

## A segmentation proposal to the consumers' brazilian beer sector

### Proposta de segmentação do mercado brasileiro de cerveja

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#### **ABSTRACT**

The objective of this research was to identify the different segments of beer consumers based on the behavior presented during the purchase decision process. A field survey was carried out with a convenience sample of 422 respondents, using questionnaires, available in the authors' relationship networks. In the data analysis, the statistical technique cluster

analysis was applied, which allowed the identification of four consumer segments: high involvement consumers, medium consumption consumers, occasion buyers, and low consumption consumers. Results obtained from the investigation show that consumers with high levels of involvement (Group 1) seek a lot of information before consumption. For consumers of average consumption (Group 2), the search for knowledge and references on beers is limited to previous experiences they had and to friends, and they choose beers mainly by the taste and by the country of origin. Occasional consumers (Group 3) usually buy the same brands of beer, but use flavor and brand as a selection criterion. Finally, low-consumption consumers (Group 4) had a consumption of beer for special occasions. They often do not seek information about the product, and they do not do any kind of word-of-mouth marketing. The Main theoretical contribution is the new segmentation proposal method originated from the research. The relevance of this study is related to the new segmentation framework proposed segments that could be used to future studies in other competitive markets.

**Keywords:** beer sector, market segmentation, beer consumers.

## RESUMO

O objetivo desta pesquisa foi identificar os diferentes segmentos de consumidores de cerveja com base no comportamento apresentado durante o processo de decisão de compra. Foi realizada uma pesquisa de campo com uma amostra de conveniência de 422 entrevistados, utilizando questionários, disponíveis nas redes de relacionamento dos autores. Na análise dos dados, foi aplicada a análise de agrupamento de técnicas estatísticas, que permitiu a identificação de quatro segmentos de consumidores: consumidores de alto envolvimento, consumidores de consumo médio, compradores ocasionais e consumidores de baixo consumo. Os resultados obtidos na investigação mostram que consumidores com alto nível de envolvimento (Grupo 1) buscam muitas informações antes do consumo. Para os consumidores de consumo médio (Grupo 2), a busca por conhecimento e referências sobre as cervejas é limitada às experiências anteriores que tiveram e aos amigos, e eles escolhem as cervejas principalmente pelo gosto e pelo país de origem. Os consumidores ocasionais (Grupo 3) geralmente compram as mesmas marcas de cerveja, mas utilizam o sabor e a marca como critério de seleção. Finalmente, os consumidores de baixo consumo (Grupo 4) tinham um consumo de cerveja para ocasiões especiais. Eles freqüentemente não buscam informações sobre o produto e não fazem nenhum tipo de marketing boca-a-boca. A principal contribuição teórica é o novo método de proposta de segmentação originado da pesquisa. A relevância deste estudo está relacionada à nova estrutura de segmentação proposta para segmentos que poderiam ser usados para estudos futuros em outros mercados competitivos.

**Palavras-chave:** setor cervejeiro, segmentação de mercado, consumidores de cerveja.

## 1 INTRODUCTION

The world beer industry has undergone a process of consolidation, which has led to changes in the ranking of the sector (DEPEC (2017), Bradesco's Department of Research and Economic Studies, 2017).

It should be noted that according to the Brazilian Beer Industry Association - CERVBASIL (2018), the beer sector is one that most employs people in the country, approximately 2.7 million people, considering direct and indirect jobs. In terms of world production, Brazil occupies the third position in the world ranking. Only after the United States and China, surpassing Russia and Germany.

In this context, occurred one increase in the supply of imported, handmade, or specialty beer - points out that there has been a constant movement of brands and consumption sophistication (Associação Brasileira de Bares e Restaurantes, 2017). Companies that do not have a portfolio of more sophisticated options and do not know the profile of different groups of consumers generally doesn't conduct their marketing efforts to serve specific segments and consequently tend to lose market space. Because of the above, the objective of this research was to identify the different sectors of beer consumers, based on the behavior shown during the purchase decision process.

## **2 HYPOTHESIS DEVELOPMENT AND DISCUSSION**

### **2.1 MARKETING SEGMENTATION: CONCEPT AND HISTORICAL CONTEXTUALIZATION**

According to (Verhoef, 2019) the top three firms in the brand equity rankings of Interbrand in 2018, are all digital and relatively young – namely Apple, Google, and Amazon – compared with firms such as Coca Cola, General Motors, and Exxon Mobile. Knowing and understanding the attributes that consumers value most in their purchasing process is relevant, once these, as reported by (Grunert & Juhl, 1995), constitute the criteria used to select and justify their actions.

Some aspects such as brand, convenience, price, environment, among others (Watson, Viney, & Schomaker, 2002), play an essential role in consumer decision, mainly if we consider the amount of information received every day (Milosavljevic & Cerf, 2008). The consumers' choice of one store depends on the relative importance that they give to each one of these aspects.

Segmentation is based on the premise that the market is heterogeneous and composed of specific interest groups (Hoek, Gendall, & Esslemont, 1996), with purchasing capacities that need to be understood first and to be attended later (Dibb, Stern, & Wensley, 2002).

Initially, the underlying principles of market segmentation were attributed to the pricing in economic theory, which suggested that discriminatory pricing could be used to maximize profits among different groups of consumers (Stigler, 1942).

Segmentation evolved with the advent of new information technologies and data processing, associated with the application of psychographics in the 1970s - a technique that combines demographic and psychological factors; and geodemographic refinement in the 1980s - a technique that allowed the mapping of specific demographic and psychographic clusters into space and was a key factor for increasingly targeted marketing campaigns (Goss, 1995).

First, the geographical aspects were predominant, in which consumers were selected according to their location. Afterward, demographic elements such as gender, ethnicity, age, perceived income, and others were introduced, but there was a need to consider consumers' tastes, preferences, and personal values, motivations, and the product benefits (Plummer, 1974).

In the 1970s and 1980s, studies that included these aspects were already being conducted and the results were already helping marketers to target even more specific actions to particular consumer clusters (Holbrook & Hulbert, 2002).

Investigations to analyze if geographic market segmentation is sufficient to overarch cultural specificities of each Federal Unit (FU) in Brazil showed that geographic segmentation does not correspond to culture segment (Alfinito, Assumpção, Torres, & Aragão, 2019). Additionally, the study alerts to the possibility of existence of better-adjusted geographic segmentation in Brazil in comparison to the division by regions, and, considering the specific cultural characteristics, it alerts to the fact that the federal unities (FUs) might constitute subcultures. The aspects related to consumer behavior and the buying process are presented in the next section.

## 2.2 CONSUMER BEHAVIOR AND STAGES OF THE PURCHASING DECISION PROCESS

Consumer behavior can be understood as the activities directly involved in obtaining, consuming and disposing of products and services, including the decision-making processes that precede and succeed these actions (Blackwell, Miniard, & Engel, 2008).

The question that consumer behavior as a sum of activities appears to in this definition that affirms it as a complex process involving the pursuit of choice, purchase,

use, evaluation, and disposal of products and services in order to satisfy needs, wants, and desires (Tan, 2010). Other authors corroborate this line of thought by stating that human behavior is complex, full of contradictions and controversies and that consumer behavior is no exception (Demirdjian, S., & Senguder, 2004) .

Several internal and external factors influence consumers' buying behavior, such as individual differences, environmental influences, social, cultural, personal, and psychological factors (Schiffman & Kanuk, 2000). Among the most researched subjects are the individual characteristics and their influence on consumer behavior.

In a broadly perspective, consumer behavior includes the analysis of observable variables that can be measured (what is bought, how much is bought, where it is bought, who buys and with whom, for whom and how the product purchased is used) and non-observable variables that cannot be measured (subjective values, personal needs, perceptions, information that the consumer already has in memory and even the consumer's evaluation of the purchase alternatives) (Hawkins, Best, & Coney, 1989).

In the pursuit of risk reduction, consumers seek to engage in a variety of activities, from buying, consuming, participating in discussions, sharing knowledge with other consumers - and also being a contributor of the pursuit, purchase, and consumption to other consumers - on social media such as YouTube, MySpace, Facebook and Wikipedia (Heinonen, 2011).

### 2.3 BEER CONSUMPTION AROUND THE WORLD

Despite being considered one of the passions of the Brazilian population, beer only started to be produced in Brazil in the late nineteenth century (Visentini, Fenner, Oliveira, & Basso, 2016). These same authors report that until the 1980s, the Brazilian brewing sector was based on the primacy of two major brands: Brahma and Antarctica. Within this approach, other authors reports that the country beer market has always been characterized by the presence of few brands, predominantly of the Pilsen type, because it is mild, with a pH around 4.3, limpid and transparent (Araújo, Silva, & Minim, 2003).

Beer sector had a process of mergers and acquisitions on last two decades in Brazil, as a result of these changes new industries have emerged, and today the beer sector has become one of the main generators of jobs, taxes, income, and social and economic benefits (Visentini, Fenner, Oliveira, & Basso, 2016). Same authors mention that as a result of in these changes, two big companies, Brahma and Antarctica have united, giving

rise to Companhia de Bebidas das Américas - AmBev. The multinational is the third-largest brewing industry and the fifth largest beverage manufacturer in the world.

Although COVID pandemics the consumption of beer in Brazil registered one increase of 5,3% in 2020 (EUROMONITOR, 2021).

Despite the initial scare for the beer and cider market, expectation is that new 2022 forecasts, which falls short of the original baseline expectations, could have been much worse (GlobalData, 2020). According to this source COVID-19 adjusted forecasts, the global beer and cider market will recover to 2019 value by 2022, reaching US\$630.4bn in 2022; this represents a difference of -US\$55.4bn against the previous baseline value of that same year.

During the COVID pandemics with closed bars and restaurants, many small breweries are now left with quite a few liters to sell. Although daunting, this can be a unique opportunity. Small breweries offer a great variety of beers that are unlikely to be found just anywhere. Unique recipes, own creations and funky bottles make these kinds of beer very interesting options that customers may want to try out during this time of isolation. The next section presents an approach to beer consumer behavior.

#### 2.4 BEER CONSUMER BEHAVIOR AND THE ATTRIBUTES OF CONSUMPTION PERCEPTION

In the face of a market with wide competition and a great variety of product brands, as seen in the brewing sector one company is forced to adopt strategies that make it overcome the others in its field, (Visentini, Fenner, Oliveira, & Basso, A cerveja nos estudos de marketing: uma análise bibliográfica das publicações nacionais, 2016).

The market construction is a dynamic process involving multiple actors in hegemonic and alternative positions. Multiple market dimensions with each actor constantly implementing new practices without a definitive stabilization occurs in some markets generating great instability (Dalmoro & Fell, 2020).

Consumers are constantly exposed to sensorial attributes of products, which are recommend that one should look upon the fact that consumers are constantly exposed to the sensorial attributes of products, which are intrinsic characteristics (alcohol content, origin, novelty, taste, temperature, and quality) and extrinsic (fame, price, aggregate benefits, media, point of sale positioning, promotion, availability, packaging, brand, brand origin, convenience, recommendation, reputation) related to the beer which is normally perceived and used as evaluation criteria at the time of consumption (Tagnin &

Giraldi, 2013). The purpose of the sensory system is the perception of the environment by individuals whose sensations depend on the stimuli to which they are exposed to and activate the five senses: touch, sight, smell, taste, and hearing (Campbell, 2007). The touch corresponds to the perception of the objects, mainly by the skin on the fingers, the palm, the soles of the feet, and the lips (Kandel, Schwartz, & Jessel, 2003). Depending on the type of food or beverage, the temperature sensation, which determines whether these are hot or cold, affects consumer choice and consumption.

The function of smell is to promote sensory transduction or transformation in impulses or stimuli through the sensory neurons located in the nasal mucosa. Thus, being able to smell a product through olfactory sensations and determine if it is pleasant influences the choice and the purchase of such a product (Lent, 2004). Still, according to this author, the taste corresponds to the perception of the flavors (sweet, sour, salty and bitter) by the molecules that dissolve in the saliva and give rise to the palate, which in turn allows each person to perceive the taste of the same food or drink in different ways.

The results of a study done by (Zuniga, et al., 1993) have shown that the diversity of individual variations in taste sensitivities in the tongue is explained in part by the variations in the density of the fungal buds of each individual. For this reason, these authors always believe that gustatory sensitivity is directly related to the distribution density of the drink around each person's mouth. In light of the above, it is thought that capturing consumers' perceptions regarding the taste of their products is essential for companies to implement actions that better meet consumers' preferences.

Another study by (Carbone & Quici, 2020) shown that, overall, Italian consumers appreciate craft beers and are interested in this market. Socio-demographic characteristics impact this inclination but have no significant influence on the results of the choice experiment. Market knowledge, preferences and consumption habits influence consumer spending.

Considering the consumption of certain products, such as beer, is done collectively by a particular social group (friends, family, co-workers, or classmates), the consumer's buying decision is often influenced by the opinion of these groups, which exert all social pressure on the individual (Ajzen, 1991). In this same line, (Karsaklian, 2008) points out that the consumer suffers social influence that directly affects the buying and consumption behavior.

### 3 METHODOLOGICAL ASPECTS

In the first phase of the study, it was considered appropriate to use the exploratory research, whose objective was to do a bibliographical survey about the subject in order to better understand the proposed research problem (Malhotra, 2001). In the field research step, primary data were collected through a field survey. It is a method of collecting primary data from individuals. This method is most indicated when it is intended to collect information from a large sample of individuals (Hair, Anderson, Tatham, & Black, 1998).

Regarding the purposes, the research was of a descriptive nature, using the quantitative method which allows quantification during data collection and treatment (Richardson, Wanderley, M., & Peres, 2009) and seeks to measure aspects that can be quantified, using predetermined categories, subject to statistical analysis, as reported by (Skinner, Tagg, & Holloway, 2000). The research instrument was the structured questionnaire with a single script of 34 questions for all respondents, related to each purchase decision process. The variables considered in the data collection were extracted from the already validated research, performed by (Ceribeli, Piovezana, & Rocha, 2017), who sought to analyze the different segments of consumers in the wine market.

The scale chosen in this study was the Likert scale because it is easily understood by the respondent and presents facilities for the researcher in the construction of the data collection instrument. It is an ordinal, non-metric scale where the variables can be ordered in relation to the agreement that the interviewee has with the statements (Hair et al., 1998). According to (Larentis, Giacomello, & Camargo, 2015), who tested different amounts of points at scales, it is the one that presents the best results, both in terms of collecting the respondents' perceptions and in relation to the ease of interpretation.

The data collection was carried out from September to December 2019, through the printed application by the researcher and also through electronic means, using Google Docs, whose link was made available in the authors' networks, such as Facebook and Linked In. To define the sample size, the recommendations of (Hair, Anderson, Tatham, & Black, 1998), which suggests that when the objective is to apply multivariate statistical techniques to analyze the data collected, the sample size should be between 10 and 20 times the number of variables included in the research. Thus, it was defined that the sample of the present research should be composed of at least 340 respondents.

The collected data were analyzed by applying the statistical technique known as cluster analysis. It is a statistical technique that seeks to identify, within a sample, groups homogeneous to each other and, at the same time, heterogeneous in relation to the others,



according to a set of predetermined characteristics (Hair, Anderson, Tatham, & Black, 1998). These same authors mention that this analysis is composed of some distinct phases. While the first one split the total sample into smaller subgroups, the second one checks if these groups are statistically different from each other, and the third one shows the characteristics of the groups analyzed. The next section discusses the result analysis.

## 4 METHODOLOGICAL STEPS AND RESULT ANALYSIS

### 4.1 SAMPLE CHARACTERIZATION

The sample of 422 respondents is predominantly male (54.7%), married (57.3%) and with no children (49.3%), of relatively adult age (66.1% are aged between 31 and 59 years) and a high level of schooling (73.2% have full higher education).

Analyzing the database there is high satisfaction with beers consumed (average 5.7, and this consumption has already become a habit for many consumers (4,2). Concerning the beer selection criteria, the taste (6,1), the brand (5,2), the search for experimentation of new flavors (4,9), the components used in the brewing process (4,2) and the price (4.0) were the criteria that obtained the highest averages in the scale. Supermarkets (5.5) are notably the preferred channel of purchase when compared with beer purchased from specialty stores (3.1).

### 4.2 SEGMENTATION OF BEER MARKET

Considering only the 34 variables that measured beer consumers' buying behavior, the respondent sample was submitted to a two-stage grouping analysis, according to recommendations by (Punj & Stewart, 1983). In the **first stage**, several exploratory analyzes were carried out considering the different types of hierarchical methods with the squared Euclidean distance without standardization of the data. In the **second stage**, the non-hierarchical cluster analysis was performed considering the k-means method for the defined number of 4 groups and having the centroids of the groups resulting from the preliminary analysis of the previous stage as initial seeds (hierarchical method).

### 4.3 VALIDATION OF RESULTS AND CHARACTERIZATION OF FORMED GROUPS

(Punj & Stewart, 1983) suggest that researchers should test the reliability and external validity of the solution and its statistical significance. Reliability can be verified by cross-validation, splitting the sample into two parts, then performing the cluster

analysis in each part, and then comparing the results found. Another method to test cross-validity is the discriminant analysis.

In this particular case, we opted for the use of discriminant analysis to evaluate the classification power of beer consumers among the groups. For that, the variable that represents the cluster membership was considered as the qualitative dependent variable and the 34 variables that measure the purchasing behavior as the independent quantitative variables. For the first solution of 4 groups that emerged at the end of the first stage (Ward's method), the correct classification of the consumers in the groups was 87.4% of the original cases, and 81.3% of cases correctly classified in the cross-validation. For the groups formed at the end of the second stage, presented in Table 1, the correct classification of the cases increased to 96.0% and 90.3%, respectively, showing an improvement of the initial solution with the use of the 2-stage technique. The results below provide a strong indication of the validity of the clustering structure found.

Table 1. Classification result of cases in the formed groups

		K-means groups	Association to the planned group				Total
			1	2	3	4	
Original	count	1	146	5	0	0	151
		2	1	176	0	0	177
		3	0	3	70	0	73
		4	0	0	1	20	21
	%	1	96,7	3,3	0	0	100
		2	0,6	99,4	0	0	100
		3	0	4,1	95,9	0	100
		4	0	0	4,8	95,2	100
With cross validation	count	1	139	12	0	0	151
		2	6	169	2	0	177
		3	0	3	70	0	73
		4	0	0	1	20	21
	%	1	92,1	7,9	0	0	100
		2	3,4	95,5	1,1	0	100
		3	0	4,1	95,9	0	100
		4	0	0	4,8	95,2	100

Source: Elaborated by the authors (2019).

External validity, however, requires demonstration that the formed groups are useful in a practical way. This can be achieved by characterizing the groups. The Kruskal-Wallis test was used again to identify the variables that best discriminated the groups, and through the mean, to identify in which of them the differences were occurring. Tables 2 to 8 present the results of the Kruskal-Wallis (H) statistic and its significance (Sig), as

well as the mean value of each group for each variable that measured beer purchase behavior. To facilitate analysis, the variables were classified as decreasing in relation to the H. statistic.

Table 2. Characterization of groups: Search for information

Var	Variable description	H	Sig	Group	Group	Group	Group	Average
V08	I look for information about beers on specialized websites.	236,031	0,000	1 5,391	2,232	3 1,397	4 1,238	3,168
V09	I look for information about beers on social networks.	177,374	0,000	4,649	2,079	1,438	1,048	2,836
V12	I use my previous experiences as a source of information about beers.	175,871	0,000	6,305	5,701	3,110	1,190	5,244
V11	I look for beer references with friends.	165,188	0,000	6,192	5,226	3,219	1,238	5,026
V13	I try to know the beers I see in advertisements.	135,294	0,000	4,960	3,689	2,123	1,095	3,744
V10	I ask for information about the beers with the sale promoters in the supermarkets.	63,618	0,000	2,854	1,751	1,370	1,048	2,045

Source: Elaborated by the authors (2019).

Table 3. Characterization of groups: Word-of-mouth marketing

Var	Variable description	H	Sig	Group	Group	Group	Group	Average
V29	I always tell friends the beers I bought and enjoyed	145,621	0,000	1 6,424	2 6,096	3 3,795	1,333	5,578
V32	I divulge in my social networks my experience and satisfaction or dissatisfaction with each beer purchased.	79,704	0,000	3,106	1,757	1,479	1,048	2,156

Source: Elaborated by the authors (2019).

Table 4. Characterization of groups: selection and experimentation criteria

Var	Variable description	H	Sig	Group	Group	Group	Group	Average
V23	I choose beers that I have never tasted to increase my knowledge about the product	173,328	0,000	6,192	5,056	3 2,548	1,619	4,858
V15	I choose beers that are being launched on the market.	157,731	0,000	4,907	3,605	1,767	1,190	3,633
V18	I choose beers for the components used in the production process	155,277	0,000	5,616	4,124	2,247	1,190	4,187
V16	I choose beers by country of origin.	147,544	0,000	4,987	2,723	2,205	1,048	3,360
V22	I choose beers for its flavor.	108,945	0,000	6,689	6,458	5,315	1,476	6,095
V14	I get beers I've tried in bars and restaurants	106,521	0,000	6,238	5,667	4,301	1,095	5,408
V19	I choose beers for the packaging.	68,629	0,000	3,556	2,638	1,767	1,333	2,751
V30	I always try to buy the same beers.	65,600	0,000	4,325	4,746	5,288	1,238	4,514
V21	I choose beers according to the alcoholic content.	63,008	0,000	3,861	3,226	2,137	1,143	3,161
V20	I choose beers by brand.	59,736	0,000	5,563	5,475	4,932	1,238	5,201
V17	I choose beers according to the price.	43,020	0,000	3,927	4,412	3,973	1,190	4,002

Source: Elaborated by the authors (2019).

Table 5. Characterization of groups: channel

Var	Variable description	H	Sig	Group	Group	Group	Group	Average
V25	I buy beers mainly at specialty stores.	137,672	0,000	1 4,490	2,627	3 1,918	4 1,381	3,109
V24	I buy beers mainly in supermarket.	45,128	0,000	5,781	5,808	5,466	1,762	5,538

Source: Elaborated by the authors (2019).

Table 6. Characterization of groups: purchases by occasion / special purchase

Var	Variable description	H	Sig	Group	1Group	2Group	3Group	4Avera
V07	I buy beers to give to people.	125,034	0,000	5,656	4,045	2,425	2,143	4,246
V02	I buy beer to drink on cold days.	98,225	0,000	4,781	3,452	2,411	1,429	3,647
V05	I buy beers to use in the preparation of culinary dishes	38,380	0,000	3,457	2,266	2,041	2,095	2,645
V06	I only buy beers for special occasions.	9,496	0,000	2,291	2,876	3,041	2,381	2,671

Source: Elaborated by the authors (2019).

Table 7. Characterization of groups: impulsivity

Var	Variable description	H	Sig	Group	Group	Group	Group 4	Average
V26	I buy beers on impulse, without prior planning or research	42,167	0,000	4,026	4,068	2,781	1,429	3,699
V27	I always know which beers I'll buy before reaching the point of sale.	35,459	0,000	3,987	3,932	3,959	1,190	3,820

Source: Elaborated by the authors (2019).

Table 8. Characterization of groups: buying behavior

Var	Variable description	H	Sig	Group	Group	Group	Group	Average
V03	Drinking beer has become a habit for me.	106,816	0,000	1 <sup>5,305</sup>	2 <sup>4,181</sup>	2,712	4 <sup>1,095</sup>	4,175
V31	I feel satisfied with the beers I have drunk.	63,591	0,000	6,159	5,904	5,438	1,524	5,697
V28	When I buy a beer I do not know, I buy another beer which I know for guarantee.	59,150	0,000	4,298	4,249	2,849	1,143	3,870
V34	Even if other attributes change, I always buy beers from the same country of origin.	39,767	0,000	3,060	2,237	2,452	1,095	2,512
V01	I choose to consume beer because it is beneficial to health	36,843	0,000	3,411	2,684	2,178	1,524	2,799
V33	When I do not like an unknown brand of beer, I avoid others that have just been released and I do not know.	27,740	0,000	3,013	2,712	2,918	1,095	2,775
V04	For me, drinking beer is synonymous with social status.	21,408	0,000	2,589	2,446	1,836	1,619	2,351

Source: Elaborated by the authors (2019).

#### 4.2.1 The characterization of each of the formed groups is presented below

##### Group 1: High Involvement Buyer

36% of cases are characterized as being the consumers with the highest level of involvement among all of them. They are the ones that most seek information, either information on specialized websites (5.39), on social networks (4.65) or with friends (6.20), and often indicate to friends the beers they have tasted and enjoyed (6,19), they are also the ones that most disseminate good or bad experiences in social networks (3,11). To reduce the risks of deception, which according to (Heinonen, Consumer activity in social media: managerial approaches to consumers' social media behavior, 2011), are often perceived as something painful and contribute to generate anxiety, they engage in various activities, from the act of buying, consuming, to participating in discussions, share knowledge with other consumers and contribute to other consumers' search, purchase and consumption activities.

They are also avid for knowledge and much more prone to experimentation: they choose beers that they have never tasted before in order to increase their knowledge about the product (6,19), they are pioneers in the choice of beers that are being launched on the market (4,90) and seek to know beers that are seen in advertisements (4,96). They use previous experiences as a source of information on beers (6,31) and choose beers mainly for flavor (6,69), components used in the brewing process (5,62), brand (5,63) and country of origin (4,99), which according to Usunier and Cestre (2007) it is common that throughout the buying process, consumers make associations with some products, a certain country of origin and even with products from different countries.

For these consumers, price plays a secondary role in choice (3,93), being only higher than alcoholic composition (3,86). Additionally, they are the most likely to buy beers to gift (5,66) and for culinary purposes (3,46). As for the consumption channel, they usually buy beers mainly in supermarkets (5,78), but also buy a lot in specialized stores (4,49). They are notably the consumers with the highest consumption habit (5,31) and the most satisfied (6,16) with the beers they consume.

## **Group 2: Buyer of Average Consumption**

42% of the cases are characterized by their involvement in the purchase process. The search for information and references on beers is more limited to previous experiences (5,70) and friends (5,23), to whom they also indicate beers that they have bought and enjoyed (6,10). Considering that beer consumption is done collectively by a particular social group (friends, family, co-workers or schoolmates), these results corroborate (Ajzen, 1991) assumption that the consumer buying decision is often influenced by these groups' opinions, which exert social pressure on the individuals, denominated by this author as subjective norms.

In relation to purchasing criteria, Group 2 shares with Group 1 the choice of beers for flavor (6,46) and brand (5,48), and try to taste new beers to increase knowledge (5,06). However, price (4,41) plays a greater role in comparison with consumers in Group 1. They tend to buy the same beers (4,75), mostly in supermarkets (5,81). Sometimes they buy beer to be given as a gift (4,05). They are satisfied consumers (4,18) and with a relative habit of beer consumption (5,90).

The results of this research demonstrate that, unlike Group 1, price is a more relevant factor for Group 2, which allows us to affirm that this factor can strongly affect the consumers' purchase decision.

As the consumer market is constituted by different preferences of products and services (Smith, 1956) and in most markets it is impossible to satisfy all buyers with a single offer, the results found here indicate that, for Group 2, price is a specific need that needs to be met through market segmentation, since, according to (Quinn & Bennisson, 2007), it is one of the core principles of marketing.

### **Group 3: Occasional buyer**

17% of the cases are more conservative consumers and less involved with the buying process. They do not usually carry out many searches for information about beers, either in websites (1.40), in social networks (1.44), or with friends (3.22). They are consumers who do not have the habit of tasting different beers to increase their knowledge (2,55) or try out beers that have just been launched (1,77). They are consumers who normally buy the same beers (5,29) and, basically, in supermarkets (5,47). Regarding the choice criteria, the **taste** (5.32) and the **brand** (4.93) are considered the most important ones. Although they are satisfied with the beers they consume (5,44), beer consumption is not a habit for this group (2.71), and beer is basically bought for special occasions (3,04).

The results show that the flavor aspect is considered the first most important, both for **Group 1** and **Group 3**. The behavior of both groups supports the ideas defended by Lent (2004) when affirming that the perception of flavors (sweet, sour, salty and bitter) allows people to taste the same food or drink in different ways. As taste sensitivity is directly related to the density of the drink's distribution in the mouth of the individuals, (Zuniga, et al., 1993) believe that capturing consumers' perceptions of the taste of their products is essential so that companies can implement actions that best suit their preferences.

### **Group 4: Low consumption buyer**

5% of the cases are consumers who are not used to consuming beer (1.10) and are little involved in the buying process. They normally buy beers for special occasions (2,38), to give as a gift to someone (2,14) and to use in the preparation of culinary dishes (2,10). They do not usually get information about beer, nor do any kind of word-of-mouth marketing. Finally, when the formed groups were compared to the demographic variables in chi-square tests, only the variables of age and schooling were statistically significant ( $\alpha = 0.05$ ), according to Table 9.

Table 9. Chi-square test formed groups versus demographic variables

Analyzes done	Chi square - Comparison between groups				
	Gender	Age	Amount of children	marital status	Schooling -
2 steps Ward / K-means	0,339	<b>0,009</b>	0,623	0,523	<b>0,001</b>

Source: Elaborated by the authors (2019).

By analyzing the frequencies observed with the expected ones, it is possible to say that Group 1 has a proportionally older age profile (31-over 60 years) and more schooled (complete higher education). Group 2, in turn, is characterized by consisting of a younger profile (less than 21 to 30 years) and more education (incomplete and complete higher education). On the other hand, Group 3 presents a larger proportion of middle-aged consumers (31-40 years old) with low schooling (elementary and High school). Finally, Group 4 is closer to consumers over 60 with lower levels of education (elementary and High school).

## 5 FINAL CONSIDERATIONS

The objective of this work was to identify the different segments of beer consumers, taking as reference the behaviors of these consumers during the purchase decision process. In this way, (Dalmoro & Fell, 2020) shown that market construction is a dynamic process involving multiple actors in hegemonic and alternative positions. The results of their research allowed theorizing about a specific type of connection – covalente – between the multiple market dimensions, in which the practices of actors repel and attract both dimensions constantly, without definitive stabilization around a single dimension.

The data analysis this research evidenced the presence of four groups of consumers, the first one being called a high involvement buyer because they are the ones that most seek, divulge and share information and experiences related to beer consumption. They are consumers who risk getting to know new products, and for whom price plays a secondary role.

The second group is less involved in the beer purchase process, and their search for information is limited to previous experiences and the opinion of friends and other social groups. Although there are some similarities compared with the characteristics of the first group, these consumers are more sensitive to prices.

According to the results, group three proved to be less involved with the buying process and people in this group are not adept at searching for new flavors or new products. They are consumers who usually buy the same brands of beer. In addition, beer consumption is not a habit, once it has been shown that the consumption takes place on special occasions.

Given the market is heterogeneous and formed by specific groups of consumers, it was verified at the end of this research that these groups need to be understood so that the company can serve them better than its competitors. Knowing and understanding the attributes that consumers value most in their purchasing process is relevant since these are the criteria they use to select and justify their actions.

It is for this reason that segmentation is an important marketing tool as it allows companies to focus on their marketing efforts on buyers, having a greater chance of meeting their needs, as well as detecting new market opportunities that may best be explored.

In addition, it is worth remembering that a great volume of information and advertising on the market affects the consumer's decisions in choosing the distribution channel where they want to buy, as well as their product or brand choices. But their options will also be influenced by the importance given to the brand, the price, the environment of the purchase, among other aspects.

Given the above, knowing what consumers want and how they make their purchasing decisions is critical to the success of productive organizations. The analysis and understanding of consumer needs and behavior are meaningful because it can elucidate important information for industry executives as well as for marketers about decisions related to the development and launch of new products.

It is within this approach that the present research envisions both the academic and managerial contributions, bringing practical implications to light. The managerial contribution of this research is based on the fact that identifying different profiles of consumers in the beer segment provides data for producers and distributors to develop specific marketing actions that stimulate the consumption of each of the segments identified in this study, increasing the total sales of this product in the country. Based on this segmentation proposal, the beer factories, as well as the supermarkets, bars, and restaurants, can develop actions to reach the different segments of beer consumers, which will allow the increase of the sales volume in this specific sector.



## **6 FUTURE RESEARCH SUGGESTIONS**

A practical suggestion for beer business managers is that for the cluster comprising casual consumers (Group 4) is that they conduct tasting campaigns at points of sale, drawing attention to the beers and the areas in which they are exposed on the shelves. They can also carry out promotions that stimulate the purchase, even on special dates, carrying out marketing campaigns in the points of sale, aiming to stimulate the consumption in these occasions, thus creating the habit of consuming beer in this group of consumers.

For the cluster composed of highly involved consumers (Group 1), actions such as the creation of virtual communities that allow the exchange of experiences and product indications can be considered. Another action that can be taken is the adoption of digital advertising machines in supermarket, outlets and other retailers that sell beers so that they can provide information on types of beers, flavors, countries of origin and tips on how to harmonize them with different foods and recipes, allowing customers to print recipes that use beers as an ingredient. This second proposed action, although already implemented in some of the country's retail chains, could be used on a larger scale to stimulate the consumption in this second group of beer consumers identified in this research.

Moreover, another practical suggestion for beer business managers is that they focus their marketing efforts on group one and group two. Group One is a complete group and truly interested in the product. They are consumers who will respond to the company's marketing strategies. For group two, it will be necessary to make a little more effort, but they are consumers who pay attention to the taste and brand of the product. They are also more price sensitive.

Although the current context, people are expecting a global impact on the beer industry because of COVID-19, that dramatically has reduced beer production and consumption around the world, hitting craft and independent brewers extremely hard, with closed bars and restaurants, many small breweries are now left with quite a few liters to sell. Small breweries can offer a great variety of beers that are unlikely to be found just anywhere.

Unique recipes, own creations and funky bottles make these kinds of beer very interesting options that customers may want to try out during this time of isolation. In addition, home delivery becomes an essential channel for reaching out to customers while the usual drinking establishments are closed. The small brewer might find this rather challenging because it's not their usual method, but this should not stop brewers

from thinking creatively. Now more than ever, the average customer has discovered the convenience of home delivery options and this is likely to remain an important channel for many of them.

The academic contribution, in turn, lies in the proposition of a bibliographic framework, as well as a model to segment the beer market in the country, contributing to the literature related to the topics marketing segmentation and consumer behavior, so that this may help in implementing further research on the subject studied.

As it virtually happens in all academic research, this was also subject to limitations. One of them refers to its geographical restriction, which was restricted to consumers in the inland of the state of São Paulo. Thus, for future studies, it is suggested that the research methodology used here be applied to samples from other regions of the country, allowing to compare the results obtained and, if possible, to formulate a segmentation proposal that is nationally contextualized.

In addition, new studies related to different phenomena can be carried out with beer consumers, such as the propensity to make a socio-environmental study relating consumers' buying behavior to social-environmental issues, as well as a study of trends in behavior change for the well-being.

It is also suggested that other bases of segmentation, such as demographic and psychographic, be used to identify the different groups of consumers in the sector analyzed here in order to compare the results with those obtained in this research and to think of the market more holistically. Considering that several studies have analyzed market segmentation, it is believed that the accomplishment of this academic study aimed at the market segmentation of beer consumers come to contribute with this list of market segmentation studies.

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