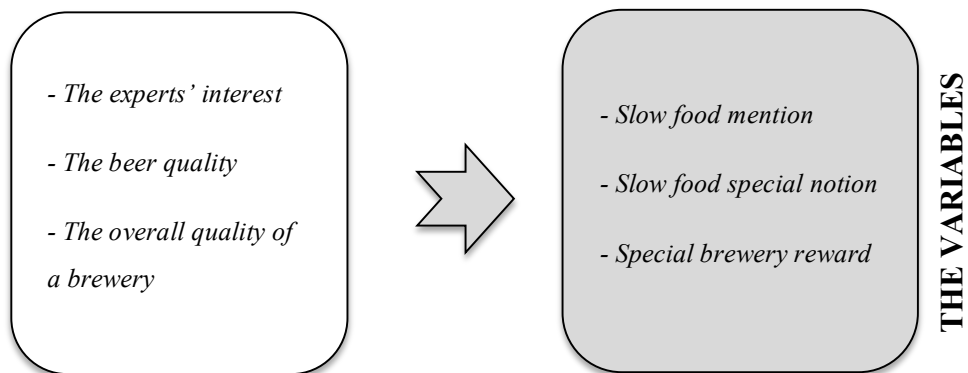
The research collected data about the expert advisors' opinion using the Slow food 2014 book '*Guida alle birre d'Italia 2015',* which reported 329 beer-brewing companies and their 1628 beers, while the usage of information obtained from Unionbirrai website, as better explained later, was a failure.

Been mentioned in the Slow food book is by itself a measure of experts' interest because the brewery companies included in the book sample have been chosen among a wider population. Therefore, the dummy variable called **Slow food mention**, that distinguished companies that

are in guide and from the ones that are not, was a first preliminary level of product quality evaluation.

Receiving a special notion for the beers produced is the forward level of beer quality because it is based on the objective degustation of beers made by experts. The **Slow food special notion** was a variable that counted the number of beers per brewery classified in the Slow food guide as '*birra slow*', '*birra quotidiana*' (which could be translated as beer for every daily activity) and '*grande birra*' (beer with superior attributes). Through this variable, the research is willing to quantify the overall beer quality of each brewery firm and the computation idea came from the idea that the more beers are valuated as having a superior quality the higher is the overall beer quality.

Finally, the dummy variable that most represents the overall quality of a beer-brewery firm is called **special brewery reward** and was obtained by accounting the presence of one of the three symbols: the '*chiocciola*' (snail), '*fusto*' (barrels) and '*bottiglia*' (bottle) which according to the authors guarantee the presence of higher quality and continuity in the quality.

To provide additional information about product quality, the research tried to use data collected from **Unionbirrai** website corresponding to 2013, 2014 and 2015 '*Birra dell'anno*' rewards. The rewards were provided for 26 different beer's styles and the first three winners were listed each year. Using the information contained it was possible to translate the variables beer quality, the overall quality of brewery and the continuity in the overall quality into respectively the following three variables: been rewarded, total number of rewards and been rewarded three years in a row (Figure 14).

In this case the beer quality was seen as a measure of the quality assessed by expert judges and it was created the dummy variable been rewarded which distinguish companies that have been rewarded in the 2015-2013 horizon at least one time in one beer. Considering the competition over the twenty-six beer styles been rewarded at least one time is itself a measure of quality.

The overall quality of a brewery could be expressed using the total number rewards received by each beer-brewery firm and the measure was obtained by summing the number of beers rewarded received in three years. Considering the competition among breweries over the twenty-six beer styles categories, the more beers rewarded a company has, the higher its quality is.

Last, but not the least the variable called been rewarded 3 years in a row could be seen as a measure of continuity in the overall quality of products and this dummy variable was

computed looking to brewery firms that showed a certain continuity in the quality evaluation been rewarded each year with at least one beer.

Using this method, the research collected 225 rewards assigned to 86 different firms in the 2015-2013 horizon, but just 14 of them showed a certain continuity in the product evaluation being rewarded three years in a row and comparing this data with the research sample of brewery just 20% of companies included in the sample were rewarded. Therefore, no matter the efforts, it was not possible to use the data collected from Unionbirrai given that 27 observations were not enough for a solid statistical analysis.

Figure 14: Expert advisors' opinion variables failure
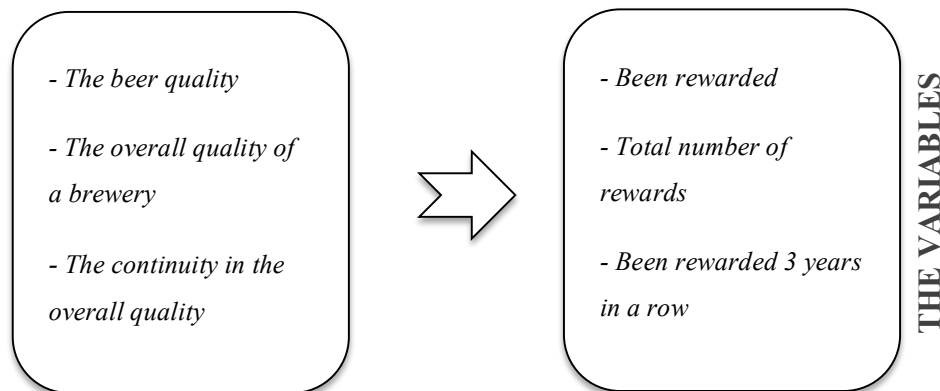
4.1.4. THE SOCIAL ATTITUDE

The research aims to study the social attitude looking to different degree of quality evaluation such as the presence, the participation and the relationship. These three dimensions could be translated into the following variables: be social, the number of contents shared and the followership (Figure 15).

Actually, as result of the social media proliferation, there is a huge amount of social media platforms, but the research decides to focus on the ones it considers the most important for the brewing activity. The data were collected from Facebook, Twitter, Instagram and YouTube approximately from the 7th July 2015 to the 5th August 2015. An additional data collection was made through a different website, but as explained later it was a failure.

The data collection was simple for the companies that having an integrated social media strategy showed a certain continuity in the name usage and it was even more simplest for the few cases that displayed through their websites the presence of different social media profiles. When the direct link to the main social media was absent and the name used was not the same

among the different online platform, to check the presence in a specific social it was enough to digit in Google search the word '*birrificio*' (brewery firm in Italian) followed by the commercial name and the social media platform name. Through this method the research was able to overcome the problem related to the uncertainty of the company username and it was able to identify also breweries that used multiple names more or less related to the company name.

Figure 15: Social attitude variables
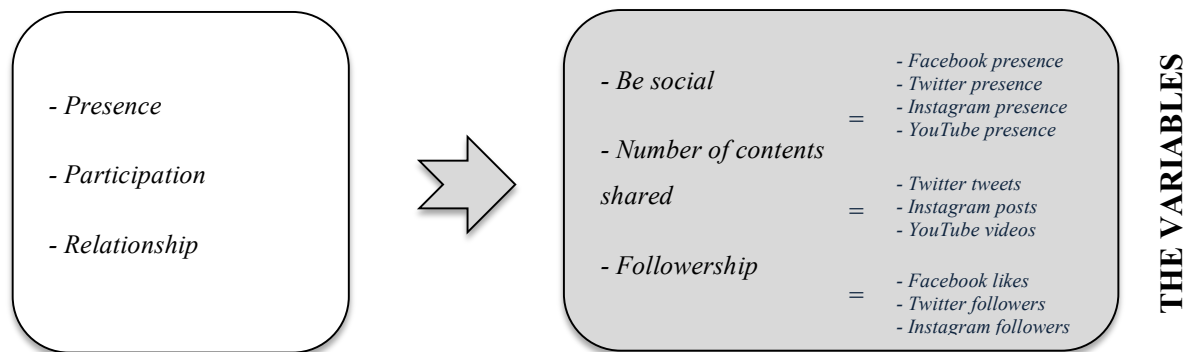
The social media presence among multiple online platforms could be seen as a measure of the company social attitude and the research decided for simplicity to call the variable that express this desire as 'be social'. The **be social** variable was created summing all the dummies representing the company presence in above mentioned social media. The more the variable gets close to four, which corresponds to the company presence among all the social media platforms studied, the higher could be considered the interest towards social media.

Be social = Facebook presence + Twitter presence + Instagram presence + YouTube presence

Facebook presence, Twitter presence, Instagram presence and YouTube presence are dummies created to represent each company **presence** among the different social media and they correspond to one if there is a company profile, zero otherwise. From the analysis were excluded customers' groups talking about a specific firm, pages about the company location, hashtags and every page run by third parties. Including just profiles directly run by the company, which were identifiable thanks the link to the general company website, guarantee the direct link with the company social attitude useful for this research. Indeed, even if a company profile run by third parties could be beneficial to the brand awareness, this is not a company choice and therefore should be excluded by the analysis.

The company social attitude is not just a matter of the presence in the online arena, but it also involves the participation among the different social media. Given that the social media participation is difficult to quantify, the research decided to approximate the social media participation with the **number of contents shared**, assuming that the higher is the number of contents published the higher is the desire to participate in the social media arena. Indeed, publishing contents companies can share information, entertain the public and engage conversations with the costumers. The variable called 'number of contents shared' was obtained summing the contents posted through the different social media both tweets, images and videos.

Number of contents shared = Twitter tweets + Instagram images + YouTube videos

As visible above, the research could easily collect the number of contents shared from three over four social platforms: from Twitter, Instagram and YouTube, but not from Facebook. Indeed, in the later there is no more the possibility to publicly see the count of posts shared and because counting one by one every post going ahead in the time requires too much time, it was preferred to focus on other indicators.

Once included the participation in the research it could be interesting also to introduce a measure of the relationships that could be entertained to access the goodness of the effort. Given that the quality of engagement is difficult to access, the research decided to approximate it using the **followership** variable, which represents the willingness to follow a specific profile. Indeed, to follow a specific brand profile is not just a matter of brand loyalty, but also the result of engagement towards the contents posted which push users to follow a specific brand profile to receive the last contents updates. The followership variable was obtained summing the Facebook likes, the Twitter and the Instagram followers, but not the YouTube subscribers because this number is not a real measure of the number of people following a specific YouTube channel.

Followership = Facebook likes + Twitter followers + Instagram followers

To provide additional information about the social media effectiveness, the research tried to collect data from **Talkwalker** analytics, but the free packet just provides weekly data horizon and the observations extracted were not enough for a solid statistical analysis. Talkwalker is a social media intelligence tool that gives companies the opportunity to listen the crowd and understand the opinions towards the brand.

Using the information contained it was possible to translate the variables people interest, consumers' participation, people reaction and diffusion of the message into respectively the following four variables: number of mentions, engagement, sentiments and reach (Figure 16). The number of mentions represents people interest and it is counted summing the number of times people talk about a specific brand or topic. The engagement represents consumers' participation and it is the sum of actions made by others on a specific mention. The sentiment represents the people reactions towards specific contents and they could be classified as positive, negative and neutral. The reach represents the diffusion of the message and therefore the number of people who was reached by the mention on a post, and the latter is calculated using the number of possible connections among people. The first three indicators can give companies important information about the crowd interest towards the brand, while the forth represents the strength of the message spread.

Even if Talkwalker seems a user-friendly instrument because based on key words, but it is not as simple as it could seem. When the research tried to analyse a sample companies, but many problems emerged. More precisely searching for a sample of 60 companies over 135 in July 28th 2015, it was possible to find mentions just for 33 of them.

First, it was difficult to find the right key word to use to identify the total mentions about a company, because there were many possible combinations and even if people find the right one it was possible that in a specific week no one talked about the company. In addition, it was important not just to check if there were mentions, but also to avoid homonymy problems, which are very common in the case of surnames.

Therefore, the limited amount of information about the companies, combined with the limited amount of data related to the small temporal horizon make the Talkwalker's usage not fully informative and the research preferred to quit this kind of analysis.

Figure 16: Expert quality evaluation variables failure
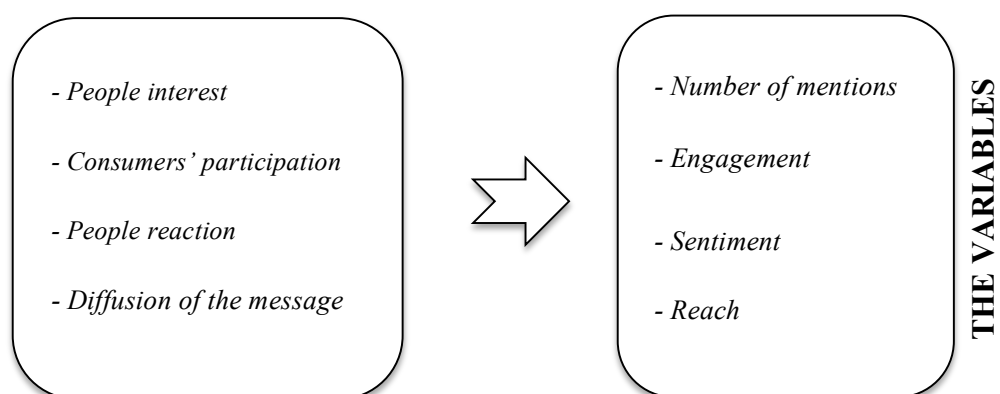
4.1.5.   OTHER CONTROLLING VARIABLES

Other controlling variables were included in the research to incorporate other structural characteristics that could have impact on the performance and these controlling variables were: production capacity, number of employees, age, brewery classification and area.

The production capacity and the beer classification were extracted from the Slow food 2014 book '*Guida alle birre d'Italia 2015*', while the number of employees, the incorporation year and the city were information provided by Aida.

The **production capacity** could be seen as a measure of the company size and a higher production capacity expressed in hectolitres could be associated with higher volumes of sales.

The **number of employees** was extracted from Aida and in the variable were included just data about the 2014 situation, the last available information. The number of employees could be employed to express the degree of structural organization of the company, indeed, better structured firms usually have better performances.

The **age** variable was computed using the year of incorporation provided by Aida and making the difference between the current year (2015) and the year of incorporation it was possible to compute the number of years of activity. Being active in a specific industry for a longer period could implicate many advantages related with a consolidated clientele and supplier channel, or they could have already finished the assets depreciation.

age = current year - year of incorporation

The **brewery classification** variable is dummy that corresponds to one if the beer-brewery firm follows industrial brewing processes and zero if it classifies itself as microbrewery. The brewery classification measures both the size and the quality of beer produced. Indeed, industrial beer-brewery firms have on average higher size, are older and more structured, and offer standardized beers which are commonly considered as lower quality beers. Given that microbrewery firms offer craft beers while multinationals offer industrial beers, the research decides to use the to dichotomy words 'craft' and 'industrial that classified the beers also to distinguish in the simplest way the two brewery clusters which will be called from now on craft and industrial breweries.

Last, but not least the **area** variable was created starting from the city name provided by Aida and dividing Italy into four main areas North-West, North-East, Centre and South and Islands

based on the twenty Italian regions, cities were associated with the right areas and therefore companies. The division was created following the regions' geographical position.

4.1.6.　　THE PERFORMANCE VARIABLES

The performance variables were collected from Aida in October 2015 following the method already explained for the sample creation. The financials collected were revenues, EBITDA and allowance for uncollectable accounts, EBIT. The EBITDA data extracted from Aida were adjusted according to the accounting principles considering the allowance for uncollectable accounts. The previous data were chosen to compute two main **performance indicators**: the revenue growth and the EBITDA/revenues ratio.

Comparing the five different pairs of revenues, it is possible to calculate the percentage revenues growth by company by year. Computing the average value by company of the previous reported yearly indicators, the research is able to compare companies based on their growth excluding the size effect on the revenues.

$$revenues\ growth\ by\ company = (revenues_{t+1} - revenues_t)\ /\ revenues_t$$

The EBITDA/revenues ratio by company is computed dividing the EBITDA result for the revenues of the same year. This type of measurement determines the percentage of revenue left over after the firm covers its operating expenses and, once computed the average values by companies, the research was able to compare companies based on their profitability.

$$EBITDA/revenues\ by\ company = EBITDA_t\ /\ revenues_t$$

4.2.　DESCRIPTIVE STATISTICS

In this section, the sample of data is summarized using descriptive statistics. A quick overview on the data is visible in the Table 1 through the exposition of measures both related to the central tendency and to the variability.

Looking deeper to the information contained in the database, the sample is composed by 135 firms and the majority of them is classified as craft beer-brewery companies (95.6%) and the remaining part as industrial (4.4%). Given the small percentage of industrial breweries in the

real life, which is reflected also in the sample, the average data reported on the Table 1 are mainly influenced by the craft breweries' information.

Table 1: Sample descriptive statistics

Variables	N	Mean	Standard deviation	p5	p25	p50	p75	p95
AGE	135	8.022	10.137	2	3	5	9	19
BREWERY CLASSIFICATION	135	0.044	0.207	0	0	0	0	0
NUMBER OF EMPLOYEES	135	19.319	107	0	0	1	3	18
PRODUCTION CAPACITY	135	92,982.440	618,254	0	0	350	1,000	26,000
NUMBER OF BEERS	135	10.630	10.090	2	4	8	12	35
AVERAGE ABV	135	0.058	0.011	0.048	0.053	0.058	0.064	0.075
AVERAGE SD ABV	135	0.038	0.298	0	0.009	0.012	0.016	0.025
AVERAGE COUNT OF RATING	121	14.306	25.381	0.500	1.824	4.556	12.267	68.083
OVERALL AVERAGE RATING	121	2.913	0.216	2.505	2.800	2.924	3.057	3.217
SLOW_FOOD MENTION	135	0.659	0.476	0	0	1	1	1
SPECIAL BREWERY REWARDS	135	0.215	0.412	0	0	0	0	1
SLOW FOOD NOTION	135	0.778	1.428	0	0	0	1	4
BE SOCIAL	135	2.074	1.111	0	1	2	3	4
NUMBER OF CONTENTS SHARED	135	463	1,603	0	0	9	207	1,784
FOLLOWERSHIP	135	164,952	1,677,223	0	945	2,352	5,210	20,392
Average revenues growth	117	3.352	12.326	-0.248	0.151	0.455	1.495	20.259
Average EBITDA/revenues	131	-0.241	0.772	-1.944	-0.311	0.064	0.164	0.377

In both brewery clusters it is visible a **not homogeneous distribution** among the four Italian areas and on average they are more concentrated in the North (Graph 7), especially in the 'Lombardia', 'Piemonte' and 'Veneto' regions where the 49% of beer-brewery firms are located. In addition, the data provide empirical evidence to the common beliefs that industrial breweries are on average older than the craft ones, better structured given the higher amount of employees and have bigger size given the great difference in production capacity (Table 2).

Graph 7: Brewery distribution per clusters by area

■ Craft brewery companies ■ Industrial brewery companies ■ Total Brewery companies
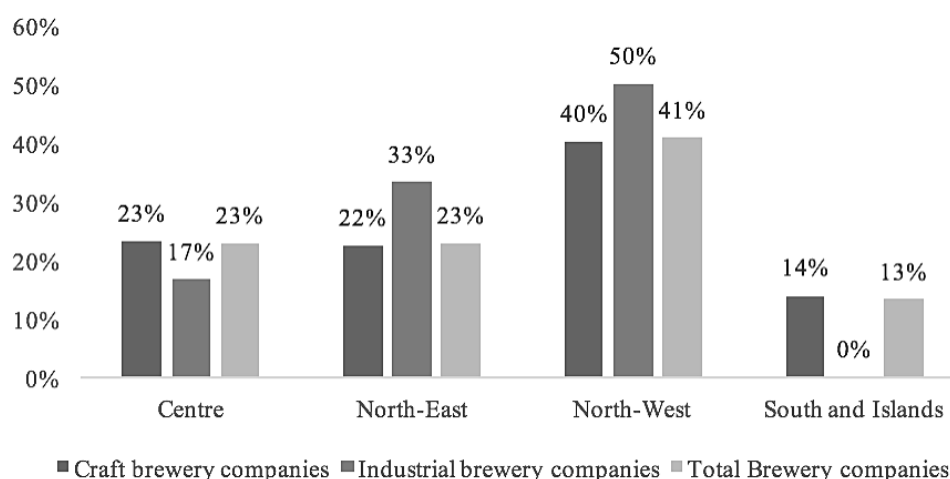
Table 2: Sample descriptive statistics

		N	Mean	Standard deviation	p5	p25	p50	p75	p95
Craft breweries	AGE	129	6.395	4.178	2	3	5	8	15
	NUMBER OF EMPLOYEES	129	2.558	4.299	0	0	1	3	13
	PRODUCTION CAPACITY	129	1,136.667	3,006.380	0	0	300	850	4,500
Industrial breweries	AGE	6	43.000	27.756	13	18	43	54	88
	NUMBER OF EMPLOYEES	6	379.667	380.868	0	131	228	729	962
	PRODUCTION CAPACITY	6	2,067,667	2,312,328	136,000	635,000	788,000	4,800,000	5,259,000
Total breweries	AGE	135	8.022	10.137	2	3	5	9	19
	NUMBER OF EMPLOYEES	135	19.319	107.308	0	0	1	3	18
	PRODUCTION CAPACITY	135	92,982.440	618,254.200	0	0	350	1,000	26,000

The differences in values between the two clusters are reflected in the average value by area and this is visible in the following graph (Graph 8). Indeed, while craft breweries' age, number of employees and production capacity values are quite stable among all the Italian areas, Industrial breweries' ones change a lot causing the differences in the values by area.

Graph 8: Differences in the variables by brewery cluster and by area
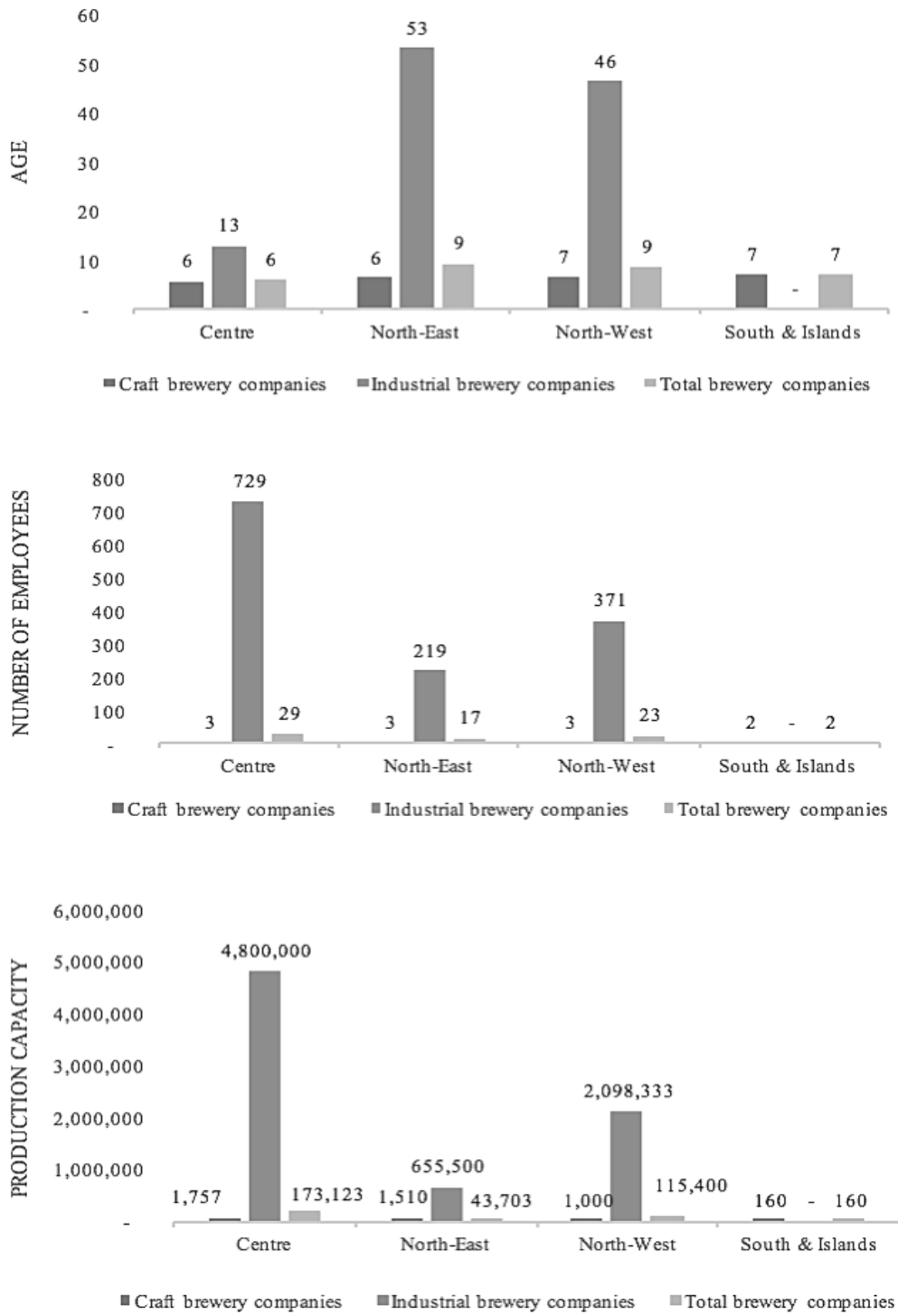
The sample description continues in the next pages following the four determinants used up to this point: the product offering, the customers' quality perception, the expert advisors' opinion and the social media attitude.

4.2.1. THE PRODUCT OFFERING

As visible in the Graph 1, on average the companies included in the sample offer 11 beers with an average alcohol by volume equal to 5.8% and an average standard deviation equal to 3.8%.

What emerged from the data is that the two clusters peculiarities are reflected also in the product offering variable. The industrial breweries are on average older and better structured and thanks to the higher average production capacity they are able to offer a wider range of beers. Craft beer-brewery companies, instead, to overcome their production capacity limits, prefer to focus on the product differentiation based on the quality exploiting the fact that they are younger and more flexible.

The two clusters' differences are immediately identifiable through the following boxplot and the same graph highlights that the industrial **product offering** is on average higher than the craft one: the industrial beer-brewery companies offer on average 26 beers, while craft companies sell on average 10 beers (Graph 9). The later data presents also many outliners and the presence of outliners could suggest that there is another group of companies inside the sample and this group even if it was classified as craft brewery given the production process and it is similar for number of beers offered to the industrial cluster.

Graph 9: Boxplot number of beers by brewery cluster

In addition, the analysis shows that the cluster differences go further beyond to the difference in the number of beers offered. Indeed, even if the two clusters are focused on offering medium alcohol beers, craft beer-breweries have higher **abv values** and they offer on average beers with 6% abv, while industrial beers have on average a 5% abv (Graph 10). This means that craft beer-brewery companies are more active in producing special beers, which are classified as beers with an alcohol by volume higher that 5%, while industrial ones are focused on normal beers.

Graph 10: Boxplot average abv by brewery cluster
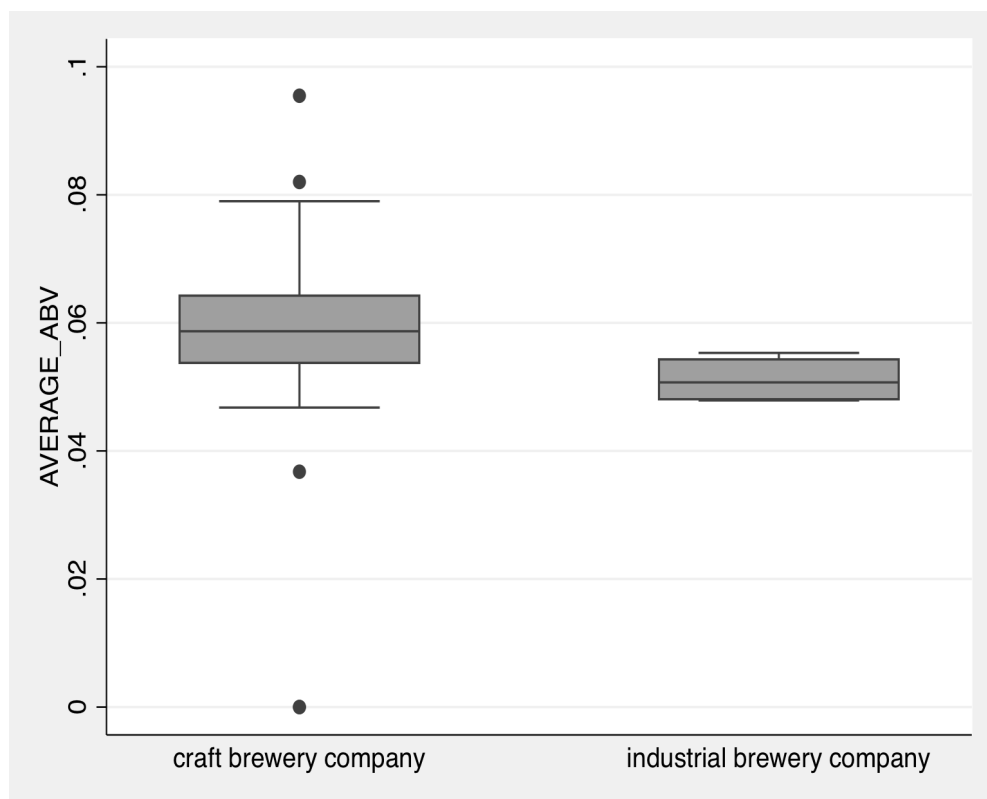
In addition, the **average standard deviation of abv** values for craft beer-brewery companies is higher than the industrial one that are respectively 3.9% and 1.4%. These data suggest that industrial breweries use to focus on a specific beer positioning, while instead craft ones highly differentiate their product offering.

The same differences discovered on the two clusters are reflected on the average total beer-brewery companies' values. Controlling the same variables for differences among the areas, it emerged that the North-East and especially the 'Veneto' region is characterized by a high average standard deviation abv and this suggests that craft beer-brewery companies in this area prefer to highly differentiate themselves proposing different beers with different abv.

Graph 11: Differences in the product offering variables by brewery cluster and by area
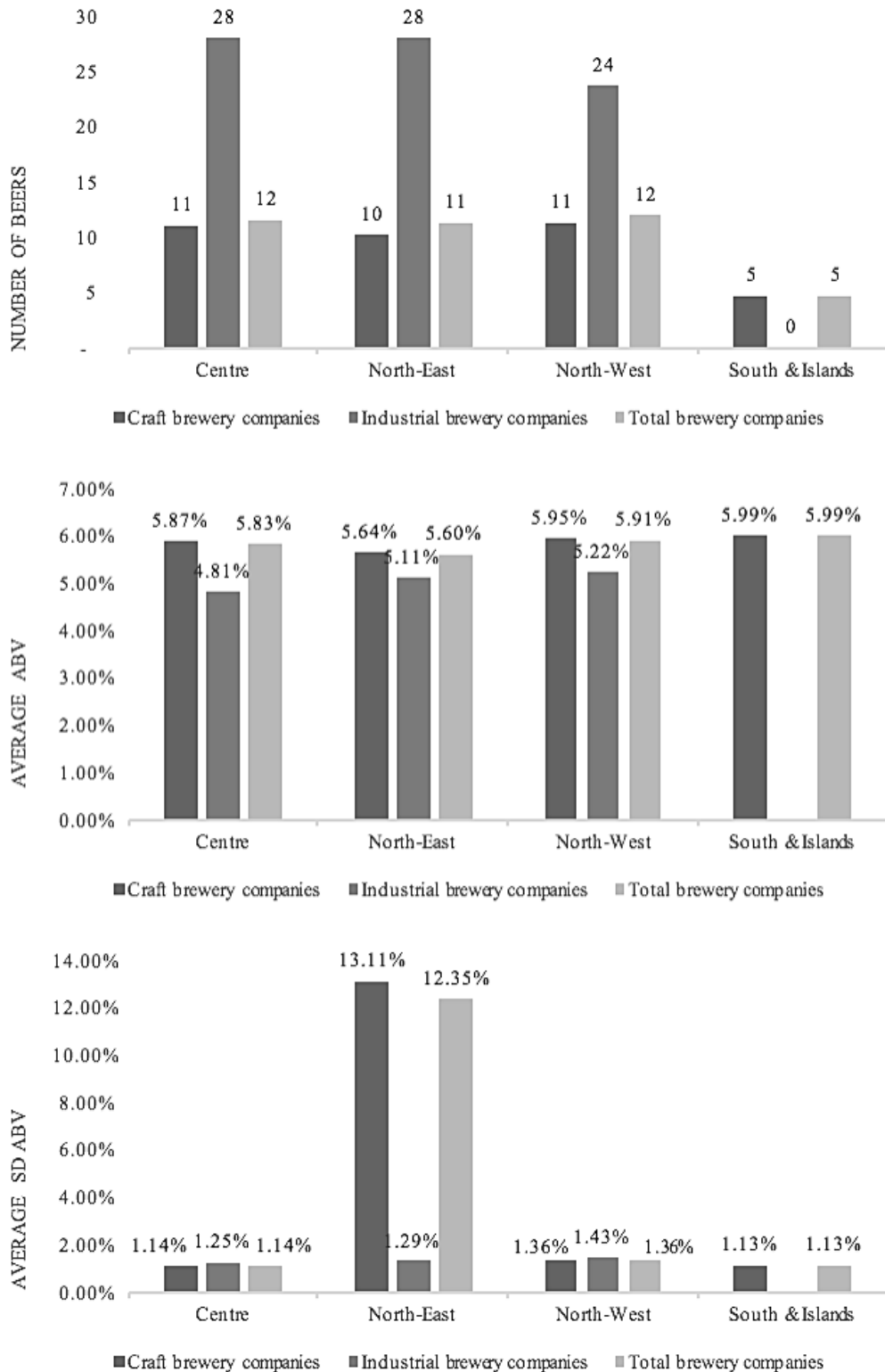
All data collected provide empirical evidence to the common beliefs that industrial breweries produce standardized medium alcoholic beverages, while the craft breweries offer highly differentiated beers in terms of ingredients and alcohol content.

4.2.2.   THE CUSTOMERS' QUALITY PERCEPTION

As visible in the Graph 1, on average the companies included in the sample are evaluated by consumers based on their quality 2.9 points over a five points scale and the companies received on average 14 reviews per beers.

Confronting the data using the brewery clusters, it is visible a great difference between the two clusters in the consumers' interest towards the company's products (Graph 12). Industrial beers receive on average higher **number of reviews** on Ratebeer than the craft ones: industrial beers obtain on average 71 reviews while craft ones just 11. This difference could be related both to the brand awareness among the market and the differences in volume of beers sold, given the differences in size. In addition, it is interesting to notice that craft beers values are more concentrated if excluding outliners, while industrial ones have higher standard deviation. Alto in this case the presence of outliners could suggest the existence of an intermediate group within industrial breweries and craft ones that have a higher count of rating similar to industrial companies, but product characteristics similar to craft breweries.

Graph 12: Boxplot average count of rating by brewery cluster

Even though industrial beers receive on average higher counts of reviews, they are recognised by consumers as having lower quality attributes with respect craft beers. Indeed, industrial beers receive lower **average review rating** with on average 2.4 points over five, while craft beers are in line with the overall sample evaluation with 2.9 points (Graph 13). These data are coherent with the common beliefs according which craft beer-brewery firms have higher product attributes while industrial beer-brewery firms offer standardized goods with inferior quality attributes.

Graph 13: Boxplot overall average rating by brewery cluster
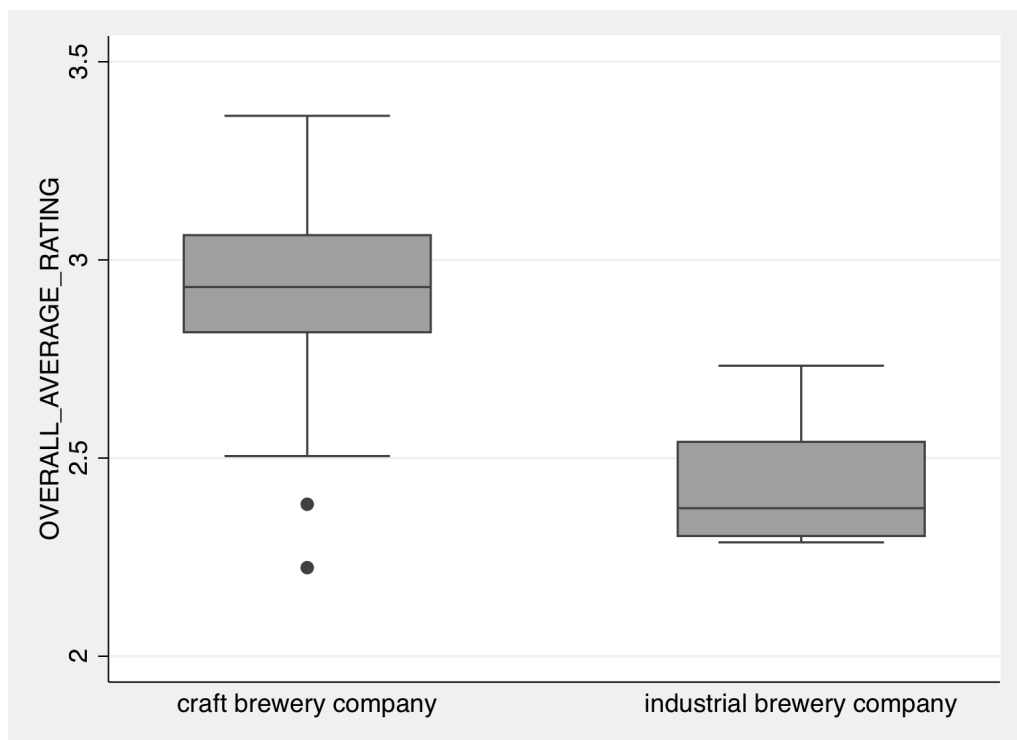
The same differences discovered on the two clusters are reflected on the average total beer-brewery companies' values. Controlling the same variables for differences among the areas, it emerges that the Centre area registers higher values both in the average count of rating and in the overall average rating, while the South & Islands values are on average the lowest (Graph 14). Within the areas, there are great differences in average count of rating for both the industrial breweries and the craft ones, but even if the difference in the industrial data is higher, the craft brewery difference is more significant because it presents a clear trend. Indeed, the average count of rating is higher in the Centre, medium in the North and lower in the South & Islands area, and in addition, the difference between the Centre and the North area is higher than 50%. The previous trend is visible also in the overall average rating of

craft beer. Even if on average craft beers have received higher quality evaluation in all the areas, between the Centre and the South & Islands there are 0.11 points of difference.

Graph 14: Differences in the customers' quality perception variables by brewery cluster and by area
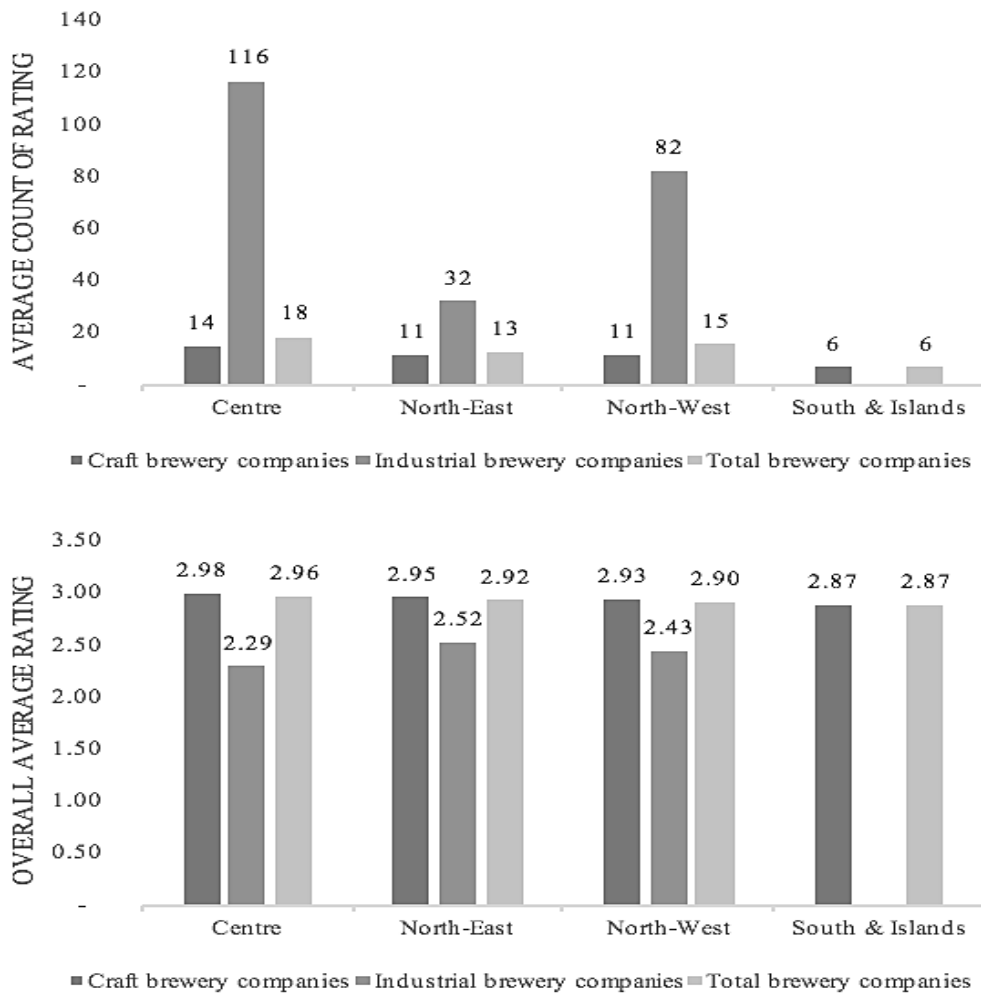
The data just presented highlight that even if industrial brewery are well known among the market, the consumers perceive craft beers as having higher quality attributes. Not matter the higher quality, the industrial beers are sold in higher volumes and this can be inferred through the higher average count of rating.

4.2.3. THE EXPERT ADVISORS' OPINION

As visible in the Graph 1, on average the companies included in the sample are mentioned 0.66 times, receive on average 0.21 special brewery reward and have 0.78 special rewarded beer. Given that there is heterogeneity in the data, it could be useful to look deeper the sample comparing industrial and craft breweries results to better understand the data.

It is true that on average the companies included in the sample have received 0.66 **mentions**, but this data also highlights that just 89 firms over 135 were included in the Slow food brewery's list (65.9%) and they are respectively 6 industrial and 83 craft breweries. Looking deeper to the data, it emerges that among the sample just 29 breweries have received a **special brewery reward** based on the overall company evaluation and they are all craft breweries. In the following graph it is reported the distribution of rewards among the three types of rewards *'chiocciola'*, *'fusto'* and *'bottiglia'*, even if these rewards are given according to different product attributes the three types of reward could provide a comparable evaluation (Graph 15). In addition, the sample contains 105 beers classified with one of the three attributes *'birra slow'*, *'birra quotidiana'* and *'grande birra'* and the same data highlight that just craft beers are have received a **Slow food special notion**.

Graph 15: Distribution of mentioned brewery firms among the three special rewards
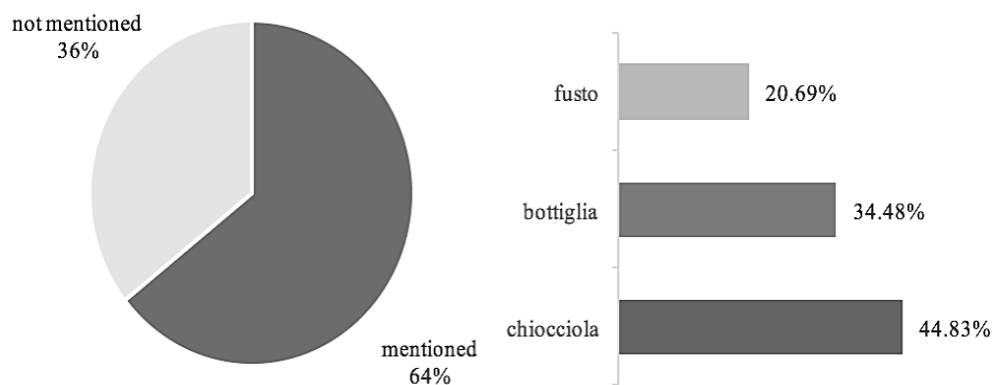
Combining the previous considerations with an analysis by area it emerges that the majority of breweries mentioned in the Slow Food guide and that belong to the sample analysed are located in the Centre and in the North-West (Graph 16).

Graph 16: Differences in the Slow food mention by brewery cluster and by area
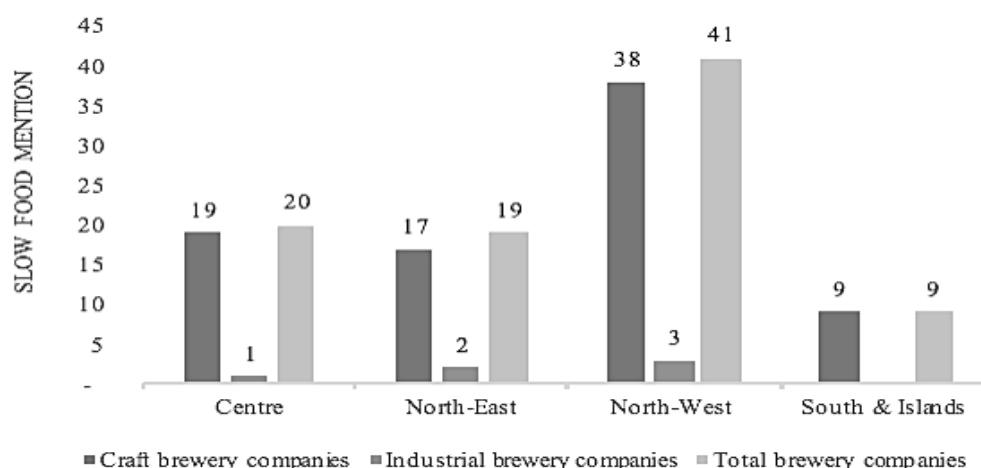
Even if, as visible in the Table 3, in the Centre and in the North-West are located the 61.5% of the companies analysed, these two areas' weight on the overall number of breweries mentioned is much higher and it is equal to 68.5%. The previous result highlights that on average the 73.0% of the companies located in these areas are included in the Slow food book while in the remaining parts of Italy the proportion is on average equal to 52.1%.

In addition, it is worth to notice that the concentration of beers that received a special notion is much higher in the Centre respect the proportion of beers offered and the ratio is equal to 8.2%, but this is mainly due because of the higher number of breweries rewarded. Given that on average breweries that obtain a special brewery reward are the ones that receive also the beer's Slow food special notion, by dividing the total number of beers rewarded for the number of breweries that have received the special brewery reward some interesting data emerge. The North-West has the highest average number of rewarded beers with 4.91 and it is followed by the South & Islands area with 3.50 beers and by the North-East in joint place with the Centre both the third position. Given the lowest number of breweries mentioned and rewarded in the South & Islands, the average 3.50 beers of this area is the most interesting result. Indeed, this data show that no matter the lowest distribution of breweries in this area the ones that are present have also a certain continuity in the production quality.

Table 3: Comparison between the area and the reward distribution

	Centre	North-East	North-West	South & Islands	Total
Distribution	28	31	55	21	135
%	20.7%	23.0%	40.7%	15.6%	100%
Slow food mention	20	19	41	9	89
%	22.5%	21.3%	46.1%	10.1%	100%
Special brewery reward	8	8	11	2	29
%	27.6%	27.6%	37.9%	6.9%	100%
Slow food special notion	22	22	54	7	88
%	21.0%	21.0%	51.4%	6.7%	100%
Distribution n. of beers	326	350	659	100	1,435
%	22.7%	24.4%	45.9%	7.0%	100%
Proportion of brewery mentioned on the total	71.4%	61.3%	74.5%	42.9%	65.9%
Proportion of beer rewarded	6.7%	6.3%	8.2%	7.0%	6.1%
Average number of beers rewarded per special breweries	2.75	2.75	4.91	3.50	3.62

The data just presented highlight that the quality is a complex concept and could be interpreted using different variables that provide different degrees and aspects of quality, but the presence of expert advisors' opinions could give the reader reassurance about the product quality evaluation.

From the previous reported statistics, it is evident that both consumers and judges perceive a difference in the product attributes between the craft-industrial clusters and on average **craft beers are high-end products**, which are the results of an accurate choice of ingredients and of an innovative production process.

4.2.4. THE SOCIAL ATTITUDE

As visible in the Graph 1, on average the companies included in the sample use two social media platforms over the four considered and through them they share on average 436 contents and have 164,951 followers. These results are aggregate numbers and contain both the craft and the industrial breweries data and given the differences in size and in brand awareness additional differences also in the social attitude are expected.

The average **social media presence** of the sample is 2.07 over four different social media, but there is a difference between industrial and craft brewery companies both in the individual platforms (Facebook, Twitter, Instagram and YouTube) and in the aggregate variable (be social) (Graph 17). At aggregate level, it is possible to notice a difference in the average number of social media used, but even if the industrial breweries are on average more interested in the social media (Graph 18), this difference is enough to assume a structural difference in the use of social media. Comparing the social media presence of the two firms' clusters among four different platforms, it is possible to notice that Facebook is the most used social media followed by Twitter, Instagram and YouTube (Graph 17). Considering that the four social media are well known among the public, the difference in the distribution in the social media should be structural of the industry. It seems that both industrial and craft beer-brewery companies prefer to be present where they have highest chance to interact with their target users, but industrial breweries respect to the craft ones are on average more interested in the presence in YouTube and in Instagram. Even though the difference in the social media presence between the two clusters is low, in the remaining variables this difference is much higher.

Graph 17: Differences in the social media presence
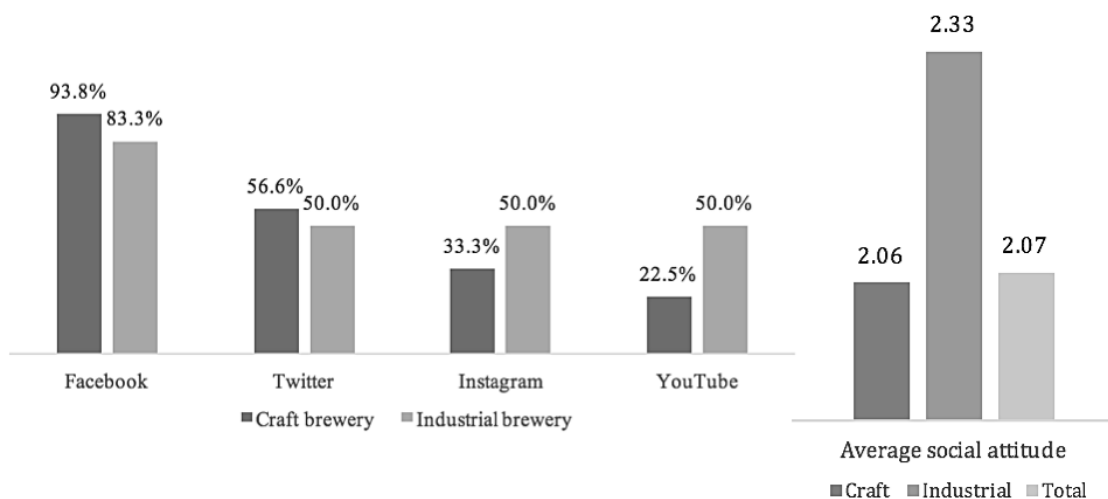
Graph 18: Boxplot be social by brewery cluster

There is a difference in participation among the social media platforms both in the average number of contents shared through each platform (Twitter tweets, Instagram posts and YouTube videos) both in the aggregate **number of contents shared**. Indeed, the industrial beer-brewery firms differentiate themselves through the volume of content shared which is more than thirteen times higher than the craft one (Table 4). Considering the contents shared by type of contents, it emerges that both industrial and craft breweries prefer to participate in the social media arena by posting tweets rather than other media contents (Graph 19). This difference in the contents participation mix could be mainly related to the strategic decision to invest in the channels where companies have higher chance to interact with consumers or to the effort required to create and share the different types of contents. Indeed, create and publish an Instagram image or a video because of the high information richness of the content requires more time and efforts than just post a tweet made of 120 characters, at the same time a tweet could reach a higher public thanks to the highest proportion of people daily using the Twitter platform.

Table 4: Sample descriptive statistics

		N	Mean	Standard deviation	p5	p25	p50	p75	p95
Craft breweries	NUMBER OF CONTENTS SHARED	129	299.806	846.136	0	0	7	186	1,525
	FOLLOWERSHIP	129	3,898.992	5,940.682	0	945	2,324	4,597	13,844
Industrial breweries	NUMBER OF CONTENTS SHARED	6	3,981.833	5,911.835	0	0	385	10,553	12,568
	FOLLOWERSHIP	6	3,627,584	7,767,403	0	7,196	109,302	2,149,878	19,400,000
Total breweries	NUMBER OF CONTENTS SHARED	135	463.452	1,602.514	0	0	9	207	1,784
	FOLLOWERSHIP	135	164,952	1,677,223	0	945	2,352	5,210	20,392

Graph 19: Differences in the average social media participation

| 91.9% | 7.8% | 0.3% | *Craft breweries* |
| 98.9% | 1.0% | 0.2% | *Industrial breweries* |
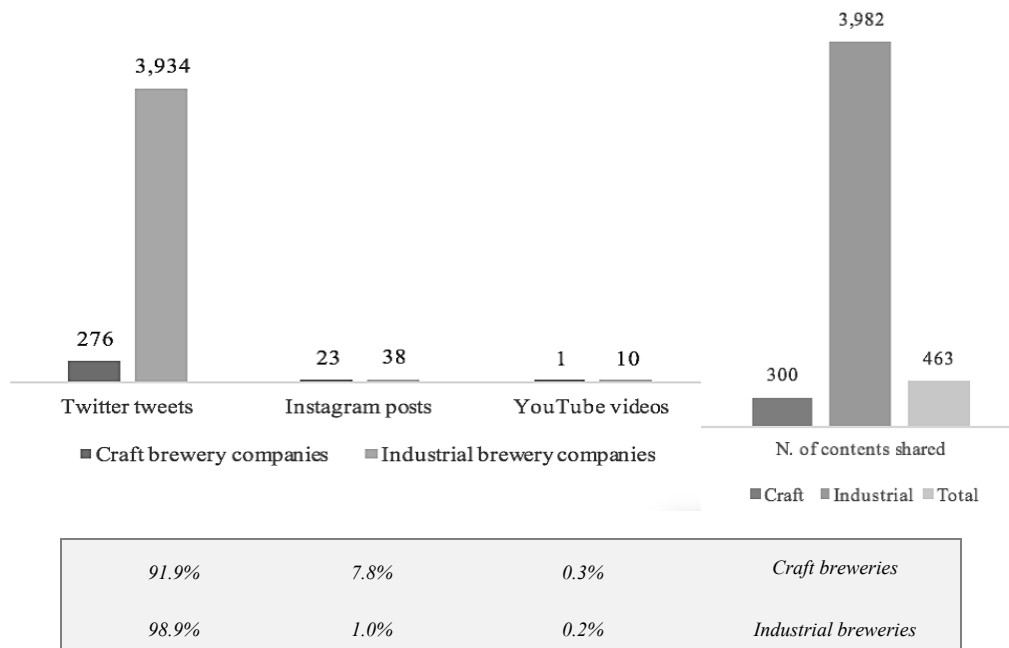
In addition, the data show a difference between the **number of followers** among the two brewery clusters (Graph 20). While on average industrial breweries have a followership value equal to 3,627,528 craft breweries have just 3,899 with the highest difference in the average number of Facebook likes, which is more than 1064 times higher in the industrial companies. Even though this huge difference in terms of average followers, craft breweries have better

performances if compared with their average production capacity with a followership over production capacity rate equal to 3.43, quite double respect the industrial one (Table 5). Therefore, excluding the size effect, craft breweries are able to overcome their production limits and attract consumers through the social media.

Graph 20: Differences in the average social media followership
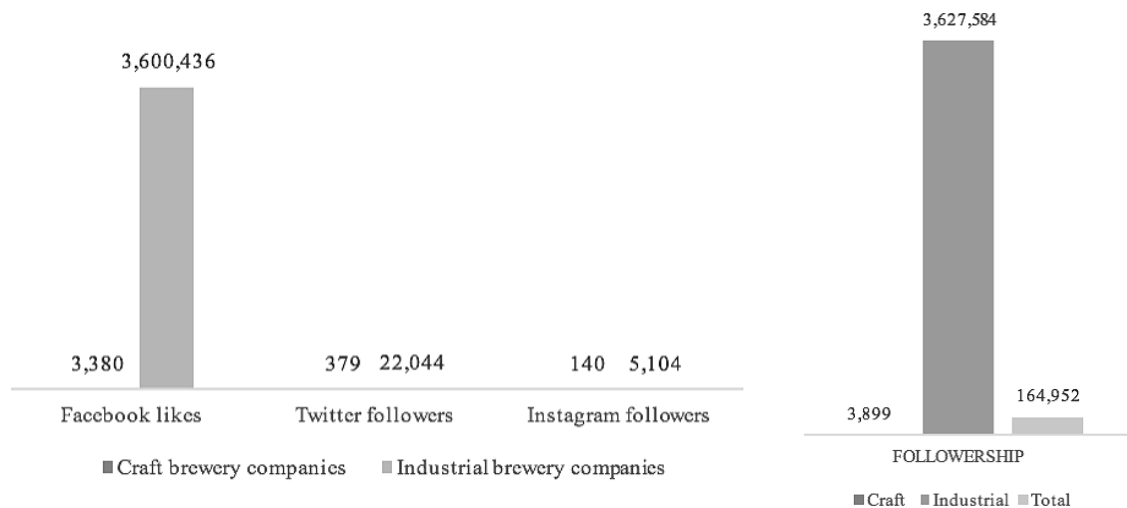
Table 5: Sample descriptive statistics

	Average Production capacity	Average Followership	Followership without size effect
Craft breweries	*1,136.7*	*3,899*	*3.43*
Industrial breweries	*2,067,666.7*	*3,627,583.8*	*1.75*

Combining the previous considerations with an analysis by area it emerges that the same differences are reflected in the distribution per area of the three variables. The average social presence slightly changes across areas and in the following graph it is visible a sort of trend between the data distribution (Graph 21). Industrial breweries have on average higher social media presence respect the craft ones in all areas ad exception of the North-East, in addition the Centre and the North-West have the highest average social media presence and both on the total values and separately on the two clusters values.

Even though the Centre and the North-West areas have accounted the highest average social presence, it seems that there is a high variety among the data registered for the average the number of contents and the average followership values by areas.

Graph 21: Differences in the average social media variables by brewery cluster and by area

AVERAGE BE SOCIAL

Centre: 2.4 / 4.0 / 2.4
North-East: 1.8 / 1.5 / 1.8
North-West: 2.1 / 2.3 / 2.1
South & Islands: 2.0 / 2.0

■ Craft brewery companies   ■ Industrial brewery companies   ■ Total brewery companies

AVERAGE NUMBER OF CONTENTS SHARED

Centre: 422 / 12,568 / 855
North-East: 500 / 12 / 468
North-West: 177 / 3,767 / 373
South & Islands: 170 / 170

■ Craft brewery companies   ■ Industrial brewery companies   ■ Total brewery companies

AVERAGE FOLLOWERSHIP

Centre: 4,719 / 171,293 / 10,668
North-East: 3,783 / 27,253 / 5,297
North-West: 4,064 / 7,179,901 / 395,473
South & Islands: 2,596 / 2,596

■ Craft brewery companies   ■ Industrial brewery companies   ■ Total brewery companies

From the previous reported statistics, it is evident that the industrial brewery firms **invest more time and resources** in the social media activities. Indeed, even if the two clusters show a similar social attitude, they share more contents through these channels. In addition, there is also a significant difference in the interest manifested by the public and this interest is expressed by the customers' willingness to follow a specific profile. This difference could be the direct consequence of the higher number of contents shared and the richness of the message spread and these two aspects together stimulate the users' attention catching and entertain them.

4.2.5.   THE PERFORMANCE VARIABLES

The sample is characterized by heterogeneity. On average the breweries contained in the database presented in 2014 the following performances (Graph 22) which underline an average low marginality in the business corresponding to 10% over revenues and a final positive result equal to just 5% over revenues.

Graph 22: Average sample performances
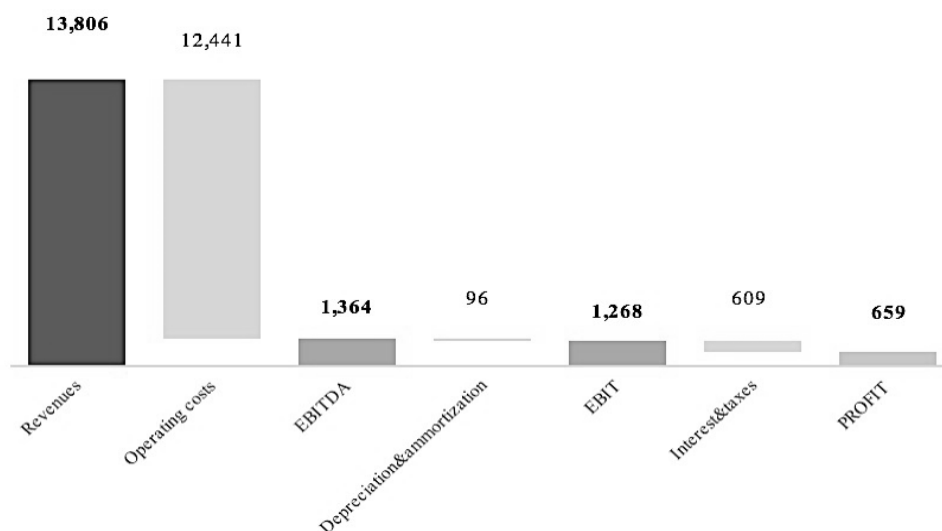
It is worth to notice that the previous data are mainly influenced by the high performances registered by the industrial breweries, which are more than 500 times higher than the average craft breweries' values (Table 6). In the same table, it is possible to observe that total assets and equity data are coherent with the assumption of higher industrial breweries' size and of higher investments. In addition, the same clusters' differences, given the industrial breweries' distribution, are reflected also in the average values by areas (Table 7): the presence of Birra

Menabrea s.p.a in the North-West caused this area performance positive peak, while the presence of just smaller craft breweries size in the South & Islands caused the later area's bad performances.

Table 6: Differences in the average performance results by cluster

2014 data	Revenues	EBITDA
Craft brewery company	469	34
Industrial brewery company	249,427	29,968
Total	**13,806**	**1,364**

Table 7: Differences in the average performance results by area

2014 data	Revenues	EBITDA
Centre	14,359	1,515
North-East	9,149	697
North-West	19,241	2,174
South & Islands	435	26
Total	**13,806**	**1,364**

On average, the companies included in the sample have accounted a variety results in terms of performances over a period of six years. On average breweries have experienced a considerable average revenues growth rate equal to 335%, but this result was mainly pushed by the craft brewery companies' growth (Table 8). Indeed, craft breweries being on average younger have experienced a higher growth, but on average lower revenues values if compared with the industrial results.

In addition, as visible from the data contained in the same table, on average companies in the database registered a negative EBITDA/revenues ratio. Also in this case these results are mainly influenced by the high volume of craft breweries which have on average lower marginality if compared with the industrial breweries given the higher costs.

Indeed, even if the beer industry is growing after few years of drop and stagnation caused by the modern global crisis, the fact that the industry forces companies to change, but not every company is able to adapt to that changes have caused many transformations in the beer industry market. Even if this situation seems to have advantaged craft breweries which are more flexible and able to provide high quality beers, in the reality industrial breweries have

obtained the highest advantages being more economically and financially stables and less subject to market shocks. Given the heterogeneity of performance values, the research decides to transforms the average revenues growth and the average EBITDA/revenues variables in deciles to avoid extreme values effects.

Table 8: Differences in the average performance ratios by cluster

	Average revenues growth	Average EBITDA/revenues
Craft brewery company	*353.2%*	*-0.36*
Industrial brewery company	*1.8%*	*0.12*
Total	***335.2%***	***-0.34***

The cluster differences are also reflected in the average performance ratios. Even if craft breweries have experienced on average higher revenues growth, industrial breweries have on average better profitability.

4.3. CLUSTER DIFFERENCES TEST

In this paragraph, the research is going to perform some tests on the sample of data. Combining the previous descriptive analysis with a t-test statistic, it emerges that there are significant differences in the mean values of variables among the two brewery clusters and the results are visible in the following table (Table 9).

Testing the hypothesis that there is no mean difference among the two groups of breweries in the **quality** variables, there is empirical evidence that the craft breweries offer a lower number of beers, have lower count of ratings, but have on average higher reviews ratings and therefore it is possible to reject the null hypothesis under a level of significance lower than 0.01. At the same time, there is no empirical evidence to reject the hypothesis that the two clusters have equal mean abv values and abv standard deviations given the p-value higher than 0.10 and, in addition, there is no empirical evidence to show the existence of a mean difference in the expert advisors' quality evaluation by brewery. The difference that emerges between the consumers' quality evaluation and the expert advisors' opinion is interesting because this result highlights that the customers clearly distinguish the beer quality and they attribute to craft beers higher product qualities.

Therefore, the previous reported data suggest that on average industrial and craft breweries' product offering is not so differentiated in terms of abv, but instead in the product range offered and the quality of products.

Testing the hypothesis that there is no mean difference among the two groups of breweries in the **social attitude** variables, there is no evidence to reject the hypothesis that craft breweries and industrial ones are present in different social media. Instead, there is empirical evidence to sustain that the number of contents posted differs among the two clusters both in the aggregate variable and the single number of Twitter tweets or YouTube videos. In addition, it is possible also to reject the null hypothesis of no mean difference in the values of the followership variables under a level of significance lower than 0.01. It is interesting to notice that even if the two clusters have their own peculiarities they are homogeneous in the social media presence and this highlights that both clusters are interested in the social media arena. Even if industrial breweries and craft ones have equal distribution among social media, what emerges is that there is a difference in the social media participation and more precisely industrial breweries post on average more contents. The analysis highlights that industrial breweries have on average higher number of followers among the three social media platforms and this could suggest that they have higher contents quality.

In addition, it is possible to reject the hypothesis that the mean values difference is zero in the **controlling variables**, highlighting that industrial breweries have on average higher age, higher number of employees and have higher production capacity.

The previous reported data are coherent with the common belief that there are significant differences among the two breweries' clusters and these differences are visible both in the quality variables and in the social attitude ones.

The cluster differences are sometimes reflected in the **difference of values by areas** and for this reason it could be interesting to see if there are significant differences among areas and the results of the tests are listed below in the Table 10.

It is interesting to notice that there is a strong and significant difference in the number of beers by area and in the production capacity, and the data show that the North-West area has on average the higher quantity of beers and the higher production capacity. This data is coherent with the presence of industrial breweries in three over four areas and the simultaneous presence of three of them in the North-West causes the significant difference in the mean values by area. Another interesting result is the significant difference in the YouTube presence among areas and the North-West is still ranked in the first position being the area most interested in the YouTube presence.

Table 9: Test differences in the mean value by brewery cluster

diff = mean(0) - mean(1)

Ho: diff = 0

	t	Ha: diff != 0 Pr(|T| > |t|) =	Craft brewery mean(0)	Industrial brewery mean(1)
NUMBER OF BEERS	-3.979	0.0001***	9.922	25.833
AVERAGE ABV	1.638	0.104	0.059	0.051
AVERAGE SD ABV	0.206	0.838	0.039	0.014
AVERAGE COUNT OF RATING	-6.468	0.000***	11.361	70.741
OVERALL AVERAGE RATING	6.411	0.0001***	2.938	2.435
SLOW FOOD MENTION	-1.810	0.0726*	0.643	1.000
SPECIAL BREWERY REWARD	1.309	0.193	0.225	0.000
Chiocciola Slow food	0.814	0.417	0.101	0.000
Bottiglia Slow food	0.705	0.482	0.078	0.000
Fusto Slow food	0.537	0.592	0.047	0.000
SLOW FOOD SPECIAL NOTION	1.369	0.173	0.814	0.000
BE SOCIAL	-0.584	0.561	2.062	2.333
Facebook	1.001	0.319	0.938	0.833
Twitter	0.316	0.753	0.566	0.500
Instagram	-0.838	0.404	0.333	0.500
YouTube	-1.552	0.123	0.225	0.500
NUMBER OF CONTENTS SHARED	-6.230	0.000***	299.806	3,981.833
Twitter tweets	-6.257	0.000***	275.566	3,934.000
Instagram posts	-0.568	0.571	23.357	38.167
YouTube videos	-5.497	0.000***	0.884	9.667
FOLLOWERSHIP	-5.761	0.000***	3,898.992	3,627,584.000
Facebook likes	-5.764	0.000***	3,380.388	3,600,436.000
Twitter followers	-5.276	0.000***	379.039	22,044.330
Instagram followers	-5.343	0.000***	139.566	5,103.500
AGE	-12.956	0.000***	6.395	43.000
NUMBER OF EMPLOYEES	-12.208	0.000***	2.558	379.667
PRODUCTION CAPACITY	-11.036	0.000***	1,136.667	2,067,667.000

*Notes: Craft brewery (0) Industrial brewery (1), p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

Table 10: Test differences in the mean value by area

	Chi-squared with ties	Probability	Area			
			Centre	North-East	North-West	South & Islands
NUMBER OF BEERS	14.587	0.002***	2,075	2,140	4,153	813
AVERAGE ABV	3.982	0.263	2,096	1,745	3,818	1,522
AVERAGE SD ABV	4.542	0.209	1,719	2,101	4,162	1,200
AVERAGE COUNT OF RATING	4.361	0.225	1,732	1,598	3,472	579
OVERALL AVERAGE RATING	3.625	0.305	1,842	1,649	3,249	641
SLOW FOOD MENTION	7.413	0.060*	2,008	2,011	4,060	1,101
SPECIAL BREWERY REWARD	3.008	0.390	2,038	2,199	3,685	1,259
Chiocciola Slow food	1.564	0.668	1,925	2,042	3,855	1,359
Bottiglia Slow food	3.493	0.322	2,034	2,156	3,600	1,391
Fusto Slow food	3.087	0.378	1,888	2,218	3,710	1,365
SLOW FOOD SPECIAL NOTION	3.317	0.345	1,979	2,125	3,889	1,188
BE SOCIAL	3.968	0.265	2,214	1,854	3,743	1,369
Facebook	3.627	0.305	1,963	2,045	3,853	1,320
Twitter	0.964	0.810	1,988	2,078	3,810	1,305
Instagram	4.323	0.229	2,205	1,935	3,623	1,418
YouTube	6.74	0.081*	2,131	1,815	3,670	1,565
NUMBER OF CONTENTS SHARED	3.394	0.335	2,168	2,122	3,683	1,208
Twitter tweets	3.929	0.269	2,198	2,162	3,574	1,247
Instagram posts	1.079	0.782	2,049	2,025	3,737	1,370
YouTube videos	5.08	0.166	2,135	1,871	3,667	1,507
FOLLOWERSHIP	3.567	0.312	2,215	2,060	3,674	1,231
Facebook likes	2.432	0.488	2,165	2,070	3,673	1,272
Twitter followers	5.098	0.165	2,175	2,050	3,827	1,129
Instagram followers	5.054	0.168	2,253	1,976	3,588	1,364
AGE	1.566	0.667	1,797	2,228	3,581	1,576
NUMBER OF EMPLOYEES	4.152	0.246	2,112	2,099	3,835	1,135
PRODUCTION CAPACITY	11.865	0.008***	2,156	2,136	4,000	889

*Notes: p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

The previous results highlight that the sample clearly reflect the difference in the industrial and the craft beer division both in the mean values by cluster and in the mean values by area. Moreover, this significant difference in the values of industrial and craft breweries could suggest that could be also interesting to analyse the differences among the craft breweries, beyond the two cluster comparison.

4.4. CORRELATION TEST

The research continues by performing a correlation analysis to see if among the variables there are some linear relationships and the results are visible in the following table (Table 11). Even if all the variables have been tested for the correlation, the research is going to analyse just correlations that involves different determinants ("be good" and "be social" variables) or within them groups of measures of the same determinants. For this reason, the research will not analyse the strict relationships within aggregate variables and the ones that composed them (e.g. be social and Facebook presence, Twitter presence, Instagram presence and YouTube presence) or the relationships within different variables that belong to the same group of measures, excepting the case of interesting results.

More precisely, the correlation matrix in Table 11 highlights a positive and strong linear relationship between the four **controlling variables** with a p-value lower than 0.01. The existence of a sort of relationship between the four controlling variables has already been accessed by performing a cluster comparison, but now, thanks to the correlation matrix, there is empirical evidence that there is a positive and strong linear relationship. The latter data suggests that moving from the craft brewery cluster to the industrial one the number of employees, the age and the production capacity proportionally increase.

In addition, the correlation matrix highlights that the four controlling variables related to the size have a strong relationship with both **quality measures** and social attitude ones. More in concrete, the four controlling variables have a strong and negative linear relationship with the the overall average rating and this data suggests that the higher is the company size the lower is the average quality of beers produced. Instead, the existence of a strong and positive linear relationship with the average count of rating and the number of beers could suggest that the higher is the company size the higher is the product offering and the size has also a positive effect on the public interest, usually given the higher brand awareness. From the same matrix, it is possible to deduce that the four controlling variables have a strong and positive linear relationship with the **social attitude variables**, excluded the be social variable.

The previous data could suggest that the higher is the size, the higher is the ability to participate actively in the social media arena and doing so they encourage consumers to follow them given the higher brand visibility. In addition, also the fact that the majority of the be social variables has not a linear relationship with the brewery size is interesting because it suggests that the size does not influence directly the presence among social media platforms.

The correlation matrix results show that there is a strong and positive linear relationship between the customers' quality evaluation variables and the expert advisor opinions ones, and this data could suggest that both quality measures provide similar information. This data indicates that the objective quality evaluation provided by expert advisors is in line with the subjective **quality** evaluation provided by consumers and both provide **reliable information** about the overall brewery's quality.

In addition, it is visible there is a strong and positive linear relationship between the **social attitude variables and the quality variables**, especially the number of beers, the average count of rating and the overall average rating. This data could suggest that the higher is the company presence and participation in the social media, the higher is the consumers' interest towards the company's products.

The overall average rating instead has a strong and negative linear relationship with the number of contents shared and the followership. This data could suggest that companies that do not have high quality products pay much attention to the social media participation to counterbalance their quality lack. Therefore, higher is the company participation and attention to the social media the lower is in the reality the quality of beers.

To conclude, the correlation analysis has highlighted many strong linear relationships within the variables analysed, but the absence of any linear relationships does not involve the absence of any other kind of relationships among variables.

Table 11: Correlation matrix

	AGE	BREWERY CLUSTER	NUMBER OF EMPLOYEES	PRODUCTION CAPACITY	mean delta revenues	EBITDA/revenues mean	NUMBER OF BEERS	AVERAGE COUNT OF RATING	OVERALL AVERAGE RATING	AVERAGE ABV	AVERAGE SD ABV	BE SOCIAL	Facebook	Twitter	Instagram
AGE	1														
BREWERY CLUSTER	0.747**	1													
NUMBER OF EMPLOYEES	0.553**	0.727**	1												
PRODUCTION CAPACITY	0.4361**	0.691**	0.983**	1											
mean delta revenues	-0.151	-0.063	-0.047	-0.044	1										
EBITDA/revenues mean	0.254**	0.103	0.081	0.073	-0.259**	1									
NUMBER OF BEERS	0.315**	0.326**	0.281**	0.271**	-0.152	0.252**	1								
AVERAGE COUNT OF RATING	0.432**	0.510**	0.578**	0.565**	-0.028	0.134	0.532**	1							
OVERALL AVERAGE RATING	-0.257**	-0.507**	-0.414**	-0.423**	0.087	0.045	0.196*	0.087	1						
AVERAGE ABV	-0.050	-0.141	-0.124	-0.127	-0.274**	0.211*	0.203*	0.166	0.524*	1					
AVERAGE SD ABV	0.028	-0.018	-0.009	-0.011	-0.030	0.035	0.012	-0.030	0.049	0.050	1				
BE SOCIAL	0.026	0.051	0.209*	0.209*	0.192**	0.005	0.194**	0.288**	0.209*	0.035	-0.081	1			
Facebook	-0.023	-0.087	0.048	0.034	0.051	0.084	0.167	-0.052	0.236**	0.044	0.026	0.501***	1		
Twitter	-0.041	-0.027	0.087	0.097	0.111	0.046	0.244**	0.213*	0.198*	0.132	-0.095	0.774***	0.303**	1	
Instagram	-0.002	0.073	0.155	0.172*	0.162	-0.069	0.041	0.248**	0.119	-0.036	-0.062	0.715***	0.192*	0.381**	1
YouTube	0.130	0.133	0.241*	0.220*	0.171	-0.011	0.076	0.223*	0.039	0.012	-0.047	0.608***	0.149	0.245**	0.187*
NUMBER OF CONTENT SHARED	0.259***	0.475***	0.801***	0.835***	-0.047	0.110	0.361***	0.604***	-0.157	0.005	-0.021	0.330***	0.078	0.253**	0.235**
Twitter tweets	0.258***	0.477***	0.802***	0.836***	-0.048	0.108	0.359***	0.598***	-0.165	0.184*	-0.020	0.315***	0.074	0.244**	0.216*
Instagram posts	0.062	0.049	0.135	0.136	0.014	0.071	0.113	0.263**	0.176	0.028	-0.028	0.453***	0.104	0.288**	0.539***
YouTube n. videos	0.475***	0.430***	0.565***	0.504***	-0.043	0.025	0.272**	0.507***	-0.076	-0.083	-0.023	0.373***	0.081	0.146	0.188**
FOLLOWERSHIP	0.435***	0.447***	0.775***	0.739***	-0.028	0.050	0.185*	0.409***	-0.279**	-0.083	-0.006	0.160	0.026	0.086	0.135
Facebook likes	0.435***	0.447***	0.775***	0.739***	-0.028	0.050	0.185*	0.408***	-0.279**	-0.061	-0.006	0.160	0.026	0.085	0.135
Twitter followers	0.399***	0.416***	0.789***	0.755***	-0.029	0.058	0.220*	0.463***	-0.233**	-0.061	-0.008	0.188*	0.033	0.110	0.149
Instagram followers	0.390***	0.420***	0.797***	0.767***	-0.024	0.061	0.225**	0.487***	-0.225**	-0.047	-0.010	0.225**	0.040	0.122	0.206*
SPECIAL BREWERY REWARD	0.033	-0.113	-0.070	-0.077	-0.087	0.225**	0.565***	0.327***	0.556***	0.303***	0.174*	0.193*	0.140	0.243**	0.119
chiocciola slow food	0.111	-0.070	-0.041	-0.042	-0.088	0.172*	0.532***	0.267**	0.371**	0.222**	-0.021	0.137	0.087	0.186*	0.030
bottiglia slow food	-0.040	-0.061	-0.043	-0.032	-0.043	0.118	0.075	0.084	0.319**	0.217**	0.311***	0.160	0.076	0.135	0.155
fusto slow food	-0.043	-0.047	-0.026		0.010	0.050	0.269**	0.156	0.158	0.011	-0.018	-0.014	0.058	0.045	-0.003
SLOW FOOD MENTION	0.035	-0.118	-0.076	-0.080	-0.073	0.238**	0.583***	0.361***	0.590***	0.393***	0.084	0.161	0.146	0.198*	0.068
SLOW FOOD NOTION	0.192*	0.155	0.120	0.109	-0.162	0.311**	0.440***	0.293**	0.274**	0.319***	0.071	0.076	0.121	0.186*	-0.110

	YouTube	NUMBER OF CONTENT SHARED	Twitter tweets	Instagram posts	YouTube n. videos	FOLLOWERSHIP	Facebook likes	Twitter followers	Instagram followers	SPECIAL BREWERY REWARD	chiocciola slow food	bottiglia slow food	fusto slow food	SLOW FOOD MENTION	SLOW FOOD NOTION
YouTube	1														
NUMBER OF CONTENT SHARED	0.2568**	1													
Twitter tweets	0.2507**	0.9993***	1												
Instagram posts	0.1831**	0.2383***	0.2008*	1											
YouTube n. videos	0.5434***	0.4692***	0.4607***	0.2666***	1										
FOLLOWERSHIP	0.1514	0.5511***	0.5494***	0.1557	0.3850***	1									
Facebook likes	0.1512	0.5506***	0.5489***	0.1554	0.3846***	1.0000***	1								
Twitter followers	0.1760**	0.6027***	0.6006***	0.1768**	0.4250***	0.9900***	0.9898***	1							
Instagram followers	0.1904**	0.6208***	0.6160***	0.2454***	0.4720***	0.9794***	0.9792***	0.9932***	1						
SPECIAL BREWERY REWARD	0.0053	0.1322	0.1286	0.1189	0.0817	-0.0489	-0.0493	-0.001	0.006	1					
chiocciola slow food	0.0542	0.0324	0.0293	0.0744	0.1817*	-0.03	-0.0303	0.0096	0.022	0.624***	1				
bottiglia slow food	0.0419	0.1790*	0.1770*	0.0971	-0.0252	-0.0268	-0.0269	-0.0063	-0.002	0.541***	-0.092	1			
fusto slow food	-0.1202	-0.0103	-0.0105	0.0069	-0.0653	-0.0205	-0.0206	-0.0077	-0.016	0.412***	-0.070	-0.061	1		
SLOW FOOD MENTION	0.0258	0.1174	0.1134	0.1199	0.1871*	-0.051	-0.0514	-0.0028	0.015	0.830***	0.669***	0.402***	0.185*	1	
SLOW FOOD NOTION	0.0332	0.1433	0.1423	0.0531	0.0951	0.0699	0.0698	0.085	0.083	0.376***	0.235***	0.203*	0.155	0.393***	1

*Notes: P-value in brackets *p<0.5 **p<0.01*

5 BE BOTH

5.1. REGRESSION ANALYSIS

The research aims to study if the quality and social attitude have a positive association with the corporate performances and wants to understand if it is more important for a brewery firm to "be good or be social" in order to provide companies some useful guidelines for their long term strategy. More in detail the research is willing to test two main hypotheses:

H_A – *The quality has a positive association with the company performance.*

H_B – *The social attitude has a positive association with the company performance.*

To test the previous relationship hypotheses, the research is going to adopt a common regression equation and adjust it for the two clusters of variables:

$$Performance = \alpha + \sum \beta_i \times (quality) + \sum Y_i \times (social\ attitude) + \varepsilon_i$$

where the dependent variable Y_i is the performance, the independent variables are the quality and the social attitude, α is the intercept, β_i and Y_i are respectively the quality and the social attitude's angular coefficients and ε_i is the statistical error.

For sake of simplicity the regression analyses are going to be divided by performance indicators changing the independent variables tested and for explanatory purposes the models will be divided into "be good" and "be social" variables.

In the model selection, the research decides to progressively test one by one the independent variables including in the analysis also the controlling variables. Once performed this, a multi-variable regression model is going to be performed combining the variables with and without controlling variables. Given that the brewery cluster dummy is strongly and positively correlated with the other controlling variables, the research has decided to exclude it from the analysis, preferring more informative variables.

Last but not least, for each performance indicators will be performed a model that include a poll of the most interesting quality and social media variables and this model would be called "be both" to clearly represent the combination of both variables.

5.2. AVERAGE REVENUES GROWTH

Analysing one by one each variable, it emerges that not every variable is directly associated with the average revenues growth and the results of the analysis are visible in the following pages. To clarify the analysis outcomes, the results have been grouped into the quality and social attitude clusters, respectively called "be good" and "be social".

Taking into consideration the **quality cluster**, a significant positive relationship was expected between the quality variables and the performance variables (H_A). However, as visible from the Table 12, the results show that there is just one quality variable that has a significant relationship with the average revenues growth, while for the remaining variables there is not empirical evidence of a direct relationship.

Differently from the expectations (H_{A2}), the numbers of beers offered is negatively associated with the average growth rate and this data could suggest that the higher is the number of products offered the higher is the cannibalization of sales. Indeed, the fact that products could be not perfectly differentiated could impact negatively the customers' decision choice reducing the volume of beers sold because products do not meet the customers taste or the characteristics of consumption occasion. It is possible to summarize the previous result as:

The product range expressed through the number of beers has a negative association with the average revenues growth.

In addition, looking the quality regression matrix visible in the Table 12 it emerges that all the controlling variables are significant, but the impact on the average revenues growth changes from one measure to the other. More in concrete, the age has a negative impact on the average revenues growth and this is coherent with the common belief that younger firms experience higher growth rate starting from null volumes of sales, while older ones instead are more stable and given the higher amount of revenues cannot sustain the growth rate that they have experienced in the early stages of their lifecycle. The number of employees instead has a positive effect on the average revenues growth and this data suggests that investing in the human resources increasing the company size could be beneficial to the revenues growth. The production capacity has a significant, but negative effect on the revenues growth. This result could indicate that even if the production capacity is higher, but the company has already reached the optimal production, performances could not improve, they would just become worst if the optimal production volumes are overcome.

Table 12: Average revenues growth regression analysis using "be good" and controlling variables

| Variables | Average revenues growth | | | | | | | | | | | | | | |
| | Single variables + controlling variables | | | | | | | | | | | Combination of variables | | Combination of variables + controlling variables | |
Models	1	2	3	4	5	6	7	8	9	10	11	12	15	18	21
NUMBER OF BEERS	-0.045 (0.024)											-0.081* (0.033)	-0.075* (0.034)	-0.057 (0.030)	-0.051 (0.032)
AVERAGE ABV		-10.229 (20.945)										56.390 (38.363)	59.656 (38.211)	49.935 (34.730)	51.555 (35.032)
AVERAGE SD ABV			-0.735 (0.730)									-1.204 (0.772)	-1.207 (0.785)	-0.789 (0.702)	-0.822 (0.721)
AVERAGE COUNT OF RATING				0.002 (0.011)								-0.009 (0.011)	-0.010 (0.011)	0.004 (0.013)	0.002 (0.013)
OVERALL AVERAGE RATING					0.679 (1.173)							2.972 (1.621)	2.859 (1.606)	0.921 (1.696)	0.990 (1.694)
SLOW FOOD MENTION						0.742 (0.527)						0.720 (0.660)	0.631 (0.655)	0.864 (0.602)	0.777 (0.604)
SPECIAL BREWERY REWARD							-0.470 (0.540)					-0.025 (1.040)		0.174 (0.960)	
chiocciola slow food								-1.350 (0.738)					-1.744 (1.370)		-1.045 (1.263)
bottiglia slow food									0.343 (0.835)				-0.424 (1.230)		0.057 (1.155)
fiasto slow food										0.351 (1.062)			1.065 (1.294)		0.789 (1.205)
SLOW FOOD NOTION											-0.130 (0.157)	-0.197 (0.324)	0.040 (0.340)	-0.260 (0.304)	-0.107 (0.321)
AGE	-0.202*** (0.037)	-0.217*** (0.037)	-0.215*** (0.037)	-0.216*** (0.037)	-0.212*** (0.036)	-0.222*** (0.037)	-0.215*** (0.037)	-0.206*** (0.037)	-0.216*** (0.037)	-0.216*** (0.037)	-0.215*** (0.037)			-0.191*** (0.038)	-0.180 (0.039)
NUMBER OF EMPLOYEES	0.061*** (0.016)	0.065*** (0.016)	0.065*** (0.016)	0.066*** (0.016)	0.065*** (0.016)	0.066*** (0.016)	0.065*** (0.016)	0.062*** (0.016)	0.065*** (0.016)	0.065*** (0.016)	0.065*** (0.016)			0.058*** (0.016)	0.055 (0.016)
PRODUCTION CAPACITY	-9.90E-06*** (2.63E-06)	-1.07E-05*** (2.65E-06)	-1.05E-05*** (2.64E-06)	-1.09E-05*** (2.56E-06)	-1.05E-05*** (2.58E-06)	-1.08E-05*** (2.63E-06)	-1.06E-05*** (2.64E-06)	-1.02E-05*** (2.62E-06)	-1.06E-05*** (2.65E-06)	-1.06E-05*** (2.65E-06)	-1.06E-05*** (2.64E-06)			-9.22E-06*** (2.65E-06)	-8.78E-06 (-2.67E-06)
AREA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
_cons	6.664*** (0.667)	7.151*** (1.429)	6.533*** (0.671)	6.887*** (0.756)	4.914*** (3.495)	6.157*** (0.720)	6.583*** (0.674)	6.543*** (0.664)	6.512*** (0.676)	6.527*** (0.674)	6.582*** (0.674)	-5.736 (4.347)	-5.633 (4.297)	0.977 (4.776)	0.662 (4.784)
N	117	117	117	108	108	117	117	117	117	117	117	108	108	108	108
R2	0.278	0.256	0.262	0.293	0.295	0.268	0.260	0.277	0.256	0.255	0.259	0.156	0.175	0.326	0.328

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

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Another consideration is that the introduction of the controlling variables decreases the quality variables' statistical significance, but at the same time it increases the R-squared value improving the model ability to approximate the sample results.

The best model that approximate the average revenues growth results using the quality variables contains the numbers of beers, the overall average rating and the controlling variables (Table 13) and could be expressed as follows:

Average revenues growth = -2.45 -0.07×(Number of beers) + 3.65×(Overall average rating) -0.28×(Age) + 6.85×(Brewery classification) + 0.07×(Number of employees) -0.00×(Production capacity)

Table 13: Average revenues growth regression analysis using "be good" most significant variables

Source	SS	df	MS			
				Number of obs	=	108
				F(6, 101)	=	10.94
Model	332.797501	6	55.4662501	Prob > F	=	0.0000
Residual	511.869166	101	5.06801154	R-squared	=	0.3940
				Adj R-squared	=	0.3580
Total	844.666667	107	7.894081	Root MSE	=	2.2512

Average revenues growth	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
AGE	-.2826131	.0470177	-6.01	0.000	-.3758836	-.1893426
BREWERY_CLASSIFICATION	6.851015	2.132795	3.21	0.002	2.620124	11.08191
NUMBER_OF_EMPLOYEES	.069265	.0161051	4.30	0.000	.0373168	.1012133
PRODUCTION_CAPACITY	-.0000116	2.70e-06	-4.27	0.000	-.0000169	-6.19e-06
NUMBER_OF_BEERS	-.0732207	.0247697	-2.96	0.004	-.1223572	-.0240843
OVERALL_AVERAGE_RATING	3.654107	1.333601	2.74	0.007	1.008601	6.299613
_cons	-2.445509	3.787043	-0.65	0.520	-9.957984	5.066966

The previous reported model highlights that two quality variables have an association with the average revenues growth: the number of beers and the overall average rating, but their impact is different. The number of beers decreases the average revenues growth, while the overall average rating has a positive association with the average revenues growth and the later results is coherent with the expectations *(H$_{A4}$)*. The overall average rating's positive association could suggest that the higher is the consumers' quality perception, the higher would be the beers recommendation and the word of month would considerably increase the volumes of product sold and therefore the revenues growth. It is possible to summarize the previous result as:

The average ratings expressed through the customers' overall average rating has a positive association with the average revenues growth.

The existence of two quality variables with opposite associations with the average revenues growth could be related with the absence of a unique and clear definition of quality.

Taking into consideration the **social attitude cluster**, a significant positive relationship was expected between the social attitude variables and the performance variables (H_B). However, as visible from the Table 14, the results showed that there are just three variables in the social attitude cluster that have a significant relationship with the average revenues growth, while for the remaining variables there is not empirical evidence of a direct relationship.

The analysis gives empirical evidence to support the hypothesis that the attitude of being present on Facebook has a positive association with the average revenues growth (H_{B1}). This result is coherent with the hypothesis that the more a company is visible to potential consumers higher is the chance to increase sales. The literature has indeed showed that social media usage could create values along the entire values chain, but the research suggests that being present and acting passively is not enough. Therefore, it is possible to summarize the previous result as:

The social media presence has a positive association with the average revenues growth.

Differently from the expectations, the data highlights that the number of contents shared is negatively associated on the average revenues growth rate (H_{B2}) especially the number of Twitter posts. This data provides evidence that it is not just important being present on social media, but it matters also the participation. The negative association could be related to the fact that even if social media offers the opportunity to stimulate the customers' attention and involve clients by sharing contents, companies cannot exploit these opportunities if they use the social media arena just to promote their brand. Therefore, it is possible to summarize the previous result as:

The number of content shared has a negative association with the average revenues growth.

Also in this case, all the controlling variables are significant and their introduction in the model increases the R-squared value, improving the model ability to approximate the sample results, but at the same time decreases the social attitude variables' statistical significance.

Table 14: Average revenues growth regression analysis using "be social" and controlling variables

Average revenues growth

Variables / Models	single variables													combination of variables		combination of variables + controlling variables	
	1	2	3	4	5	6	7	8	9	10	11	12	13	12	15	18	21
BE SOCIAL	0.112 (0.215)													0.373 (0.249)		0.226 (0.226)	
Facebook		1.413 (0.928)													2.265* (1.084)		1.270 (0.994)
Twitter			0.093 (0.473)												0.292 (0.630)		-0.003 (0.576)
Instagram				0.330 (0.524)											0.401 (0.792)		0.967 (0.734)
Youtube					-0.272 (0.578)										0.405 (0.765)		-0.346 (0.731)
NUMBER OF CONTENT SHARED						-3.44E-04 (2.53E-04)								-4.14E-04* (1.93E-04)		-4.38E-04 (2.69E-04)	
twitter tweets							-3.39E-04 (2.57E-04)								-4.54E-04* (2.17E-04)		-2.03E-04 (3.11E-04)
instagram posts								-0.003 (0.004)							-0.006 (0.005)		-0.003 (0.005)
youtube videos									-0.064 (0.066)						-0.142 (0.090)		0.030 (0.102)
FOLLOWERSHIP										-4.77E-08 (2.15E-07)				-3.02E-08 (1.78E-08)		-8.53E-08 (2.15E-07)	
Facebook likes											-4.72E-08 (2.16E-07)				-0.000 (1.18E-6)		1.65E-06 (1.25E-06)
Twitter followers												-2.37E-05 (3.50E-05)			0.000 (3.64E-04)		-7.97E-05 (3.61E-04)
Instagram followers													-1.28E-04 (1.56E-04)		0.000 (0.001)		-9.31E-04 (0.001)
AGE	-0.215*** (0.037)	-0.208*** (0.037)	-0.2160*** (0.037)	-0.218*** (0.037)	-0.219*** (0.037)	-0.223*** (0.037)	-0.223*** (0.037)	-0.217*** (0.037)	-0.216*** (0.037)	-0.218*** (0.038)	-0.218*** (0.037)	-0.225*** (0.038)	-0.227*** (0.039)			-0.223*** (0.038)	-0.258*** (0.046)
NUMBER OF EMPLOYEES	0.064*** (0.018)	0.061*** (0.017)	0.065*** (0.017)	0.066*** (0.016)	585792*** (0.017)	0.064*** (0.016)	0.064*** (0.016)	0.065*** (0.016)	0.070*** (0.017)	0.067*** (0.018)	0.067*** (0.018)	0.071*** (0.018)	0.072*** (0.018)			0.065*** (0.018)	0.077*** (0.002)
PRODUCTION CAPACITY	-1.05E-05*** (2.66E-06)	-9.91E-06*** (2.66E-06)	06E-05*** (2.65E-06)	08E-05*** (2.65E-06)	09E-05*** (2.69E-06)	66E-06*** (2.72E-06)	67E-06*** (2.72E-06)	1.06E-05*** (2.64E-06)	1.13E-05*** (2.76E-06)	1.08E-05*** (2.76E-06)	1.08E-05*** (2.76E-06)	1.13E-05*** (2.81E-06)	-1.14E-05*** (2.78E-06)			-9.46E-06** (2.85E-06)	-1.14E-05*** (3.42E-06)
AREA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES			YES	YES
_cons	6.290*** (0.822)	5.243*** (1.080)	6.483*** (0.725)	6.437*** (0.691)	6.648*** (0.714)	6.650*** (0.674)	6.638*** (0.673)	6.625*** (0.681)	6.566*** (0.672)	6.545*** (0.675)	6.545*** (0.675)	6.585*** (0.677)	6.602*** (0.677)	4.918*** (0.553)	3.375*** (0.989)	6.202*** (0.823)	5.691*** (1.130)
N	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
R2	0.257	0.270	0.255	0.257	0.256	0.267	0.266	0.259	0.261	0.255	0.255	0.255	0.255	0.036	0.060	0.261	0.258

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

The model that better approximates the average revenues growth performances using the social attitude variables contains the Facebook presence, the number of contents shared and three controlling variables (Table 15) and it could be expressed as follows:

Average revenues growth = +5.47 +1.82×(Facebook) -0.00×(Number of contents shared) - 0.21×(Age) + 0.06×(Number of employees) -0.00×(Production capacity)

Table 15: Average revenues growth regression analysis using "be social" most significant variables

Source	SS	df	MS			
Model	300.380331	5	60.0760662	Number of obs	=	117
Residual	664.696592	111	5.98825759	F(5, 111)	=	10.03
				Prob > F	=	0.0000
				R-squared	=	0.3113
				Adj R-squared	=	0.2802
Total	965.076923	116	8.31962865	Root MSE	=	2.4471

Average revenues growth	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
facebook	1.815104	.9146265	1.98	0.050	.0027102	3.627497
NUMBER_OF_CONTENTS_SHARED	−.0004322	.0002487	−1.74	0.085	−.000925	.0000605
AGE	−.2097553	.0363627	−5.77	0.000	−.2818104	−.1377001
NUMBER_OF_EMPLOYEES	.0552395	.016266	3.40	0.001	.0230072	.0874718
PRODUCTION_CAPACITY	−8.00e−06	2.69e−06	−2.97	0.004	−.0000133	−2.66e−06
_cons	5.47192	.9412954	5.81	0.000	3.60668	7.337159

The previous model clearly highlights that the Facebook presence and the number of contents shared variables have an association with the average revenues growth and the opposite impact on the performance highlights that the social media presence is important, but to exploit the maximum values companies should invest in the active social media participation, not just promote their products.

In the following table, the research aims to combine the most interesting "be good" and "be social" variables into a "be both analysis" for testing both the all sample data and the craft breweries observations (Table 16).

The first consideration is that combining both quality and social media variables, just the quality variables are still significant. This data could suggest that even if be good is not good enough, companies should invest in their product quality first and then stimulate the customers' interest towards the company's products. It could appear that be present on the social media and participate actively do not substitute the product quality, but instead it could just intensify the product opportunities. Indeed, even if the social media could stimulate the public interest towards a product, the experience of bad product attributes could nullify or

reverse every positive effects related to the higher brand awareness through the word-of-mouth or the eWOM recommendations.

In addition, there are not concrete differences among the results of the model performed with the overall sample and the one that included just craft breweries. For this reason, it is possible to assume that there is no empirical difference to assume that performance determinants differ among craft and industrial breweries and what change and influence the average revenues growth are instead the product attributes.

Table 16: Average revenues growth regression analysis using "be both" variables

Variables	Average revenues growth				Average revenues growth by Craft brewery			
	"be both"		"be both"+ controlling variables		"be both"		"be both"+ controlling variables	
Models	1	2	3	4	1	2	3	4
NUMBER OF BEERS	-0.098***	-0.071*	-0.061*	-0.038	-0.081*	-0.074	-0.057	-0.066
	0.028	0.033	0.026	0.032	0.035	0.046	0.032	0.042
OVERALL AVERAGE RATING	2.848*	3.655*	1.356	3.353*	2.493	3.745	3.616*	3.609*
	1.359	1.659	1.480	1.645	1.864	1.941	1.556	1.672
SLOW FOOD MENTION	0.754		0.888		0.843		0.281	
	0.665		0.606		0.698		0.586	
chiocciola slow food		-1.922		-1.116		-2.038		-0.465
		1.101		1.038		1.148		1.019
bottiglia slow food		-0.553		-0.130		-0.430		-0.116
		1.025		0.956		1.068		0.909
fusto slow food		0.615		0.419		0.669		0.187
		1.259		1.165		1.298		1.146
BE SOCIAL	0.254		0.186		0.394		0.108	
	0.265		0.240		0.288		0.242	
Facebook		2.154		0.628		2.533		2.387
		1.265		1.219		1.425		1.224
Twitter		0.738		0.388		0.714		0.097
		0.612		0.582		0.635		0.562
Instagram		-0.004		0.476		-0.221		0.133
		0.795		0.770		0.852		0.750
Youtube		0.220		-0.230		-0.034		-0.292
		0.760		0.731		0.797		0.696
NUMBER OF CONTENT SHARE	-1.69E-04		-2.95E-04		-1.53E-04		-2.05E-04	
	1.89E-04		2.74E-04		3.17E-04		2.70E-04	
twitter tweets		-2.34E-04		-1.25E-04		-3.81E-04		-2.66E-04
		2.26E-04		3.23E-04		3.96E-04		3.46E-04
instagram posts		-0.009		-0.006		-0.008		-0.005
		0.005		0.005		0.005		0.005
youtube videos		-0.076		0.022		0.074		0.018
		0.086		0.100		0.138		0.122
FOLLOWERSHIP	4.22E-08		-9.11E-08		-6.49E-05		-5.35E-05	
	1.67E-07		2.03E-07		5.22E-05		4.74E-05	
Facebook likes		-1.31E-06		1.81E-06		-1.66E-04		-7.52E-05
		1.20E-06		1.33E-06		9.85E-05		8.72E-05
Twitter followers		3.10E-05		-3.27E-04		4.35E-04		3.56E-04
		3.69E-04		3.74E-04		5.76E-04		5.34E-04
Instagram followers		9.08E-04		6.59E-05		1.42E-03		4.44E-05
		1.29E-03		1.34E-03		1.51E-03		1.36E-03
AGE			-0.198***	-0.220***			-0.390***	-0.374***
			0.038	0.050			0.059	0.067
NUMBER OF EMPLOYEES			0.060***	0.070**			0.133*	0.098
			0.017	0.022			0.063	0.072
PRODUCTION CAPACITY			-8.70E-06**	-1.01E-05**			4.70E-05	7.39E-05
			(2.82E-06)	(3.55E-06)			9.03E-05	9.48E-05
AREA			YES	YES			YES	YES
_cons	-2.665	-6.343	2.328	-2.964	-1.848	-6.573	-2.203	-3.663
	3.676	4.581	4.098	4.586	5.038	5.369	4.222	4.633
N	108	108	108	108	102	102	102	102
R2	0.138	0.163	0.323	0.305	0.078	0.096	0.385	0.363

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

5.3. EBITDA/REVENUES

Analysing one by one each variable, it emerges that not every variable is directly associated with the average EBITDA/revenues ratio and the results of the analysis are visible in the following pages. To clarify the analysis outcomes, the results have been grouped into the quality and social attitude clusters.

Taking into consideration the **quality cluster**, a significant positive relationship was expected between the quality variables and the performance variables (H_A). However, as visible from the Table 17, the results show that there are eight quality variables that have a significant relationship with the average EBITDA/revenues ratio, while for the remaining variables there is not empirical evidence of a direct relationship.

Coherently with the expectations (H_{A2}), the numbers of beers offered is positively associated with the average EBITDA/revenues ratio and the analysis shows a beta coefficient approximately equal to +0.07. Therefore, it is possible to summarize the previous result as:

The product range expressed through the number of beers has a positive association with the average EBITDA/revenues ratio.

In addition, it is possible to notice that the average abv of beers is positively associated with the average EBITDA/revenues ratio and this data is coherent with the expectations (H_{A1}). The results show that the average abv has a quite impressive beta coefficient which is approximately equal to +64.83. Therefore, it is possible to summarize the previous result as:

The average product positioning expressed through the average abv of beers has a positive association with the average EBITDA/revenues ratio.

As visible visible from the following table, also the overall average rating is positively associated with the average EBITDA/revenues ratio and this data is the coherent with the expectations (H_{A4}). Therefore, it is possible to summarize the previous result as:

The average ratings expressed through the customers' overall average rating has a positive association with the average EBITDA/revenues ratio.

In addition, it is possible to notice that, coherently with the expectations, the three main quality variables: the Slow food mention (H_{A6}), the special brewery reward (H_{A7}) and the Slow food notion (H_{A8}) have a positive association with the average EBITDA/revenues ratio. It is possible to summarize the previous results as:

The firm and the products' mentions in specific sectorial books such as Slow food have a positive association with the average EBITDA/revenues ratio.

Being rewarded by experienced judges on specific product characteristic has a positive association with the average EBITDA/revenues ratio.

Being rewarded by experienced judges on the overall product quality has a positive association with the average EBITDA/revenues ratio.

More in general, given that the previous variables are all related to the "be good" dimension, it is important to highlights that there could be many factors that could influence the quality impact on the performance. Indeed, even if in the common belief the higher product quality is associated with higher costs because of high-end ingredients or with investment in the production process, in the real life there could be also costs advantages associated with high quality products.

Recalling the Juran J. M. and Godfrey A. B. (1999) positive and negative quality's connotation, quality could be beneficial to revenues not just because higher volumes of product sold given the ability to meet people tastes, but quality could also positively influence the margin lowering costs related to production efficiency and reducing wastes. In addition, the higher volumes of products sold are related to lower marginal costs and this phenomenon is due to economies of scale and the allocation of overhead costs over a higher number of goods.

In addition, from the Table 17, it is also possible to notice that two controlling variables over three have a positive association with the average EBITDA/revenues ratio and they are the age and the production capacity, while the number of employees have a negative association. Indeed, while the number of employees has a negative impact on the EBITDA margin, older firms have developed positive synergies during years and are able to exploit economies of scales thanks the production capacity optimization.

Table 17: Average EBITDA/revenues regression analysis using "be good" and controlling variables

	Average EBITDA/revenues														
	Single variables + controlling variables											Combination of variables		Combination of variables + controlling variables	
Variables \ Models	1	2	3	4	5	6	7	8	9	10	11	12	15	18	21
NUMBER OF BEERS	0.066* (0.026)											-0.010 (0.033)	-0.017 (0.035)	-0.020 (0.033)	-0.030 (0.035)
AVERAGE ABV		64.828*** (21.346)										28.189 (35.563)	28.389 (35.979)	30.589 (34.003)	34.021 (34.462)
AVERAGE SD ABV			-0.108 (0.817)									-0.461 (0.787)	-0.385 (0.815)	-0.586 (0.758)	-0.420 (0.7849)
AVERAGE COUNT OF RATING				0.018 (0.012)								0.006 (0.011)	0.007 (0.012)	-0.011 (0.014)	-0.012 (0.014)
OVERALL AVERAGE RATING					3.688*** (1.225)							-1.518 (1.550)	-1.506 (1.562)	0.370 (1.684)	0.397 (1.695)
SLOW FOOD MENTION						2.248*** (0.502)						1.130 (0.619)	1.179 (0.625)	1.038 (0.594)	1.062 (0.601)
SPECIAL BREWERY REWARD							1.969*** (0.568)					0.196 (1.057)		-0.108 (1.031)	
chiocciola slow food								2.257** (0.807)					1.024 (1.419)		0.221 (1.369)
bottiglia slow food									1.221 (0.921)				0.096 (1.275)		-0.709 (1.252)
fusto slow food										1.220 (1.174)			-0.003 (1.337)		0.398 (1.304)
SLOW FOOD NOTION											0.694*** (0.160)	0.515 (0.326)	0.424 (0.349)	0.601 (0.322)	0.616 (0.343)
AGE	0.117** (0.040)	0.143*** (0.038)	0.143*** (0.040)	0.113** (0.040)	0.141*** (0.038)	0.117** (0.037)	0.131*** (0.038)	0.122 (0.039)	0.143*** (0.040)	0.146*** (0.040)	0.128*** (0.037)			0.127** (0.040)	0.129** (0.041)
NUMBER OF EMPLOYEES	-0.034 (0.018)	-0.041* (0.018)	-0.040* (0.018)	-0.034 (0.018)	-0.042* (0.017)	-0.036* (0.017)	-0.037* (0.017)	-0.035 (0.018)	-0.040* (0.018)	-0.041* (0.018)	-0.036* (0.017)			-0.036* (0.017)	-0.036* (0.017)
PRODUCTION CAPACITY	5.12E-06 (2.89E-06)	6.57E-06* (2.82E-06)	6.33E-06* (2.92E-06)	5.02E-06 (2.83E-06)	7.03E-06* (2.77E-06)	5.57E-06* (2.72E-06)	6E-06* (2.79E-06)	5.57E-06 (2.85E-06)	6.33E-06* (2.90E-06)	6.50E-06* (2.92E-06)	5.81E-06* (2.73E-06)			6.13E-06* (2.83E-06)	6.29E-06* (2.89E-06)
AREA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
_cons	5.436*** (0.674)	1.672 (1.449)	5.583*** (0.688)	6.121* (0.804)	-4.577 (3.646)	4.689*** (0.669)	5.453*** (0.658)	5.598*** (0.668)	5.516*** (0.686)	5.562*** (0.686)	5.426*** (0.642)	7.098 (4.214)	7.085 (4.239)	2.498 (4.795)	2.264 (4.838)
N	131	131	131	118	118	131	131	131	131	131	131	118	118	118	118
R2	0.127	0.146	0.082	0.094	0.146	0.210	0.163	0.136	0.094	0.090	0.203	0.094	0.084	0.189	0.180

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

According to this research, the model that best approximates the average EBITDA/revenues results using the quality variables contains the Slow food notion, the average abv and the controlling variables (Table 18) and the model could be expressed as follows:

Average EBITDA/revenues = +1.77 +0.51×(Slow food special notion) + 41.18×(Average abv) +0.13×(Age) -0.04×(Number of employees) +0.00×(Production capacity)

Table 18: Average EBITDA/revenues regression analysis using "be good" most significant variables

Source	SS	df	MS			
				Number of obs	=	131
				F(5, 125)	=	6.91
Model	236.576647	5	47.3153294	Prob > F	=	0.0000
Residual	856.018773	125	6.84815018	R-squared	=	0.2165
				Adj R-squared	=	0.1852
Total	1092.59542	130	8.40458015	Root MSE	=	2.6169

Average EBITDA/revenues	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
SLOW_FOOD_SPECIAL_NOTION	.5111664	.1736325	2.94	0.004	.1675262	.8548067
AVERAGE_ABV	41.1791	22.40073	1.84	0.068	-3.154728	85.51292
AGE	.1270158	.0374318	3.39	0.001	.0529337	.201098
NUMBER_OF_EMPLOYEES	-.0378003	.0170205	-2.22	0.028	-.0714861	-.0041146
PRODUCTION_CAPACITY	6.17e-06	2.73e-06	2.26	0.026	7.62e-07	.0000116
_cons	1.772399	1.316793	1.35	0.181	-.8336967	4.378495

The results previously displayed in Table 18 could summarize the main considerations made in this paragraph. More in concrete they highlight that quality attributes have a positive association on the average EBITDA/revenues ratio and summarize the controlling variables relationship.

Taking into consideration the **social attitude cluster**, a significant positive relationship was expected between the social attitude variables and the performance variables *(H$_B$)*. However, as visible from the Table 19, the results showed that there are just two variables in the social attitude cluster that have a significant relationship with the average EBITDA/revenues ratio, while for the remaining variables there is not empirical evidence of a direct relationship.

Coherently with the expectations, the Facebook presence has a positive association with the average EBITDA/revenues ratio *(H$_{B1}$)*. This data could suggest that the Facebook presence can both increase the revenues growth, as already showed, and decrease the impact of costs

over the EBITDA margin reducing the marketing expenses and managing the other selling costs in a more efficient way. Therefore, it is possible to summarize the previous result as:

The social media presence through Facebook has a positive association with the average EBITDA/revenues ratio.

Differently from the expectations, the data highlight that the number of Facebook Likes is negatively associated with the average EBITDA/revenues ratio *(H_{B3})*. This data could suggest that the higher is the number of relationships with customers that a company maintains the higher are the costs that are associated with this activity. Therefore, it is possible to summarize the previous result as:

The followership expressed through the Facebook Likes has a negative association with the average EBITDA/revenues ratio.

In addition, looking the social attitude regression matrix visible in the Table 19 it emerges that all the controlling variables are significant, but the impact on the average EBITDA/revenues changes from one measure to the other. For example, the age shows a positive association with the average EBITDA/revenues while the number of employees display the opposite association. These data could suggest that older firms are able to develop positive synergies that improve the performance, while being to much structured in terms of employees at any age increase the production costs and reduce the flexibility in front of unexpected events and this have negative effect on the overall performance. The production capacity, instead, has a slightly positive effect on the EBITDA/revenues. This quite null association could be related to the fact that the production capacity mainly influences the amortization of the investment in machinery and this cost is not included in the EBITDA, but at the same time the higher is the number of product sold the higher are the economies of scale.

According to this research, the model that best approximates the average revenues growth results using the social attitude variables contains the Facebook presence and the controlling variables (Table 20) and it could be expressed as follows:

Average EBITDA/revenues = +2.19 +2.01(Facebook) +0.22(Age)
-4.63(Brewery classification) - 0.06(Number of employees) +0.00(Production capacity)

Table 19: Average EBITDA/revenues regression analysis using "be social" and controlling variables

Average EBITDA/revenues

Variables	Single variables + controlling variables													Combination of variables		combination of variables + controlling variables	
Models	1	2	3	4	5	6	7	8	9	10	11	12	13	12	15	18	21
BE SOCIAL	0.285 (0.233)													0.156 (0.247)		0.193 (0.244)	
Facebook		2.425* (1.019)													1.628 (1.126)		2.717* (1.047)
Twitter			0.647 (0.491)												0.267 (0.606)		0.357 (0.557)
Instagram				-0.120 (0.532)											-0.915 (0.723)		-1.152 (0.670)
Youtube					0.283 (0.612)										-2.74E-04 (0.756)		0.269 (0.722)
NUMBER OF CONTENT SHARED						4.27E-04 (2.80E-04)								1.69E-04 (1.97E-04)		3.83E-04 (2.96E-04)	
twitter tweets							4.19E-04 (2.85E-04)								1.06E-04 (2.27E-04)		-1.22E-07 (3.29E-04)
instagram posts								0.004 (0.004)							3.25E-03 (5.66E-03)		-1.97E-04 (0.005)
youtube videos									0.057 (0.073)						1.18E-02 (0.093)		-0.104 (0.107)
FOLLOWERSHIP										1.66E-07 (2.38E-07)				3.00E-08 (1.79E-07)		2.05E-07 (2.39E-07)	
Facebook likes											1.66E-07 (2.40E-07)				-3.27E-07 (1.20E-06)		-3.40E-06* (1.32E-06)
Twitter followers												5.13E-05 (3.86E-05)			-1.22E-04 (3.74E-04)		1.64E-04 (3.78E-04)
Instagram followers													2.67E-04 (1.72E-04)		0.001 (0.001)		1.97E-03 (1.40E-03)
AGE	0.149*** (0.040)	0.158*** (0.040)	0.147*** (0.040)	0.142*** (0.040)	0.144*** (0.040)	0.149*** (0.040)	0.148*** (0.040)	0.143*** (0.040)	0.142*** (0.040)	0.148*** (0.041)	0.148*** (0.041)	0.159*** (0.041)	0.162*** (0.041)			0.159*** (0.041)	0.244*** (0.046)
NUMBER OF EMPLOYEES	-0.043* (0.018)	-0.048** (0.018)	-0.041** (0.018)	-0.040* (0.018)	-0.039* (0.018)	-0.039* (0.018)	-0.039* (0.018)	-0.040* (0.018)	-0.045* (0.018)	-0.046* (0.020)	-0.046* (0.020)	-0.053* (0.020)	-0.054* (0.020)			-0.048* (0.020)	-0.075** (0.023)
PRODUCTION CAPACITY	6.65E-06* (2.92E-06)	7.56E-06* (2.91E-06)	6.36E-06* (2.90E-06)	6.34E-06* (2.92E-06)	6.54E-06* (2.96E-06)	5.079E-06 (3.00E-06)	5.102E-06 (3.01E-06)	6.29E-06* (2.91E-06)	6.87E-06* (3.00E-06)	6.89E-06* (3.03E-06)	6.88E-06* (3.03E-06)	7.65E-06* (3.07E-06)	7.78E-06* (3.04E-06)			6.14E-06 (3.15E-06)	1.06E-05*** (3.59E-06)
AREA	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES			YES	YES
_cons	4.976*** (0.845)	3.317*** (1.166)	5.249*** (0.729)	5.623*** (0.711)	5.485*** (0.720)	5.462*** (0.687)	5.476*** (0.686)	5.475*** (0.693)	5.562*** (0.687)	5.555*** (0.688)	5.555*** (0.688)	5.491*** (0.687)	5.461*** (0.686)	5.058 (0.552)	3.875 (1.038)	5.028 (0.849)	2.573 (1.172)
N	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
R2	0.093	0.122	0.094	0.082	0.083	0.099	0.097	0.090	0.086	0.085	0.085	0.095	0.099	-0.004	-0.026	0.094	0.169

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

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Table 20: Average EBITDA/revenues regression analysis using "be social" most significant variables

Source	SS	df	MS			
Model	174.018929	5	34.8037858	Number of obs	=	131
Residual	918.576491	125	7.34861193	F(5, 125)	=	4.74
				Prob > F	=	0.0005
				R-squared	=	0.1593
Total	1092.59542	130	8.40458015	Adj R-squared	=	0.1256
				Root MSE	=	2.7108

Average EBITDA/revenues	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
facebook	2.010139	1.015408	1.98	0.050	.0005207	4.019757
AGE	.2234475	.0523713	4.27	0.000	.1197982	.3270968
BREWERY_CLASSIFICATION	-4.629717	2.294166	-2.02	0.046	-9.170156	-.0892769
NUMBER_OF_EMPLOYEES	-.0598962	.0187349	-3.20	0.002	-.096975	-.0228175
PRODUCTION_CAPACITY	.0000101	3.12e-06	3.23	0.002	3.92e-06	.0000163
_cons	2.192761	1.040645	2.11	0.037	.1331964	4.252326

The previous model clearly highlights that the Facebook presence has a positive effect on the performance and it could overcome the negative effect associated with higher costs related to the participation and the customers' entertainment.

In the following table, the research aims to combine both "be good" and "be social" most interesting variables into a "be both analysis" and test both all sample and the craft breweries observations (Table 21). The first consideration is that combining both quality and social media variables, just the quality variables are still significant. This data could suggest that even if be good is not good enough, companies should invest in their product quality first and than stimulate customers' interest towards the company's products. It could appear that be present on the social media and participate actively do not substitute the product quality, but instead it could just intensify the product opportunities.

Indeed, even if the social media could stimulate the public interest towards a product, the experience of bad product attributes could nullify or reverse every positive effects related to the higher brand awareness through the word-of-mouth or the eWOM recommendations.

As result, the positive quality's effect related to economies of scales prevails over the social media's effect on the overall performance.

In addition, there are not concrete differences among the results of the model performed with the overall sample and the one that included just craft breweries. For this reason, it is possible to say that there is no empirical difference to assume that performance determinants differ

among craft and industrial breweries. Indeed, what change and influence the average EBITDA/revenues ratio are instead the product attributes.

Table 21: Average revenues growth regression analysis using "be both" variables

Variables	Average EBITDA/revenues				Average EBITDA/revenues by Craft brewery			
	"be both"		"be both"+ controlling variables		"be both"		"be both"+ controlling variables	
Models	1	2	3	4	1	2	3	4
NUMBER OF BEERS	0.027	0.006	0.010	-0.020	0.018	-0.009	0.012	-0.019
	(0.028)	(0.036)	(0.028)	(0.035)	(0.036)	(0.048)	(0.038)	(0.050)
OVERALL AVERAGE RATING	1.225	0.754	2.225	1.658	1.616	1.505	1.281	1.813
	(1.318)	(1.668)	(1.497)	(1.687)	(1.741)	(1.915)	(1.648)	(1.845)
SLOW FOOD MENTION	1.291*		1.216*		1.202		1.335*	
	(0.623)		(0.603)		(0.648)		(0.617)	
chiocciola slow food		2.489*		1.377		2.693*		1.578
		(1.175)		(1.142)		(1.227)		(1.226)
bottiglia slow food		1.187		0.706		1.088		0.677
		(1.080)		(1.043)		(1.126)		(1.081)
fusto slow food		0.983		1.338		1.047		1.880
		(1.347)		(1.280)		(1.388)		(1.370)
BE SOCIAL	0.007		0.007		-0.017		0.092	
	(0.263)		(0.255)		(0.287)		(0.276)	
Facebook		0.072		1.234		0.794		1.042
		(1.350)		(1.341)		(1.517)		(1.463)
Twitter		-0.123		0.278		-0.003		0.494
		(0.611)		(0.588)		(0.635)		(0.617)
Instagram		-0.794		-1.235		-0.810		-1.145
		(0.742)		(0.727)		(0.796)		(0.778)
Youtube		0.679		0.700		0.863		0.697
		(0.770)		(0.757)		(0.807)		(0.789)
NUMBER OF CONTENT SHARED	8.01E-05		1.16E-04		-4.51E-05		6.86E-05	
	(1.94E-04)		(2.99E-04)		(3.29E-04)		(3.20E-04)	
twitter tweets		1.73E-04		1.11E-05		1.57E-04		2.90E-04
		(2.40E-04)		(3.57E-04)		(4.24E-04)		(4.16E-04)
instagram posts		1.04E-03		-1.94E-03		3.56E-04		-2.41E-03
		(0.006)		(0.006)		(0.006)		(0.006)
youtube videos		-0.042		-0.130		-0.157		-0.112
		(0.092)		(0.108)		(0.146)		(0.146)
FOLLOWERSHIP	7.63E-08		1.80E-07		3.86E-05		1.75E-05	
	(1.72E-07)		(2.23E-07)		(5.40E-05)		(5.60E-05)	
Facebook likes		1.11E-06		-1.78E-06		7.21E-05		-2.94E-05
		(1.27E-06)		(1.46E-06)		(1.05E-04)		(1.04E-04)
Twitter followers		-4.33E-04		-1.92E-04		-6.04E-04		-5.99E-04
		(3.80E-04)		(4.01E-04)		(6.03E-04)		(6.21E-04)
Instagram followers		1.24E-03		2.35E-03		1.29E-03		2.45E-03
		(0.001)		(1.43E-03)		(0.002)		(0.002)
AGE			0.130**	0.197**			0.239***	0.253**
			(0.041)	(0.054)			(0.068)	(0.076)
NUMBER OF EMPLOYEES			-0.043*	-0.056*			-0.125	-0.142
			(0.019)	(0.025)			(0.074)	(0.085)
PRODUCTION CAPACITY			6.35E-06*	8.32E-06*			2.64E-05	1.06E-04
			(3.08E-06)	(3.88E-06)			(1.07E-04)	(1.13E-04)
AREA			YES	YES			YES	YES
_cons	0.738	2.955	-1.071	-0.195	-0.365	-0.030	0.714	-0.784
	(3.617)	(4.629)	(4.217)	(4.744)	(4.782)	(5.327)	(4.578)	(5.155)
N	118	118	118	118	112	112	112	112
R2	0.056	0.001	0.149	0.122	0.055	0.013	0.177	0.119

*Notes: Standard error in parenthesis, p-value in brackets ***p<0.01 **p<0.5 *p<0.1*

CONCLUSIONS

The purpose of this analysis is to test which are the determinants that have a positive association with the performances of the companies that belong to the Italian brewing industry. The main objective of this study is to investigate if the quality (H_A) and social attitude (H_B) have a positive association with the corporate performances and to understand if it is more important for a firm to "be good or be social" in order to provide companies some useful guidelines for their long term strategy. Even though the interest towards the social media, a systematic analysis of the social media impact on the performance is missing in the literature and especially any authors has ever tried to combine the quality and the social media with the performance measurement.

This research is based on the assumption that the social attitude and the quality are fixed characteristics for a company. According to this assumption the willingness to be present and participate in the social media arena or to produce beers with superior product attributes does not change in a short period of time and even in the period analysed by this research. Given that are not expected any variations in the social media attitude or in the quality of products, actual social media and quality data could be used respectively as a proxy of the average social attitude and of the average quality.

The research provides empirical evidence that **craft and industrial breweries have significant differences** in the product quality attributes and in the social media participation, but not in the social media presence. The data shows that industrial breweries offer a higher number of beers, while craft breweries are recognized as having higher product attributes and this result clearly highlights that the customers are able to distinguish a standardized beer from a craft one and they attribute to craft beers superior product quality. It is interesting to notice that even if the two clusters have their own peculiarities, they are homogeneous in the social media presence and this means that they both have a sensibility towards internet. Even if industrial breweries and craft ones have equal distribution among social media platforms, data shows that there is a difference in the social media participation and more precisely industrial breweries post on average more contents. Testing the controlling variables, the research provides empirical evidence to sustain that industrial breweries differ from craft ones because they have on average higher age, number of employees and production capacity.

Furthermore, by performing regression analyses, the research provides empirical evidence that both the **quality and the social media variables have an association** with the breweries performances. Differently from the expectations (H_A), the quality variables have a

contradictory effect on the average revenues growth, but such results could be due to many factors. The number of beers that is used as a measure of product offering has a negative association with the average revenues growth and this data could suggest that the higher is the number of products not perfectly differentiated the higher is the cannibalization of sales that this could negatively affect the customers' product choice. Contrary from the previous results, the overall average rating that is used as a measure of customers' quality evaluation is positively associated with the average revenues growth. This data could suggest that the higher is the consumers' quality perception the higher would be the beers recommendations and this would increase the volumes of product sold. Therefore, as the overall brewery quality evaluation has a positive association with revenues because it stimulates the sales, the higher number of beers inhibits sales influencing negatively the customers' decision choice. Differently from the expectations (H_B), the social attitude variables have a contradictory effect on the average revenues growth and also in this case such results could be due to many factors. The Facebook presence is positively associated with the average revenues growth, while the number of contents shared has a negative association with the same variable. This data provides evidence that it is not just important being present on social media, but it matters also the participation and the quality of the participation. Even if the social media presence offers opportunities companies must be able to exploit such value. Being present in the social media platforms can guarantee to companies an increase of brand awareness, but to obtain the most from these instruments companies should participate actively stimulating the customers' interest and engaging them in conversations.

At the same time, coherently with the expectations (H_A), the quality variables have a positive association with the average EBITDA/revenues ratio and this result highlights that offering products with higher product attributes improves the performance by reducing the operating costs' impact on the revenues thanks to economies of scale and the waste reduction. In addition, coherently with the expectations (H_B), there is empirical evidence that the Facebook presence has a positive association with the average EBITDA/revenues and this data clearly highlights that the social media presence could be useful to not just to save money, but to optimize the marketing investments.

Combining together the quality and the social attitude variables, it emerges that the quality association with the performance prevails. This data could suggest that even if be good is not good enough, companies should invest in their product quality first and then stimulate the customers' interest towards the company's products. It could appear that be present on the social media and participate actively do not substitute the product quality, but instead it could

just intensify the product opportunities. This consideration is true for all the breweries and the data does not highlight any differences among the two cluster in the regression results.

Going beyond the empirical results this research aims to offer a **new and unexpected path of analysis** suggesting usefulness of the social media application also in the mainly quantitative science such as the performance measurement. The research is aware of the limitations of this work, which are mainly related to the limited number of observations and the use of the continuity assumptions in the product quality and in the social attitude, but given that in the literature a systematic analysis on the quality and the social media impact on the performance was missing, the research aims to propose a starting points for further investigations. Indeed, the choice of the brewery industry does not obstruct further analyses, but it instead could stimulate the academic interest about this topic and even promote further analyses in the same industry or in different ones. Indeed, also to apply the same research to different sectors could provide important contributions to the literature by accessing differences within results.

This paper's main contribution is not related to the fact it has tested the existence of any associations within the quality and the social attitude with the performance, but to have stimulate the discussion about this topic encouraging authors to follow unconventional and unexpected path of analysis.

APPENDIX

Appendix 1: List of variables

Variables cluster	Variable name	Description	Calculation
"Be good"			
Product offering	**The number of beers**	a measure of the product range	Average number of beers rated in Ratebeer website by brewery company.
Product offering	**The average beer abv**	measure of the company positioning	Average abv of beers rated in Ratebeer website by brewery company.
Product offering	**The abv standard deviation of beers**	measure of the company degree of differentiation	Average standard deviation of abv of beers rated in Ratebeer website by brewery company.
Customers' quality perception	**The average count of rating**	a measure of the consumers' interest towards the company's products	Average count of rating of beers rated in Ratebeer website by brewery company.
Customers' quality perception	**The overall average rating**	a measure of the overall average rating	Average rating of beers rated in Ratebeer website by brewery company.
Expert advisors' opinion	**Slow food mention**	a measure of the experts' interest towards the company	Accounting the presence of the brewery in the Slow food book (dummy).
Expert advisors' opinion	**Slow food special notion**	a measure of the beer quality	Counting the number of beers per brewery classified as *birra slow'*, '*birra quotidiana'* and '*grande birra'*.
Expert advisors' opinion	**Special brewery reward**	a measure of the overall quality of the company	Summing the presence of one of the three symbols: the '*chiocciola'*, '*fusto'* and '*bottiglia'*(dummy).
"Be social"			
Social attitude	**Be social**	a measure of the company presence among the social media	Summing the presence of the company among Facebook, Twitter, Instagram and YouTube
Social attitude	**Number of contents shared**	a measure of the company participation in the social media	Summing the contents shared through Twitter, Instagram and YouTube.
Social attitude	**Followership**	a measure of the quality of contents shared	Summing the number of followers accounted in Facebook, Twitter and Instagram.
Controlling variables			
Controlling variables	**Age**	a measure of the stability	Making the difference between the current year (2015) and the year of incorporation.
Controlling variables	**Number of employees**	a measure of the degree of structural organization	2014 data extracted from Aida.
Controlling variables	**Production capacity**	a measure of the company size	Production capacity expressed in hectolitres collected from the Slow food guide.
Controlling variables	**Brewery classification**	a measure to identify the two brewery clusters	A dummy variable created distinguishing the breweries that produce industrial beers (1) from the ones that offers craft beers (0).
Controlling variables	**Area**	a measure to identify the geographical areas where breweries are located	Created dividing the breweries by geographical areas according where they are located.

REFERENCES

- Allison, R. I., & Uhl, K. P., (1964). Influence of beer brand identification on taste perception. Journal of Marketing Research, 36-39.

- Assobirra, (2013). Annual Report 2014. Assobirra white paper,1-87. Article available <http://www.assobirra.it/press/wp-content/ar2013-assobirra_03-09.pdf> [13/10/2015]

- Assobirra, (2014). Annual Report 2014. Assobirra white paper, 1-44. Article available online <http://www.assobirra.it/press/wp-content/annualreport2014ita.pdf> [13/10/2015]

- Assobirra, (2014). Annual Report 2014 dati di sintesi. Assobirra white paper, 1-36. Article available online <http://www.assobirra.it/press/wp-content/annualreport2014data.pdf> [13/10/2015]

- Asur, S., & Huberman, B. (2010, August). Predicting the future with social media. In Web Intelligence and Intelligent Agent Technology (WI-IAT), 2010 IEEE/WIC/ACM International Conference, 1, 492-499

- Bhanot, S. (.). A study on impact of social media on company performance.1-14. Article available online <http://www.siescoms.edu/images/pdf/A%20STUDY%20ON%20IMPACT%20OF%20SOCIAL%20MEDIA%20ON%20COMPANY%20PERFORMANCE.pdf> [10/08/2015]

- Bolotaeva, V., & Cata, T., (2010). Marketing opportunities with social networks. Journal of Internet Social Networking and Virtual Communities, 2010, 1-8.

- Brunsø, K., Fjord, T. A., Grunert, K. G., (2002). Consumers' food choice and quality perception. Aarhus School of Business, MAPP-Centre for Research on Customer Relations in the Food Sector.

- Cardello, A. V., (1995). Food quality: relativity, context and consumer expectations. Food quality and preference, 6(3), 163-170.

- Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. Journal of marketing research, 43(3), 345-354.

- Choi, H., & Varian, H. (2011). Predicting the present with google trends. Economic Record, 88(1), 2-9.

- Clemons, E. K., Gao, G. G., & Hitt, L. M. (2006). When online reviews meet hyperdifferentiation: A study of the craft beer industry. Journal of Management Information Systems, 23(2), 149-171.

- Dellarocas, C., Zhang, X. M., & Awad, N. F. (2007). Exploring the value of online product reviews in forecasting sales: The case of motion pictures. Journal of Interactive marketing, 21(4), 23-45.

- Eisingerich, A. B., Chun, H. H., Liu, Y., Jia, H. M., & Bell, S. J., (2015). Why recommend a brand face-to-face but not on Facebook? How word-of-mouth on online social sites differs from traditional word-of-mouth. J Consum Psychol, 25, 120-128.

- Ernst & Young, (2011). Social media new game new rules new winners. Ernst & Young white paper. Article available online
  <https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCEQFj AAahUKEwja1eySsPbHAhVHuBoKHUjOB0M&url=http%3A%2F%2Fwww.ey.com%2 FPublication%2FvwLUAssets%2FSocial_media_-_New_game_new_rules_new_winners%2F%24FILE%2FEY_Social_media.pdf&usg=AF QjCNHnT_o9q-2qhUlXN-Omdxc2UOzHFg&bvm=bv.102537793,d.d2s> [10/08/2015]

- Evans, D., McKee, J., (2010). Social Media Marketing. The Next Generation of Business Engagement. Wiley Publishing, Inc.

- Ferguson, R., & Hlavinka, K., (2006). Loyalty trends 2006: three evolutionary trends to transform your loyalty strategy. Journal of Consumer Marketing, 23(5), 292-299

- Gdoweek, (2015). Il bio cresce e preferisce sempre più la gdo. Article available online <http://www.gdoweek.it/il-bio-cresce-e-preferisce-sempre-piu-la-gdo/> [20/09/2015]

- Giaccone, L., & Signoroni, E., (2014). Guida alle birre d'Italia 2015. Slow Food Editore

- Gillan, P., (2010). The New Conversation: Taking Social Media from Talk to Action. Harvard Business Review, 1-22.

- Godin, S., (2009). Purple Cow, New Edition: Transform Your Business by Being Remarkable. Penguin.

- Gretton, J. F., (1929). The history of beer. Journal of the Institute of Brewing, 356-362

- Gupta, S., & Lehmann, D. R. (2003). Customers as assets. Journal of Interactive Marketing, 17(1), 9-24.

- Hanna, R., Rohm, A., & Crittenden, V. L., (2011). We're all connected: The power of the social media ecosystem. Business horizons, 54(3), 265-273.

- Hendler, J., & Golbeck, J., (2008). Metcalfe's law, Web 2.0, and the Semantic Web. Web Semantics: Science, Services and Agents on the World Wide Web, 6(1), 14-20.

- Hu, N., Bose, I., Koh, N. S., & Liu, L. (2012). Manipulation of online reviews: An analysis of ratings, readability, and sentiments. Decision Support Systems, 52(3), 674-684.

- Hu, N., Koh, N. S., & Reddy, S. K. (2014). Ratings lead you to the product, reviews help you clinch it? The mediating role of online review sentiments on product sales. Decision Support Systems, 57, 42-53.

- I numeri del vino, (2015). Il consumo di bevande alcoliche in Italia – aggiornamento ISTAT 2014. Article available online <http://www.inumeridelvino.it/2015/05/il-consumo-di-bevande-alcoliche-in-italia-aggiornamento-istat-2014.html> [19/10/2015]

- Idoko, E. C., Nkamnebe, A. D., Ireneus, N. C., & Okoye, V. I., (2013). Effects of Intrinsic and Extrinsic Product Cues on Consumers' Purchase Intention: A Study of Alcoholic Beverage Consumers in a Developing Country Metropolitan City. Researchers World, 4(3), 1.

- ISTAT, (2015). L'uso e l'abuso di alcol in Italia. ISTAT News Releases. Article available online <http://www.istat.it/it/archivio/156223> [19/10/2015]

- ISTAT, (2014). L'uso e l'abuso di alcol in Italia. ISTAT News Releases. Article available online <http://www.istat.it/it/archivio/117897> [19/10/2015]

- Jacoby, J., Olson, J. C., & Haddock, R. A., (1971). Price, brand name, and product composition characteristics as determinants of perceived quality. Journal of Applied Psychology, 55(6), 570.

- Jamil, R. A. (2013). Consumer's Reliance on Word of Mouse: Influence on Consumer's Decision in an Online Information Asymmetry Context, Journal of Business & Economics, 5(2), 171-205.

- Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A., (2009). Twitter power: Tweets as electronic word of mouth. Journal of the American society for information science and technology, 60(11), 2169-2188.

- Jeacle, I., & Carter, C. (2011). In TripAdvisor we trust: Rankings, calculative regimes and abstract systems. Accounting, Organizations and Society, 36(4), 293-309.

- Juran, J., & Godfrey, A. B., (1999). Quality handbook. Republished McGraw-Hill.

- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business horizons, 53(1), 59-68.

- Kaske, F., Kügler, M., & Smolnik, S. (2012, January). Return on Investment in Social Media--Does the Hype Pay Off? Towards an Assessment of the Profitability of Social Media in Organizations. 2012 45th Hawaii International Conference, 3898-3907.

- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S., (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business horizons, 54(3), 241-251.

- Kim, W. G., Lim, H., & Brymer, R. A., (2015). The effectiveness of managing social media on hotel performance. International Journal of Hospitality Management, 44, 165-171.

- Kimani, E., (2015, January). Role of Social Media Marketing On Organisational Performance in Kenya. IOSR Journal of Business and Management (IOSR-JBM) 17(1), 101-105

- Kirin Holding, (2014). Kirin Beer University Report. Global Beer Consumption by Country in 2013. Kirin News Releases. Article available online <http://www.kirinholdings.co.jp/english/news/2014/1224_01.html> [13/10/2015]

- Kirin Holding, (2015). Kirin Beer University Report. Global Beer Production by Country in 2014. Kirin News Releases. Article available online <http://www.kirinholdings.co.jp/english/news/2015/0810_01.html> [24/10/2015]

- Kirtiş, A. K., & Karahan, F., (2011). To be or not to be in social media arena as the most cost-efficient marketing strategy after the global recession. Procedia-Social and Behavioral Sciences, 24, 260-268.

- Kotler, P., Kartajaya, H., & Setiawan, I., (2010). Marketing 3.0: From products to customers to the human spirit. John Wiley & Sons.

- KPMG, (2013). 2013 Food and Beverage Industry Outlook Survey. KPMG white paper. Article available online <https://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/food-beverage-outlook-survey-2013.pdf> [15/09/2015]

- KPMG, (2011). Going Social. How businesses are making the most of social media. KPMG white paper. Article available online <https://www.kpmg.com/FR/fr/IssuesAndInsights/ArticlesPublications/Documents/Going-social-how-business-are-making-the-most-of-social-media.pdf> [15/09/2015]

- Luca, M. (2011). Reviews, reputation, and revenue: The case of Yelp. com. Harvard Business School NOM Unit Working Paper, 1-39.

- Mangold, W. G., & Faulds, D. J., (2009). Social media: The new hybrid element of the promotion mix. Business horizons, 52(4), 357-365.

- Mattern, F., Huhn, W., Perrey, J., Dorner, K., Lorenz, J. T., & Spillecke, D., (2012). Turning buzz into gold. McKinsey & Company white paper.

- Mattia, G., (2004). Balsamic vinegar of Modena: From product to market value: competitive strategy of a typical Italian product. British Food Journal, 106(10/11), 722-745.

- McKinsey Global Institute, (2012). The social economy: Unlocking value and productivity through social technologies. McKinsey Global Institute white paper. Article available online
  <http://www.mckinsey.com/insights/high_tech_telecoms_internet/the_social_economy> [16/09/2015]
- Meussdoerffer, F. G. (2009). A comprehensive history of beer brewing. Handbook of Brewing: Processes, Technology, Markets. Weinheim: Wiley-VCH Verlag GmbH & Co. KGaA, 1-42. Article available online
  <https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0CCoQFjABahUKEwizq8-n36nIAhXFWhQKHXpbBTo&url=http%3A%2F%2Fwww.wiley-vch.de%2Fbooks%2Fsample%2F3527316744_c01.pdf&usg=AFQjCNGICnydvt51Aa0C8qzu2fWuVkUAQA> [04/10/2015]
- Nagar, V., & Rajan, M. V. (2001). The Accounting Review, 76(4), 495-513
- Neely, A., (2008). Exploring the financial consequences of the servitization of manufacturing. *Operations Management Research*, *1*(2), 103-118.
- Nieto, J., Hernández-Maestro, R. M., & Muñoz-Gallego, P. A., (2014). Marketing decisions, customer reviews, and business performance: The use of the Toprural website by Spanish rural lodging establishments. Tourism Management, 45, 115-123.
- Oh, J. (2015, May). Social Media as Firm's Network and Its Influence on the Corporate Performance. International World Wide Web Conferences Steering Committee, 511-514.
- Paniagua, J., & Sapena, J. (2014). Business performance and social media: Love or hate?. Business Horizons, 57(6), 719-728.
- Parbonetti, A., Menini, A., (2015). I Trend nel settore Food and Beverages in Italia.
- Park, D. H., & Lee, J., (2009). eWOM overload and its effect on consumer behavioral intention depending on consumer involvement. Electronic Commerce Research and Applications, 7(4), 386-398.
- Poelmans, E. and Swinnen, J.F.M. (2011a). A Brief Economic History of Beer'. In J.F.M. Swinnen (ed.), The Economics of Beer. Oxford: Oxford University Press.
- Poelmans, E., & Swinnen, J. F. (2011b). From monasteries to multinationals (and back): a historical review of the beer economy. Journal of Wine Economics, 6(02), 196-216.
- Price Waterhouse Coopers, (2015). Food Report. Strategie di successo nel settore food. Price Waterhouse Coopers white paper.

- Reed, D. P., (2001). The law of the pack. *Harvard Business Review*, *79*(2), 23-24.

- Rosso, A. M., (2012). Beer and wine in antiquity: beneficial remedy or punishment imposed by the Gods?. Acta med-hist Adriat,10(2),237-262.

- Rust, R. T., Lemon, K. N. & Zeithaml, V. A., (2004). Return on marketing: Using customer equity to focus marketing strategy. Journal of marketing 68(1), 109-127.

- Senecal, S., & Nantel, J., (2004). The influence of online product recommendations on consumers' online choices. Journal of retailing, 80(2), 159-169.

- Shafie, F. A., & Rennie, D., (2012). Consumer perceptions towards organic food. Procedia-Social and Behavioral Sciences, 49, 360-367.

- Shao, K., (2012). The effects of controversial reviews on product sales performance: the mediating role of the volume of word of mouth. International Journal of Marketing Studies, 4(4), p32.

- Smith, A. N., Fischer, E., & Yongjian, C., (2012). How does brand-related user-generated content differ across YouTube, Facebook, and Twitter?. Journal of Interactive Marketing, 26(2), 102-113.

- Solis, B., (2013). The 2013-2014 Social Media Landscape. Article available online <http://www.briansolis.com/2013/07/the-2013-social-media-landscape-infographic/> [29/09/2015]

- Starvish, M., (2014). Decommoditizing the Canned Tomato. Harvard Business School Working Knowledge. Article available online <http://hbswk.hbs.edu/item/7368.html> [21/09/2015]

- Thatcher, M. E., & Oliver, J. R. (2001). The impact of technology investments on a firm's production efficiency, product quality, and productivity. Journal of Management Information Systems, 18(2), 17-45.

- The Hale Group, (2006). Business Opportunities in Specialty Food Products. The Hale Group white paper. Available online <https://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact= 8&ved=0CCAQFjAAahUKEwiym8Xw_PvHAhWLVhQKHaHyAw8&url=http%3A%2F %2Fproductcenter.msu.edu%2Fuploads%2Ffiles%2FSpecialty%2520Food%2520Product s%2520Report.pdf&usg=AFQjCNEL4cIu545-6AahieSlD4bCg2jLAw> [16/09/2015]

- Tumasjan, A., Sprenger, T. O., Sandner, P. G., & Welpe, I. M., (2010). Predicting elections with Twitter: What 140 characters reveal about political sentiment. Proceedings of the Fourth International AAAI Conference on Weblogs and Social Media, 178–185.

- Williams, C., & Gulati, G., (2008). What is a social network worth? Facebook and vote share in the 2008   presidential primaries. Annual Meeting of the American Political Science Association, 1–17.

- Yu, S., & Kak, S. (2012). A survey of prediction using social media,1-20. Available online <http://arxiv.org/pdf/1203.1647.pdf> [10/08/2015]

- Zhang, J. Q., Craciun, G., & Shin, D., (2010). When does electronic word-of-mouth matter? A study of consumer product reviews. Journal of Business Research, 63(12), 1336-1341.

- Zhu, F., & Zhang, X., (2010). Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics. Journal of marketing, 74(2), 133-148.

List of websites:

- *http://www.bieretheque.com*
- *http://www.chromacademy.com*
- *http://www.conversationprism.com/*
- *https://www.facebook.com*
- *https://www.google.com/trends/*
- *https://instagram.com*
- *http://www.mondobirra.org/*
- *http://www.mutti-parma.com*
- *http://www.talkwalker.com*
- *https://twitter.com/*
- *http://unionbirrai.it*
- *https://www.youtube.com*