Bottom-up market segmentation method for Dutch Microbreweries

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Abstract

The Dutch beer industry has experienced significant growth, notably marked by the rise of microbreweries. However, besides microbreweries gaining market share, there has been a significant increase in failure rates. The growing number of microbreweries has intensified competition, presenting challenges for gaining a competitive advantage. Furthermore, a concerning trend is that macro breweries are taking over microbreweries, resulting in lower prices against which other microbreweries cannot compete. Effective strategic marketing, and particularly market segmentation, is crucial to improve the financial performance of microbreweries. However, the conventional top-down segmentation approach is not feasible in a micro company environment. Hence, this study aims to develop a bottom-up market segmentation method tailored to Dutch microbreweries, starting at existing customers rather than the entire beer market. For a selected microbrewery, a market segmentation is performed. Existing customers are compared with individuals who buy beer at the supermarket and liquor store to gain insights in preferences and characteristics of the microbrewery's target customers. The brewery successfully interpreted the data and gained valuable insights into their target customers' preferences and characteristics. Findings reveal unique characteristics of existing customers, including strong preference for trying out new beer brands, strong preference for weizen and triple beer, and low preference for pilsner and radler beer. Additionally, existing customers place importance on a high alcohol percentage, and locally produced beer from small breweries. This study can serve as a guidance for micro companies seeking to understand the preferences and characteristics of their target market. However, to establish an effective and feasible bottom-up segmentation method, future research is required, encompassing additional microbreweries and diverse types of micro companies. Through continued research, a comprehensive understanding of market segmentation tailored to micro companies can be achieved.

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1. Introduction

The Dutch beer industry is a popular and substantial industry. Back in the 1980s there were only a few independent beer producers with products so similar that tastes could hardly be distinguished by professional tasters (van Dijk et al., 2018). Nowadays, the opposite is occurring. The number of beer breweries has grown tremendously, with currently 933 breweries in the Netherlands (Stichting Erfgoed Nederlandse Biercultuur, 2023a). Moreover, the Netherlands is known as one of the countries with the widest variety of beer produced (van Dijk et al., 2018). Especially microbreweries have become increasingly popular over the years, with the most rapid expansion over the past twenty years (van Dijk et al., 2018). With the emergence of such microbreweries, the Dutch beer brewing industry has transformed into one of the most dynamic industries in the Netherlands. Additionally, this expansion of microbreweries can be seen as a renewal of the mature beer industry in which macro breweries dominate (van Dijk et al., 2018).

There is not a singular definition to define microbreweries due to the varied traditions and practices in beer brewing across countries (Garavaglia & Swinnen, 2017). However, the term “microbrewery” commonly distinguishes breweries producing their own specialty beer on a small scale, contrasting with larger beer brewers like Heineken who mass-produce beer (Garavaglia & Swinnen, 2017). Microbreweries fall under the category of micro companies, meaning they share the same criteria for categorization. The primary characteristic defining a micro company is its size. According to the European Commission, a company qualifies as 'micro' if it has fewer than ten employees and an annual turnover or balance sheet total below two million euros (European Commission, n.d.).

Several drivers, encompassing both demand-side and supply-side dynamics, contribute to the emergence of the microbrewery movement (Garavaglia & Swinnen, 2017). Two key demand-side drivers have significantly stimulated the microbrewery movement. Firstly, there's a rising consumer demand for variety in beer styles, countering the homogenization prevalent in the beer market. Secondly, the increase in income among beer consumers has driven the demand for variety and premium products like specialty beers offered by microbreweries. On the supply side, factors driving the microbrewery movement include the growing accessibility of technical equipment and capital, alongside the spread of information and expertise through networks (Garavaglia & Swinnen, 2017).

Despite the rise of microbreweries in the beer industry, leading to a shift in market share away from the larger breweries, it is not all looking bright. Over recent decades, many microbreweries, as well as micro companies in general, appeared to have failed. Studies show that around 50% of starting micro companies fail within the first five years of operation (Turner & Endres, 2017). These failures can be attributed to three primary challenges micro companies face: limited financial and technological resources, limited knowledge of business, and limited impact on the market (Bodlaj & Rojšek, 2014; Carson & Cromie, 1990; Ropega, 2011; Salamzadeh & Kawamorita Kesim, 2015). Moreover, with the substantial increase of micro companies in recent years, the competition has intensified, making it harder to gain a competitive advantage. For instance, in the Netherlands, even the smallest municipalities count one or more breweries (Stichting Erfgoed Nederlandse Biercultuur, 2023b). Another challenge in the beer industry is that macro breweries are taking over microbreweries, resulting in lower prices against which other microbreweries cannot compete.

Strategic marketing plays a crucial role in shaping company's position within its industry (Ropega, 2011). However, compared to larger counterparts, micro companies often lack well-developed marketing practices due do their micro firm characteristics such as limited resources and marketing expertise to exploit marketing opportunities and perform market research (Bodlaj & Rojšek, 2014; Walsh & Lipinski, 2009; Mc Cartan-Quinn & Carson, 2003). To enhance the success rate of micro companies, it is crucial to mitigate competition from macro companies while also effectively competing with other micro companies. Strategic marketing, and particularly the identification of market segments, is crucial for this (Murray & O'Neill, 2012; Hassan & Craft, 2012). The strategic decision of which segment to target and how to deliver superior value to this segment is the vital element for micro companies to succeed in the competitive industry (Doohan et al., 2009).

Extensive literature on market segmentation exists, primarily adopting a top-down approach where the entire market is segmented based on descriptive segmentation bases before selecting the target segment (Goyat, 2011; Kotler & Keller, 2015). Micro companies lack the resources, time, and expertise to implement such an approach, and have the need for a bottom-up market segmentation approach. With a lack of literature on effective segmentation methods tailored to micro companies, this study aims to fill this gap by providing micro companies with a method on how to segment their market. Specifically, this study aims to develop a bottom-up market segmentation method for microbreweries, using existing customers as the starting point to gain insights in the target customer segment, rather than the entire beer market. The study focuses on Dutch microbreweries, since microbreweries are a growing industry, especially in the Netherlands. With fierce competition and high failure rates among microbreweries, Dutch microbreweries are a good example of a type of micro company in need of market segmentation guidance. Accordingly, the central research question guiding this study is:

What is an effective and feasible market segmentation method for Dutch microbreweries?

A microbrewery is selected for which a bottom-up market segmentation is performed. The target customer segment is compared to other segments. Specifically, existing customers are compared with individuals who buy beer from supermarkets and individuals who buy beer at liquor stores. Through these comparisons, the distinct preferences and characteristics defining the microbrewery's target customers are identified. The findings are discussed with the brewery to assess the feasibility and effectiveness of the method. The sub question for this study is:

What are the preferences and characteristics of existing customers of a microbrewery and how do they differ from individuals who buy beer at the supermarket or liquor store?

2. Theoretical background

This chapter aims to provide a comprehensive literature review encompassing the beer industry, micro companies and microbreweries and their functioning, and market segmentation. The literature on the functioning of micro companies and microbreweries is organized in alignment with the Resource-Advantage (R-A) Theory of Competition framework.

2.1 The beer industry

Given the study's focus on microbreweries, it is crucial to gather information about the beer industry. It is evident that the beer market has undergone a significant transformation. Back in the 1980s there were only a handful independent beer producers whose products were so similar that tastes could hardly be distinguished by professional tasters (van Dijk et al., 2018). At that time, breweries primarily focused on producing pilsner, resulting in the characterization of the Dutch brewing industry as a "pilsner desert" (van Dijk et al., 2018). Presently, the beer industry is characterized by its dominance and scale, featuring a wide variety of beer styles, producers, and intense competition (Ascher, 2012).

Notably, the rise and expansion of microbreweries have been remarkable in reshaping the beer industry (van Dijk et al., 2018; Garavaglia & Swinnen, 2017; Ascher, 2012). Microbreweries disrupted the domination of a few global multinational breweries, and the homogenization of beer (Garavaglia & Swinnen, 2017). Microbreweries typically brew specialty beers rather than the standard pilsner produced by traditional commercial breweries (Garavaglia & Swinnen, 2017). Additionally, microbreweries are often referred to as specialty breweries or craft breweries (van Dijk et al., 2018).

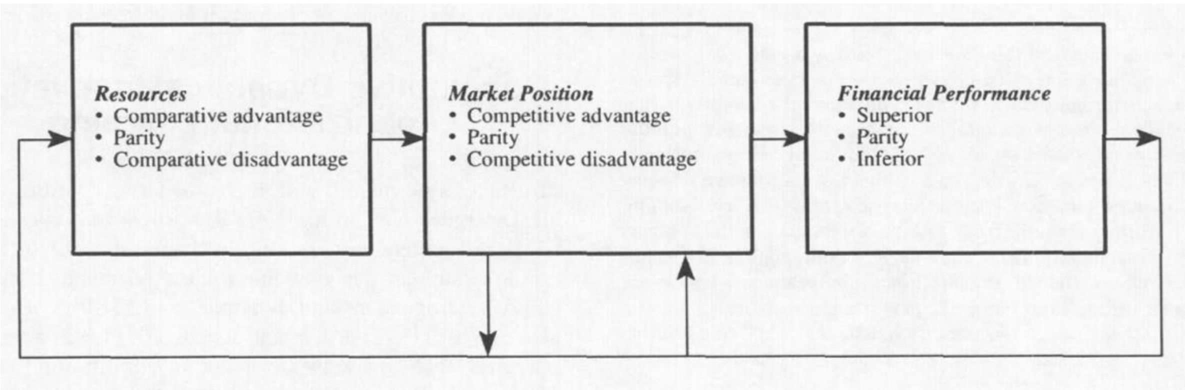
Beer is an alcoholic beverage primarily composed of malted barley, hops, yeast, and water (Ascher, 2012). Other ingredients are added to create different types and flavors of beer. Renowned as the world's most consumed alcoholic drink and the third most popular beverage overall (Ascher, 2012; Nelson, 2005), beer is broadly classified into two main categories: lagers and ales. Lagers typify bottom-fermented beers, while ales typify top-fermented beers. Furthermore, beer exbibits a wide variety in flavors and alcohol contents (van Dijk et al., 2018; Ascher, 2012; Hardwick et al., 1996). Pilsner, a lager type of beer, stands out as the most well-known, widely available, mainstream, and traditional beer (van Dijk et al., 2018). Specialty beers are typically ales (van Dijk et al., 2018).

2.2 Resource-Advantage (R-A) Theory of Competition

The Resource-Advantage Theory (R-A Theory) of Competition serves as a valuable framework for describing the functioning of companies and explaining the failure of many micro companies, and particularly microbreweries, in recent decades. Additionally, the R-A Theory of Competition offers a structured approach for micro companies to comprehend their resources and the positive impact of resource management on their market position and financial performance. The R-A Theory of Competition framework comprises three main elements: resources, market position, and financial performance. The framework proposes that companies have the primary objective of superior financial performance (Hunt & Morgen, 1996). This financial performance, whether superior or inferior, results from a marketplace position of competitive advantage or disadvantage, which, in turn, is influenced by a comparative advantage or disadvantage in resources. The overall R-A theory of competition marks competition as a disequilibrating, ongoing process in which companies strive for a comparative advantage in resources to attain a marketplace position of competitive advantage that results in superior financial performance (Hunt & Morgen, 1996). The schematic representation of the framework is presented below in Figure 1.

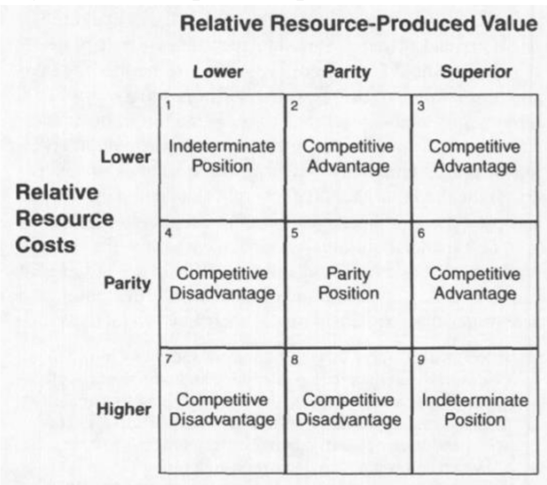
The assessment of a company's market position can be facilitated by the competitive position matrix, illustrated in Figure 2 below. According to R-A theory, competing companies are distributed across the nine cells of figure 2. A competitive advantage position resulting in superior financial performance is obtained in three situations, implied by cells 2,3, and 6. A competitive disadvantage position resulting in inferior financial performance is similarly obtained in three situations, and implied by cells 4,7, and 8 (Hunt & Morgen, 1996).
Moreover, the R-A theory posits that competition fosters organizational learning because of feedback from relative financial performance. This financial performance signals the relative market position, and this, in turn, signals relative resources (Hunt & Morgan, 1996). Thus, competition serves as a mechanism through which companies gain awareness of their relative resources and marketplace position.

Figure 1: Resource-Advantage Theory of competition framework



Source: adapted from Hunt and Morgan (1996)

Figure 2: Competitive position matrix



Source: Hunt and Morgan (1996)

2.3 Functioning micro companies and microbreweries

2.3.1 Definition

The definition of a micro company varies across countries due to differences in their industrial and economic structures (Inan & Bitici, 2015), resulting in the absence of a universal definition (Turner & Endres, 2017; Olusegun, 2012). However, several key indicators, including revenue, total assets, and the number of employees, can be used to distinguish micro from medium and macro companies (Inan & Bitici, 2015). Primarily, a company is considered 'micro' based on its size relative to industry leaders, particularly in terms of sales volume (Turner & Endres, 2017; Carson, 1990). According to the European Commission's classification, a company qualifies as micro if it has fewer than ten employees and a turnover or balance sheet total equal to or below two million euros (European Commission, n.d.).

Similarly, there is not a universal definition for microbreweries as there is diversity among countries and among their traditions in beer brewing (Garavaglia & Swinnen, 2017). As microbreweries fall under the category of micro companies, the same size-based definition applies. The American Brewers Association defined a microbrewery as a brewery that produces less than 15,000 barrels (1 barrel = 119 liter) of beer per year with 75% or more of its beer sold off site (Ascher, 2012).

Micro companies and breweries can also be classified based on their functioning, aligning with the three primary elements of the R-A Theory of Competition framework.

2.3.2 Resources

In a micro company, ownership typically resides with an individual or small group of individual who often take on managerial responsibilities as well (Turner & Endres, 2017; Resnick et al., 2016; Carson, 1990; Schöllhammer & Kuriloff, 1988). Thus, managers tend to fulfil multiple roles that would be distributed among several employees in macro companies. This indicates a scarcity of specialized expertise within micro companies, as there are no personnel focusing fulltime on a specific discipline. Moreover, micro companies differ from macro companies in management style adopted. Micro companies are known for embracing an informal management style, contrasting with the more formal and professional style in macro (Resnick et al., 2016; Inan & Bitici, 2015; Matlay, 1999; Schöllhammer & Kuriloff, 1988). The management culture in micro companies tends to be more flexible and dynamic, mainly because of the greater freedom of expression in micro companies (Resnick et al., 2016; Mc Cartan-Quinn & Carson, 2003). Another distinguishing aspect is that leaders in micro companies are primarily involved in operational activities rather than strategic activities; micro companies generally act in the moment to survive (Inan & Bitici, 2015). Regarding operations, micro companies typically operate within a localized scope, with workers and owners residing in the same area (Carson, 1990; Schöllhammer & Kuriloff, 1988).

While the above does not necessarily lead to advantages or disadvantages for the functioning of micro companies, there are resources that imply a comparative advantage or disadvantage for a micro company.

Micro companies exhibit a simplistic organizational structure without layers and hierarchy (Resnick et al., 2016). This structure is typically less coordinated than that of macro companies, which can pose challenges when implementing strategies and operating in business (Gilmore, 2011). However, the simplistic organizational structure also has its advantages. Due to their small size and single organizational layer, decision making takes less time. Consequently, responding to the business environment is quicker and more flexible (Resnick et al., 2016; Mc Cartan-Quinn & Carson, 2003). Additionally, micro companies are characterized by a limited customer base with informal customer relationships (Inan & Bitici, 2015). Therefore, micro companies can build strong customer relationship. By being in closer contact with its customers, micro companies can better understand and cater to customer wants (Inan & Bitici, 2015; Mc Cartan-Quinn & Carson, 2003).
Micro companies face three main resource related disadvantages. These include limited financial and technological resources, limited knowledge of business, and limited impact on the marketplace (Resnick et al., 2016; Bodlaj & Rojšek, 2014; Carson, 1990; Ropega, 2011; Salamzadeh & Kawamorita Kesim, 2015; Doohan et al., 2009). Micro companies lack the financial resources and struggle to secure financing from banks, making business operations more challenging compared to larger companies (Ropega, 2011). Unlike macro companies benefiting from economies of scale and higher resource efficiency per unit of output, micro companies face higher production costs due to the inability to mass produce and standardize production (Wells, 2016). Moreover, micro companies cannot spread their fixed costs as well as macro companies, resulting in higher fixed costs per product (Mc Cartan-Quinn & Carson, 2003). Additionally, limited resources hinder training and staff development activities, contributing to the lack of disciplinary knowledge necessary for market research and operational improvements (Inan & Bitici, 2015). Consequently, micro companies often struggle to identify and respond effectively to external threats, leading to suboptimal business operations (Doohan et al., 2009).

Focusing on microbreweries as a subtype of micro companies, they are distinguished by their small-scale production of high-quality, flavorful beers (Garavaglia & Swinnen, 2017; Wells, 2016). There exist three types of microbreweries: production breweries, rental breweries, and brewery tenants (Stichting Erfgoed Nederlandse Biercultuur, 2023c). Production breweries, the most prevalent type, both brew their own beer and market it under their own brand. Rental breweries exclusively produce beer, selling it to brewery tenants who then distribute it under their own brand name (Stichting Erfgoed Nederlandse Biercultuur, 2023c).
Unlike macro breweries, which often rely on third-party distributors and retailers, microbreweries typically oversee the entire production process and manage their own retail spaces. While macro breweries enjoy superior access to distribution networks for their beer, microbreweries often encounter challenges in distributing their products to retailers and consumers through distributors, as these distributors generally interested in moving larger volumes (Ascher, 2012). Microbreweries often embrace their local identity, contributing to the development of new, community-based economies (Wells, 2016; Schnell & Reese, 2014). Just like micro companies in general, microbreweries lack the extensive resources of macro breweries. Despite lacking the extensive resources of macro breweries, microbreweries possess advantages, particularly in human capital. Where microbreweries seem to lack the business

skills, they do possess the brewing skills. In many cases, microbrewery owners also serve as the brewers, equipped with formal education in and knowledge about brewing, leading to the production of high-quality beer (Bentzen & Smith, 2018; Wells, 2016). The small scale and local focus of microbreweries typically fosters strong customer relationships. Microbreweries often use stories and images associated with their locality, facilitating customer engagement and enhancing relationships (Schnell & Reese, 2014).

2.3.3 Market position

As previously mentioned, micro companies face higher resource costs and therefore cannot compete with macro companies in price. To survive and to remain profitable, micro companies calculate a higher price to its customers compared to macro counterparts (Audretsch et al., 1999). Consequently, micro companies find themselves in a competitive disadvantage market position in terms of costs. Since micro companies cannot compete on price, they must rely on their relative resource-produced value to move away from a competitive disadvantage. Because of the close customer relationships, micro companies can offer tailored products and services, and thereby deliver superior resource-produced value. The ability to quickly respond to customer wants, also enables micro companies to innovate more rapidly than their macro counterparts, potentially leading to a competitive advantage in terms of resource-produced value (Inan & Bitici, 2015). However, most radical innovations come from macro companies (Paulson et al., 2007). Micro companies lack the necessary expertise and resources to introduce radical innovations to the market, placing them at a competitive disadvantage in terms of resource-produced value compared to macro companies.

Focusing on microbreweries, they typically sell their products at higher prices compared to macro breweries (Bentzen & Smith, 2018; Schnell & Reese, 2014), leading to a competitive disadvantage compared to macro breweries in terms of costs. Nevertheless, microbreweries generally compete on differentiation. They specialize in unique beers that cannot be found anywhere else. The brewed beers have more distinctive flavors than the beers brewed by macro breweries; microbreweries typically brew darker ales and stronger hop brews compared to macro breweries which typically brew lagers (Schnell & Reese, 2014). Offering unique flavored products that cannot be found anywhere else (Bentzen & Smith; Schnell & Reese, 2014), results in superior resource produced value and a competitive advantage for microbreweries. According to the competitive position matrix, this leads to an intermediate position for microbreweries compared to macro breweries.

Yet, a growing concern is that macro breweries are taking over microbreweries. In the past, specialty beers were solely produced by small breweries that were restricted to local markets. However, due to the market globalization and macro breweries taking over microbreweries, production volumes of specialty beers from macro companies are rapidly increasing (Vanderhaegen et al., 2007). Macro breweries can use their cost advantages to lower the relative resource costs of microbrewery beers and with that lowering the prices, while maintaining the superior resource produced value. Consequently, the microbreweries that are taken over move from an intermediate position towards a competitive advantage in the competitive position matrix. This poses challenges for other microbreweries to compete against these lower prices and thus struggle to gain a competitive advantage.

Besides competing with macro brewers, microbreweries mainly compete with fellow microbreweries (Ascher, 2012). The problem arising here, is that the number of microbreweries keeps increasing. Presently, there is a notable rise in concentration of micro companies competing within the same segment, such as the same geographical region, leading to a considerable increase in competition (Utton, 2020). Even in the smallest municipalities in the Netherlands there are one or more breweries present (Stichting Erfgoed Nederlandse Biercultuur, 2023b), which further contributes to intense competition and difficulties for a microbrewery to gain a market position with a competitive advantage.

2.3.4 Financial performance

The micro company sector is known for poor financial performance levels and high failure rates (Jocumsen, 2004). While companies of all sizes fail, micro companies are particularly more likely to fail. Statistics indicate that 50% of starting micro companies fail within the first five years of operation (Turner & Endres, 2017).

As macro breweries continue to acquire micro companies and competition intensifies among microbreweries, gaining a competitive advantage market position becomes increasingly challenging. According to R-A Theory of Competition, this results in poor financial performance and increased risk of failure among microbreweries.

2.3.5 Marketing

Marketing plays a crucial role in determining a company's position within the industry (Ropega, 2011). Without effective marketing strategies, micro companies struggle to survive the increasing competition within the segment they are operating and fail to gain a market position with a competitive advantage, resulting in inferior financial performance. Numerous studies have consistently shown that companies with a strong market orientation perform better in terms of their market share (Doohan et al., 2009). Especially market segmentation holds significant importance in improving a company's the market position of a company (Hassan & Craft, 2012).

To enhance the financial performance and chances of success of micro companies, it is important to achieve a competitive advantage market position. Micro companies need to avoid competition from macro companies and survive the competition of other micro companies. To accomplish this, strategic marketing is crucial (Murray & O'Neill, 2012), which is the marketing discipline that enables companies to enhance its competitiveness (Brooksbank, 1999). Management within micro companies faces the challenge of deciding on how to allocate their limited recourses to achieve a competitive advantage market position. This entails meeting the market's needs and providing superior resource-produced value. To deliver superior value, micro companies must identify their target market and tailor their offer to meet the specific needs of this segment (Varadarajan, 2010). This strategic marketing approach, known as market segmentation, is the vital marketing element for micro companies to effectively meet customer needs and succeed in the competitive industry (Doohan et al., 2009).

Micro companies face marketing problems because of their micro firm characteristics (Mc Cartan-Quinn & Carson, 2003). Their approach to strategic marketing decisions is much less complex compared to larger companies (Jocumsen, 2004). Micro companies are quicker and more flexible with their marketing decision-making. They tend to adopt short-term and reactive marketing decisions rather than long-term planned marketing decisions (Doohan et al., 2009; Anderson & Zontanos, 2004; Mc Cartan-Quinn & Carson, 2003). Limited resources and marketing expertise hinder micro companies in exploiting marketing opportunities and performing market research (Mc Cartan-Quinn & Carson, 2003). Nonetheless, their strong customer relationships and personal contact with customers, gives them valuable insights into consumer preferences.

In the context of microbreweries, similar marketing challenges are presumed to exist, and market segmentation remains equally vital for microbreweries as it does for other micro companies (Resnick et al., 2016)

2.4 Market segmentation

2.4.1 Market segmentation definition and process

Market segmentation entails dividing the market into smaller customer groups, known as segments, each with distinct needs and wants (Goyat, 2001; Smith, 1956). This strategy facilitates the identification of customer groups who behave similarly but significantly different from other groups. Understanding the target market's needs, wants, and demands is crucial in segmenting the market effectively. When evaluating a market segment, it should meet five key criteria: *measurability, substantiality, accessibility, differentiability, and actionability* (Kotler & Keller, 2015). Measurability refers to the ability to obtain data about the market segment, including its size, purchasing power, and characteristics. Substantiality implies that the segment should be large and profitable enough so that it is interesting to serve the segment. Accessibility refers to the possibility of reaching and communicating with the segment. Differentiable denotes the segment's distinguishability and varied response to the different marketing mix elements, ideally responding more favorably than other segments. Actionability refers to the suitability of the company to serve the segment, and that effective programs can be formulated for the segment (Kotler & Keller, 2015). Two additional desirable criteria for segments include *stability* (market segment should stay over time), and *identifiability* (ability to describe and label how the segment differentiates from others) (Goyat, 2011; Kotler et al., 2001). The criteria not only apply to macro companies, but also to micro companies such as microbreweries, when evaluating segments.

The market segmentation process comprises five key steps (Goyat, 2011; Summers et al., 2006). The first step is selecting *a market or product category*. The second step is *choosing a basis or bases for segmenting the market,* which include geographic, demographic, psychographic, and behavioral bases (Goyat, 2011; Kotler & Keller, 2015). Factors influencing the choice of segmentation basis include industry, product type, nature of demand, available media for communication, and buyer motivation (Goyat, 2011). Geographic segmentation divides the market based on consumer characteristics like region, population density, or climate. Demographic segmentation divides the market based on consumer characteristics like age, gender, family size, income, occupation, education, nationality, and religion. Psychographic segmentation divides the market based on life-style variables like interests, activities, and opinions. Behavioral segmentation variables include purchase occasions, benefits sought, usage rate, brand loyalty, and user status. The third step in the market segmentation process is *selecting segmentation descriptors* to describe the resulting groups. The fourth step entails *profiling and analyzing segments*, by size, expected growth, purchase frequency, brand image, loyalty, sales, and profit potential. This analysis enables ranking potential market segments based on factors like profit opportunity, risk, match with company's resources, and organizational objectives. Finally, the fifth step is *selecting the target market*, which concludes the segmentation process.

2.4.2 Micro companies and market segmentation

The traditional market segmentation approach, as described above, adopts a top-down approach in which the entire market is segmented before selecting the target market (Goyat, 2011; Kotler & Keller, 2015). Micro companies lack the resources and knowledge to follow this approach, which necessities the exploration of alternative segmentation methods. Contributions addressing market segmentation methods tailored for micro companies is lacking (Bocconcielli et al., 2018), which is also confirmed by a systematic literature review in this study. The literature review aimed to identify existing market segmentation approaches suitable for micro companies, that could be applied to microbreweries. Despite an extensive search process, only one article appeared to be relevant to include in the literature review and focused on the actual market segmentation process. However, this article focused on a narrow basis of segmentation, namely the number of purchases and the amount of the purchases, which is especially applicably to small retail and service businesses (Marcus, 1998). For this reason, this method is not applicable to all types of micro companies, including microbreweries. Other articles were linked to segmentation but were primarily focused on targeting strategies and positioning based on segmentation, rather than the segmentation process itself. The complete search process and relevant information from the article can be found in Appendix I.

In summary of the theoretical background chapter, the challenges faced by microbreweries, such as poor financial performance and high failure rates, can be explained based on the R-A theory of competition framework. Microbreweries face three primary resource-related disadvantages: limited financial and technological resources, limited knowledge of business, and limited impact on the marketplace. Consequently, achieving a competitive advantage market position becomes challenging. However, microbreweries often excel in offering superior resource produced by producing unique beers that cannot be found anywhere. This allows them to compete on differentiation rather than price, which is crucial for the existence and survival of microbreweries in the market. Two main challenges for the market position of microbreweries can be identified. Firstly, the number of microbreweries keeps growing, which intensifies the competition and poses challenges in gaining a competitive advantage market position. Secondly, macro breweries pose a threat by taking over microbreweries. These macro breweries can use their scale to lower costs and prices while maintaining the superior resource produced value from the unique beer offer. Other microbreweries cannot gain this competitive advantage and struggle to survive. To enhance financial performance and ensure survival, strategic marketing and particularly market segmentation is crucial for microbreweries. The traditional top-down marketing segmentation approach is not feasible in a micro company environment. Instead, a market segmentation method must be developed that is tailored to micro companies. Market segmentation should be manageable for owner-managers besides their day-to-day tasks, indicating that the market segmentation should not be too time-consuming. Additionally, given the limited development of business skills, segmentation tasks should not be overly complex or require specialist knowledge. This suggests that that the segmentation method should avoid difficult statistical analysis. Moreover, considering resource constraints and high costs in general, a market segmentation method should not be too expensive. The method should have a bottom-up approach starting at existing customers.

3. Methodology

This study is a quantitative study in which data is obtained through surveys. The focus is on developing a market segmentation method tailored for microbreweries. To achieve this, a bottom-up market segmentation is conducted for a selected Dutch microbrewery.

3.1 Sample selection

The selected Dutch microbrewery for conducting the market segmentation was identified through the ‘Stichting Erfgoed Nederlandse Biercultuur’ (SENB), a foundation that is affiliated with 910 Dutch breweries. Several criteria guided the selection process. To start with, microbreweries located in Utrecht were selected for practical reasons, considering the researcher’s proximity to the area. SENB’s website allowed filtering of microbreweries in Utrecht, resulting in 28 remaining breweries. Given this study’s aim to segment the market of a brewery, it was essential to select a brewery that markets and thus sells beer to customers. Therefore, both production breweries and brewery tenants were considered suitable for this study. To maintain a homogenous group, this study focused solely on production breweries, which are the most prevalent and most flexible in tailoring their offer to specific segments. Filtering on production breweries in Utrecht narrowed to list down to 11 breweries. Furthermore, to qualify as a suitable microbrewery for this study, the criteria of a micro company had to be met, meaning less than 10 employees and a turnover or balance sheet total equal or be below two million euros (European Commission, n.d.). More specifically, a microbrewery should produce less than 15,000 barrels (1 barrel = 119 liter) of beer annually, with at least 75% of it being sold (Ascher, 2012). These criteria were verified when visiting the interested brewery. Initially, contact was made with the first six breweries via email. The email clarified that the brewery was found through the SENB website, followed by the aim of this study, and the brewery was asked if they would be interested in participating in a market segmentation study. Within five working days, the selected brewery expressed interest in participating. Subsequently, the remaining breweries were contacted to identify a second participant microbrewery. Those that did not respond via email were contacted by phone. Unfortunately, no additional breweries agreed to participate.

Following the brewery selection, participants were selected from the same city as the microbrewery, since microbreweries are known for local operations. Consequently, the research population consisted of Dutch beer drinkers residing in Utrecht. To assess the representativeness of the research population compared to the population of Utrecht, the data of the research sample is compared with the data of the population of Utrecht presented on the website Utrecht in Cijfers. Participant criteria included shopping foodstuffs in Utrecht, being above 18 years old (legal drinking age in the Netherlands), and drinking beer at least once a month. The consumer sample consisted of three participant groups: existing customers of the microbrewery, individuals buying beer at the supermarket, and individuals buying beer at the local liquor store. Existing customers were defined as individuals who bought and consumed beer from the brewery at least once. Selecting existing customers allowed for gathering insights into the characteristics and preferences of its target customers, thus ensuring a segment’s measurability of a segment. Additionally, other beer drinkers were selected to facilitate comparisons with existing customers and to identify the unique profile of the target customers. Participants were selected at the supermarket and liquor store since these are places where beer is typically bought. For the supermarket, participants were selected at the Albert Heijn XL in Utrecht, given Albert Heijn's status as the largest supermarket chain in the Netherlands with an extensive beer selection (Bierista, n.d. a). The XL location accommodated many customers, increasing the likelihood of finding participants. Additionally, the indoor entrance and exit at this location provided a convenient setting for individuals to participate in the survey. For the liquor store, it was chosen to select participants at De Bierverteller in Utrecht, known for its specialization in specialty beer and large beer assortment (De Bierverteller, n.d.).

3.2 Measures

Different constructs were measured on five-point Likert-scales (5=totally agree, 1=totally disagree). The primary survey questions were organized around the four elements of the marketing mix, commonly known as the 4Ps: product, price, place, promotion. Since different segments have distinct preferences, it is essential to tailor the marketing mix accordingly. Structuring the questions around the 4Ps enables the identification of customers who respond more positively to the unique offerings of the microbrewery, thereby ensuring the differentiability of market segments. See Appendix II for an overview of the constructs and items, along with the scales used for measurement.

Variety seeking behavior

Variety seeking behavior is measured using three items. Participants were asked whether they always buy beer from the same brand, they like trying out new beer brands, and if they like trying out new beer styles. These items were formulated as a statement. An exploratory factor analysis was performed in SPSS to determine whether the three items align with the same construct. Additionally, a reliability analysis was performed to ensure that the items measuring the same construct are reliably measuring the construct.

Product – importance product attributes

Discovering preferences for different product attributes involved measuring the importance of beer styles, tastes, color, alcohol percentage, packaging, and brand through structuring items around the statement "When I buy beer, it is important that…". Asking about these attributes ensures actionability of a segment, as it provides the microbrewery with insights into preferences and identifies who gives a high importance to the product offer of the brewery.

To discover beer style preferences, participants were asked about the importance of pilsner, white beer, weizen beer, blond beer, double beer, triple beer, IPA beer, stout beer, radler, bock beer, and seasonal beer. This list was drawn from Bierista website, which highlights these beer styles (Bierista, n.d. b). Additionally, participants had the opportunity to specify additional beer styles and rate their importance. Taste preferences were discovered by asking about the importance of mild, strong, sweet, sour, bitter, fruit, and spiced tastes, aligning with the classifications used by the Bierista website for rating beers (Bierista, n.d. c). Regarding beer color preferences, participants were asked about the importance of colors yellow, golden, copper, brown, and black beer colors, which correspond to the list of colors used on the brouw-bier.nl website (brouw-bier.nl, n.d.). As for alcohol percentage preferences, participants were asked about the importance of alcohol-free beer (less than 1%), low alcohol percentage (between 1% and 4%), average alcohol percentage (between 4% and 6%), high alcohol percentage (between 6% and 8%), and very high alcohol percentage (above 8%). This categorization aligns with the alcohol percentage distinctions on the Bierista website, and the inclusion of alcohol percentage ranges aimed to prevent ambiguity regarding the intended alcohol percentage. Packaging preferences were discovered by asking about the importance of a bottled and canned beer, the two primary forms of packaging. Lastly, the importance of brand was measured by assessing preferences for buying beer from a well-known national brand, different small/large size of a brewing company, locally produced beer, and locally sourced raw ingredients. This ensures actionability of a segment and whether a consumer is a fit for the microbrewery.

Price – importance price

Price preferences were discovered by measuring the importance of both a low and high prices when buying beer. This ensures actionability as microbreweries typically offer products at higher prices. Consumers who place high importance on low prices are good fit for a microbrewery.

Place – common places to drink beer and importance of places to buy beer

Preferences for places to drink and buy beer was measured by asking to what extent participants agree with statements about different places to drink and buy beer. Regarding places to drink beer, participants were asked about their frequency of beer consumption at different places, including home, terraces, restaurants, cafés, bars, and nightclubs. Additionally, participants were asked about the importance of being able to buy beer at supermarkets, liquor stores, and directly from local brewers. With these questions, microbreweries gain insights in how to reach segments, ensuring accessibility or a segment.

Promotion – ways to promote beer offer

Preferences for promotional efforts were discovered by asking participants’ agreement with statements regarding different ways microbreweries can promote their offer. Statements were formulated in the form “When I buy beer, I like…”. The participants were asked about knowing the brewing process, reading stories about the brewery, visiting the brewery’s website, visiting the brewery’s social media pages, usage of beer apps, and support of local charities. These questions provide insights in how microbreweries can best promote their offer and how to effectively communicatee with and reach different segments, thereby ensuring accessibility of a segment.

Demographic characteristics

Demographic information was gathered to discover characteristics and better understand who is interested in the offer of the brewery. The participants were asked about their year of birth, gender, marital status, living situation, origin, highest level of education achieved, and gross income per month.

3.3 Procedure

The microbrewery was visited to provide further clarification about the study and set expectations. Additionally, arrangements were made for a reward to hand to one of the participants. After the data collection, another visit was made to discuss the results and obtain their interpretations, as well as the usefulness of the results.

Since microbreweries are known for close and strong customer relationships, the microbrewery was asked to have their customers participate in the survey. However, as the microbrewery's customer base consists of cafes and beer specialty stores, they lacked direct contact with end consumers. Therefore, the survey reached end consumers through the cafes and beer specialty stores selling the microbrewery's beer. Flyers were created with the question whether beer of the brewery was bought and if they were willing to help the brewery in gaining insights in what their beer drinkers value in a beer offer. These flyers, accompanied by a QR code linked to the survey, were displayed in cafes and beer specialty stores, as well as handed out to customers purchasing the brewery's beer.

At the supermarket and liquor store, individuals visibly carrying beer, including both pilsner and specialty beer, were approached and asked if they wanted to participate in a study about beer by filling in a survey. Participants were provided with a QR code leading to the survey questions and encouraged to complete it on the spot. Alternatively, if participant lacked time or bought beer for someone else in their household, they were requested to complete the survey at home.

The survey was created in Google Forms as it is easy accessibility (only requiring a Google account) and free to use, making it relatively simple to apply by microbreweries. The survey started with thanking the participants for their participation, followed by an outline of the study's purpose, expected duration for completion, and the criteria for participation. Additionally, participants were assured of the anonymity of their answers and informed that their data is solely used for research purposes. Subsequently, the survey guided the participants though various themes, beginning with variety seeking behavior to ease participants before answering the primary questions related to the 4Ps of the marketing mix. Demographic questions were asked at the end of the survey to mitigate potential sensitivity and avoid deterring participants. After completion of all questions, participants were directed to a closing page where they were thanked for their participation and informed about the opportunity to win a beer package from a microbrewery if they leave their email address. The reward was offered at the end of the survey to prevent attracting participants outside of the target groups who may solely participate for the reward, thus safeguarding the integrity of the study.

Each participant completed the same set of survey questions. However, three identical surveys were created to distribute among the different participant groups. This ensured clarity regarding which survey responses correspond to each group, facilitating the comparison of answers across the three groups. Test surveys were conducted to ensure clarity of all questions. The complete survey can be found in Appendix III, and the Dutch version filled in by the participants in Appendix IV.

3.4 Data analysis

Given the feasibility of survey data analysis for microbreweries, Microsoft Excel was used due to its widespread familiarity and ease of use. Prior to analyzing the data, a few steps were undertaken. Initially, survey responses were connected to a Google Spreadsheet and consequently imported into Excel. Responses from the three participant groups were downloaded in separate worksheets within the same Excel file, ensuring each row represented a unique responded and each column a survey question. To prepare the data for analysis, Likert-scale responses were transformed into numerical values. All ‘totally disagree’ responses were coded as 1, ‘somewhat disagree’ as 2, and so forth, utilizing Excel’s ‘search and replace’ function. The data analysis involved comparing the existing customers group with the supermarket and liquor store participants. Through the analysis of existing customers data, insights are obtained in who are interested in the offer and the microbrewery and what their preferences are, thereby identifying the target market. By comparing this data to the data of supermarket and liquor store participants insights are obtained in how the target market differs from other type of beer drinkers in preferences and demographic characteristic, and thus a microbrewery learns what makes their customers unique.

Preference comparisons were conducted using behavioral variables, and thus the questions under variety seeking behavior and the 4Ps of the marketing mix. Average scores on these questions for all three participants groups were calculated using the AVERAGE function and rounded to two decimal places. To facilitate comparisons, two additional worksheets were created: one for comparing existing customers with supermarket participants and another for comparing existing customers with liquor store participants. Each worksheet displayed the survey questions, average scores of existing customers, average scores of the comparison group, the differences in average scores between the groups, and the p-values of independent sample t-tests. The independent sample t-tests, using the T.Test function, tested whether the differences in average scores were significantly different. In this analysis, matrix 1 and matrix 2 represented the data ranges of the two groups, with tails set to 2, and type set to 2 to account for independent samples. Significant differences (*p*-values below 0.05) were highlighted. Additionally, for each construct measured, the average scores of existing customers were sorted from highest to lowest to provide insights in what existing customers find most important.

Characteristic comparisons were made using demographic variables, and thus the questions under demographic characteristics. Comparing age is conducted similarly to the comparison of preferences. However, since other demographic characteristics are not interval variables, a different approach is used than calculating means and testing significant differences. Instead, these demographic variables are compared using contingency tables and chi-square tests. The contingency table shows, for each demographic characteristic, the frequency of each combination of item and participant group. Subsequently, chi-square tests are performed to test whether there is a significant different in the demographic characteristic between the three participant groups. The CHISQ.TEST function is utilized, with matrix 1 containing the observed frequencies for the respective demographic variable, and range 2 containing the expected frequencies for the same demographic variable. Significant differences (chi-square *p*-value below 0.05) were highlighted. Before conducting the chi-square tests, the expected frequencies had to be calculated. Per demographic characteristic, the expected frequencies for different items were calculated using the formula “expected value = (row total * column total) / overall total”. Here, the row total represents the sum of the three participant groups for the specific item, the column total is the total of each participant group (n=35), and overall total is the total research sample (n=105).

4. Results

4.1 Demographics research sample compared to the population of Utrecht

In this study, a total of 105 individuals participated, with 35 participants in each participant group. The detailed demographic characteristics of the research sample can be found in Appendix V. Table 1 below presents a comparison between the demographic characteristics of the research sample and the population of Utrecht.

Table 1: demographic characteristics research sample compared to population of Utrecht

Demographic characteristics	Research sample	Population of Utrecht (Dutch population for marital status)
Gender		
Male	63,8%	48,8%
Female	35,2%	51,2%
Other	1,0%	-
Age		
20-29 years	39,0%	21,8%
30-39-years	10,5%	18.4%
40-49 years	5,7%	12,5%
50-59 years	32,4%	11,0%
60-69 years	9,5%	7,6%
70-79 years	0,0%	4,9%
80-89 years	1,0%	2,2%
Marital status		
Unmarried	58.1%	40.6%
Married	41,0%	44,5%
Divorced	1,0%	9.2%
Widow	0,0%	5,7%
Household composition		
Pair with children	48,6%	20,0%
Single household	29,5%	53,0%
Other	12,4%	1,0%
Pair without children	8,6%	21,0%
Single parent	1%	6,0%
Origin		
Netherlands, parents as well	89,5%	60,7%
Netherlands, one parent not	10,5%	-
Netherlands, both parents not	0,0%	-
Foreign country, parents as well	0,0%	39,3%
Foreign country, one parent as well	0,0%	-
Foreign country, both parents Netherlands	0,0%	-
Highest level education achieved		
Hbo/university	81,9%	53%
Mbo	11,4%	28%
No starting qualification	6,7%	18,0%
Gross income in euros per month		
0-500	12,4%	
500-1000	10,5%	
1000-2000	5,7%	
2000-3000	12,4%	
3000-4000	23,8%	
4000-5000	20,0%	
5000-7500	9,5%	
7500-10.000	2,9%	
>10.000	2,9%	

Looking at gender, the research sample consisted of mostly men (63,8%). Within the population of Utrecht demonstrates a nearly equal male-to-female ratio, with females slightly outnumbering males (Utrecht in Cijfers, 2024a). This indicates that the sample does not accurately represents the gender composition of the population of Utrecht.
The year of birth of the research sample ranges from 1943 to 2003, with most participants born between 1991 and 2003 (n=44). To compare with the population of Utrecht, the birth years were converted into ages by subtracting them from 2024. The ages were categorized using the same criteria as used by Utrecht in Cijfers. The study required participants to be at least 18 years old, which explains the criteria the low percentage in the 10-19 age category. Most participants fall within the 19- 29 age category (39,0%), followed by the 50-59 age category (32,4%). In Utrecht, most citizens fall within the 19-29 age category as well (21,8%), although the age between 50-59 age category is less represented. The overall population of Utrecht is a slightly younger than the research sample, with citizens more evenly distributed across the younger age categories (Utrecht in Cijfers, 2024a).
The marital status of the population of Utrecht is not provided on the Utrecht in Cijfers website. To conduct a comparison, data from the CBS website is utilized to examine how the research sample relates to the Dutch population. In this case it is assumed that the population of Utrecht is similar to the Dutch population. Since CBS does not differentiate in partnership registration, research participants with partnership registrations were incorporated under unmarried. The research sample is mostly unmarried (58.1%) or married (41%). Similarly, within the Netherlands, the population is mostly unmarried (40.6%) or married (44.5%) as well (CBS, 2024), indicating that the sample offers an accurate representation. However, within the research sample, the percentage unmarried is highest, while in the Netherlands the percentage married is highest.
Living situations within the research sample mostly varied from living with partner and one or more children living at home (n=36) or living with one or more persons above the age of 18 (n=23). To align with the Utrecht in Cijfers website, living situations were converted into household compositions. Student houses were not considered as households, hence living with one or more persons above the age of 18 were incorporated under single household. Since Utrecht in Cijfers only categorizes pairs with children, survey responses indicating living with partner and children away from home were grouped together with those indicating living with partner and one or more children at home. Additionally, living at parents was incorporated under “other”. As for the research sample, most participants are pairs with children (48,6%) and single households (29,5%). In contrast, within the population of Utrecht, over half are single households (53,0%), and pairs with children comprise a similar percentage of the population (20,0%) as pairs without children (21,0%) (Utrecht in Cijfers, 2024b). This is a noticeable difference from the composition within the research sample.
Regarding origin, almost all participants are fully Dutch (89,5%). The remaining small percentage of the participants are Dutch with one parent from another nationality (10,5%). Utrecht in Cijfers only presents migration background, but it shows that 60.7% of the population of Utrecht has a Dutch background and 39.3% a foreign background (Utrecht in Cijfers, 2024a). With the participants being almost fully Dutch, the sample does not accurately represent the population of Utrecht.

More than half of the research sample completed a hbo/university bachelor's degree (57,1%). This is followed by those who completed master's degree (23,8%), and a mbo-degree (11.4%). Utrecht in Cijfers distinguished between no starting qualification, mbo2-3-4, and hbo/university (Utrecht in Cijfers, 2024c). Participants without diploma, those who completed elementary school, and those who completed secondary school were incorporated under no starting qualification. Hbo/university bachelor's degree, master's degree, and PhD were incorporated under hbo/University. Based on this categorization, most of the research sample completed hbo/university (81,9%) which does not relate to the overall population in Utrecht where approximately half of the population completed hbo/university (53%). Nonetheless, similarly to the population of Utrecht, completing hbo/university is the largest group, followed by mbo, and no starting qualification being the smallest.

Income among participants varied, but most participants earned between €3,000 and €5,000 gross per month (20%). The income of the research sample cannot be compared to the population of Utrecht as Utrecht in Cijfers provides standardized household incomes (Utrecht in Cijfers, 2024d) rather than individual gross incomes. Similarly, the presentation of income data by CBS is also not comparable, as it presents annual incomes distributed among the working people in 2022 (CBS, 2022).

4.1 Preferences existing customers compared to supermarket and liquor store participants

The comparisons of the three participants groups are organized based on the measures, including variety seeking behavior and the 4Ps of the marketing mix. Mean scores of existing customers that are significantly higher than those of liquor store participants are expressed in bold, while mean scores significantly higher than those of supermarket participants are underlined. Conversely, mean scores of existing customers that are significantly lower than those of liquor store participants are expressed in italics, while mean scores significantly lower than those of supermarket customers are double underlined. If a significantly higher or lower mean score of existing customers holds for both comparisons, cells are marked in grey.

Tables 2 to 8 show the comparisons for the different constructs measured. The first columns represent the constructs and items, and the second columns the mean scores of existing customers sorted from highest to lowest per construct measured. The third column and fourth columns represent the mean scores of liquor store participants and supermarket participants respectively.

4.2.1 Variety seeking behavior

As for the factor analysis, the Bartlett's test of sphericity is significant ($p<0.001$), indicating the correlation matrix is factorable. The total variance explained table showed one component with an eigenvalue above one, implying that one underlying characteristic is represented by the data. All three items exhibit a factor loading above 0.5 on this component, indicating they align with the same construct.

The third item, I always buying beer from the same brand, negatively correlates with like trying out new beer brands and beer styles. Consequently, the third item was reverse coded before performing the reliability analysis by subtracting the original scores from 6. The reliability analysis showed a Cronbach's alpha of 0.550, which is below the commonly accepted threshold of 0.7, indicating that the three items do not reliably measure variety seeking behavior. Removing the item “I like trying out new beer styles” increases the Cronbach’s alpha to 0.661, nearing 0.7. Details of the factor analysis and reliability analysis can be found in Appendix VI. It is decided to analyze the three items separately rather than collectively based on their unreliable measurement of variety seeking behavior and to gain insights into the absolute scores. Table 2 below shows the mean scores and comparisons for the three items related to variety seeking behavior.

Table 2: Means scores variety seeking behavior

Variety seeking behavior	*M* existing customers	*M* liquor store participants	*M* supermarket participants
I like trying out new beer brands	**4,20**	3,60	3,66
I like trying out new beer styles	3,26	3,40	3,83
I always buy beer from the same brand	*2,06*	2,63	3,26

Note: bold score=significantly higher than liquor store score, underlined score=significantly higher than supermarket score, italic score=significantly lower than liquor store score, double underlined score=significantly lower than supermarket score. Grey highlighted cell=significant score holds for both comparisons.

Existing customers have a strong preference out new beer brands. They also like trying out new beer styles, but do not always buy beer from the same brand. Results show significant differences in means scores for all three items. Existing customers like trying out new beer brands more than both liquor store participants (p=0.004) and supermarket participants (p=0.004), On the other hand, they like trying out new beer styles less than supermarket participants (p=0.012). This distinction, higher scores on trying out new beer brands and lower scores on trying out new beer styles, presents a contradiction in terms of variety seeking behavior. Furthermore, existing customers less often buy beer from the same brand than both liquor store (p=0.009) and supermarket participants (p<0.001). This aligns with the variety seeking behavior that is expected from customers from a microbrewery, and with the high score on trying out new beer brands. Where existing customers are looking for variety, they especially look for it in terms of brands rather than beer styles. This deviates from the literature in which demand for variety in beer styles is pointed out as a primary driver of the microbrewery movement (Garavaglia & Swinnen, 2017). Moreover, the high importance placed on trying out new beer brand may potentially disadvantage microbreweries, as it implies that existing customers may not become regular customers of the microbrewery but instead explore preferred beer styles from different microbreweries.

4.2.2 Product – importance product attributes

The mean scores and comparisons for the various items belonging to the different product attributes are shown in table 3 below.

Starting with beer styles, existing customers gave highest importance to blond, weizen and triple beer, while radler and stout beers are considered less important. Given that microbreweries typically brew darker and stronger specialty beers (Schnell & Reese, 2014), explains the preferences for blond and triple beer, and the lower preference for radler beer. However, the high preference for weizen beer and low interest in double, bock, and stout beer is unexpected. Results show significant differences in mean scores for weizen beer, triple beer, pilsner, and radler. Specifically, existing customers gave higher importance to weizen

(p=0.020) and triple (p=0.025) beer, and lower importance to bock beer (p=0.013) compared to liquor store participants. Moreover, pilsner and radler are less important for existing customers compared to both liquor store participants (p=0.035 for pilsner, p=0.005 for radler) and supermarket participants (p=0.001 for pilsner, p=0.013 for radler). This aligns with microbreweries typically brewing specialty beer instead of pilsner (Garavaglia & Swinnen, 2017).

Table 3: Mean scores product attributes

Product	*M* existing customers	*M* liquor store participants	*M* supermarket participants
Style			
Blond	3,77	3,29	3,31
Weizen	**3,57**	3,00	3,49
Triple	**3,49**	2,83	2,97
Seasonal	3,09	2,69	2,80
White	2,94	2,86	3,00
Pilsner	*2,80*	3,37	3,63
IPA	2,74	2,34	2,43
Double	2,34	2,63	2,49
Bock	*2,11*	2,89	2,77
Radler	*1,71*	2,51	2,43
Stout	1,68	1,91	2,17
Taste			
Strong	3,11	2,94	3,00
Mild	3,09	3,31	3,40
Bitter	3,06	3,06	3,20
Fruity	3,00	2,97	2,83
Spiced	2,97	3,11	2,89
Sweet	2,86	2,83	2,43
Sour	2,34	2,20	2,03
Color			
Gold	3,97	3,86	3,54
Yellow	3,63	3,50	3,37
Copper-colored	3,09	3,37	2,71
Brown	*2,20*	2,85	2,23
Black	1,63	1,86	1,63
Alcohol percentage			
Average: 4%-6%	**4,09**	3,54	3,83
High: 6%-8%	**4,00**	3,14	3,26
Low: 1%-4%	2,49	2,60	2,29
Very high: >8%	2,31	2,51	2,40
Alcohol free: <1%	*1,43*	2,06	1,94
Packaging			
Bottle	4,43	4,14	4,09
Can	*1,89*	2,43	2,40
Brand			
Beer produced by a small brewing company	**3,54**	2,63	2,69
Beer locally produced	**3,43**	2,89	2,69
Raw ingredients locally sourced	2,59	2,51	2,57
Beer from well-known national brand	*1,77*	2,57	2,63
Beer produced by big brewing company	*1,69*	2,09	2,40

Note: bold score=significantly higher than liquor store score, underlined score=significantly higher than supermarket score, italic score=significantly lower than liquor store score, double underlined score=significantly lower than supermarket score. Grey highlighted cell=significant score holds for both comparisons.

Continuing with beer taste preferences, existing customers gave highest importance to strong, mild, and bitter beer tastes. Preferences for strong beers aligns with the reputation of microbreweries as they typically brew strong beers (Schnell & Reese, 2014). Although the high scores on both strong and mild tastes appear contradictory, it is plausible that “strong” is interpreted in terms of alcohol percentage rather than taste. It is possible for a beer to contain a high alcohol percentage while also having a mist taste. The results show no significant differences in mean scores for beer tastes compared to both liquor store and supermarket participants.

As for color preferences, gold, yellow, and copper-colored beer are most important to existing customers. Brown and black beer are given lowest importance, which is unexpected as microbreweries typically brew darker beers (Schnell & Reese, 2014). The results show no significant differences in mean scores compared to supermarket participants, and one significance difference in mean scores compared to liquor store participants. Brown-colored beer is less important for existing customers than for liquor store participants (p=0.027).

Regarding preferences for alcohol percentage, average and high alcohol percentages are most important, and alcohol-free beer is least important to existing customers. Mean scores on high alcohol percentage, average alcohol percentage, and alcohol-free beer are significantly different. Existing customers gave higher importance to beers with an average alcohol percentage compared to liquor store participants (p=0.003), and to a high alcohol percentage compared to both liquor store (p<0.001) and supermarket participants (p=0.003). Conversely, alcohol-free is less important compared to liquor store (p=0.009) and supermarket participants (p=0.026). These are expected results as microbreweries are known for brewing stronger beers in terms of alcohol percentage (Schnell & Reese, 2014).

Concerning packaging preferences, it is very important for existing customers that beer is packaged in a bottle. The results show that beer packaged in a can is significantly less important for existing customers compared to both liquor store (p=0.018) and supermarket participants (p=0.032).

Regarding brand, locally produced beer and beer produced by a small brewing company are given highest importance. Conversely, beer from a well-known brand and beer produced by a big brewing company are given lowest importance. This is logical as the existing customers bought beer from a microbrewery, a small company known for a locally based economy (Wells, 2017; Schnell & Reese, 2014). Significant differences in mean scores are observed for almost all items and hold compared to both liquor store and supermarket participants. Locally produced beer (p=0.020 and p=0.001 for liquor store and supermarket respectively) and beer from a small brewing company (p<0.001 and p<0.001 for liquor store and supermarket respectively) is more important for existing customers. Beer from a well-known national brand (p<0.001 and p<0.001 for liquor store and supermarket respectively) and beer from a big brewing company (p=0.015 and p<0.001 for liquor store and supermarket respectively) is less important for existing customers.

4.2.3 Price – importance of price

Table 4 below shows the mean scores and comparisons for the two items belonging to price.

Table 4: Mean scores price

Price	*M* existing customers	*M* liquor store participants	*M* supermarket participants
Low	*2,77*	3,60	3,86
High	2,34	2,23	2,09

Note: bold score=significantly higher than liquor store score, underlined score=significantly higher than supermarket score, italic score=significantly lower than liquor store score, double underlined score=significantly lower than supermarket score. Grey highlighted cell=significant score holds for both comparisons.

For existing customers, neither a low price nor a high price is important. Though, a low price of beer is less important for existing customers compared to both liquor store and supermarket participants (p<0.001 and p<0.001 respectively). This aligns with the common practices of microbreweries, which typically sell beer at higher prices compared to larger breweries (Bentzen & Smith, 2018; Schnell & Reese, 2014).

4.2.4 Place - common places to drink beer and importance of places to buy beer

Table 5 below shows the mean scores and comparisons for the items belonging to places to drink beer and buy beer.

Table 5: Mean scores common places to drink and importance of places to buy beer

Place	*M* existing customers	*M* liquor store participants	*M* supermarket participants
Common places to drink beer			
At a terrace	4,51	4,29	4,29
In a café	4,37	4,29	4,23
At a bar	3,71	3,80	4,20
Home	3,11	3,17	2,94
At a restaurant	*3,06*	3,37	3,63
At a nightclub	3,00	3,49	3,49
Importance of places to buy beer			
Supermarket	4,60	4,23	4,49
Liquor store	**4,49**	3,94	4,00
Directly from the local brewer	3,37	3,49	3,49

Note: bold score=significantly higher than liquor store score, underlined score=significantly higher than supermarket score, italic score=significantly lower than liquor store score, double underlined score=significantly lower than supermarket score. Grey highlighted cell=significant score holds for both comparisons.

Existing customers mostly prefer drinking beer at a terrace, in a café, or at a bar, indicating that beer is more often consumed in places out of home. Consequently, terraces, cafes and bars serve as important sales channels for microbreweries. The supermarket is the most important place to buy beer, followed by the liquor store and directly at the local brewer. This suggests that direct sales from the local brewer are less likely, emphasizing the importance for microbreweries to strategize about places to offer their beer. Since the supermarket is the most important place to buy beer, it would be a good place for microbreweries to offer their beer there. However, beer from microbreweries is typically not available in the supermarket due to restrictions to local markets and limited productions volumes and resources (Wells, 2016). Microbreweries that are taken over by macro breweries can overcome this hurdle by scaling up production volumes and leveraging to logistics of the macro breweries, thereby gaining access to supermarket shelves (Vanderhaegen et al., 2007). With the supermarket being the preferred place to buy beer, this poses a threat for microbreweries. Results show significant differences in mean scores for drinking beer at a restaurant and buying beer at the liquor store. Drinking beer at a restaurant is a less common place for existing customers compared to supermarket participants (p=0.020). As for places to buy beer, existing customers find it more important that they can buy the liquor store compared to both liquor store (p=0.009 and supermarket participants (p=0.011).

4.2.4 Promotion - ways to promote beer offer

Table 6 below shows the mean scores and comparisons for the items belonging to ways to promote a beer offer.

Table 6: Mean scores ways to promote beer offer

Promotion	*M* existing customers	*M* liquor store participants	*M* supermarket participants
Reading stories about the brewery	**4,17**	3,43	2,94
Brewery supporting local charities	3,14	3,03	3,17
Knowing how the beer is brewed	3,09	2,86	2,89
Visiting website of the brewery	2,37	2,49	2,66
Using beer rating apps	2,37	2,17	2,34
Visiting social media pages of the brewery	2,31	2,17	2,31

Note: bold score=significantly higher than liquor store score, underlined score=significantly higher than supermarket score, italic score=significantly lower than liquor store score, double underlined score=significantly lower than supermarket score. Grey highlighted cell=significant score holds for both comparisons.

Existing customers have a strong preference for reading stories about the brewery when buying beer. They also appreciate a brewery supporting local charities and have an interest in understanding the brewing process. However, visiting the website, usage of beer ratings apps, and visiting social media pages are not preferred. This suggests that while existing customers value information about the brewery and the beer they drink, they do not like to take additional steps to obtain this information. As for comparing the groups, existing customers like reading stories about the brewery more than both liquor store (p<0.001) and supermarket participants (p<0.001).

4.3 Demographics existing customers compared to supermarket and liquor store participants

Table 7 below shows the mean scores and comparisons for the demographic characteristics age.

Table 7: Mean scores age

Demographic characteristic	*M* existing customers	*M* liquor store participants	*M* supermarket participants
Age	39,77	41,80	41,69

The mean age of existing customers is 39,77 years. The results show no significant differences in mean scores of age compared to both liquor store and supermarket participants.

Table 8 below shows the observed frequencies and comparisons for the remaining demographic variables. The first column represents the demographic characteristics and items, and the second column the frequencies of existing customers sorted from highest to lowest per characteristic (except from income). The third and fourth columns show the frequencies of participants from the liquor store and supermarket, respectively. When there is a significant difference in the demographic characteristic between the three participant groups, the cell of the demographic characteristic is marked in grey. Additionally, items lacking frequencies for all three participant groups are excluded from the chi-square test to enable its execution. Further details on the expected frequencies table utilized in the chi-square tests can be found in Appendix VII.

Table 8: Observed frequencies demographic characteristics

Demographic characteristic	F existing customers	F liquor store participants	F supermarket participants
Gender			
Male	21	18	28
Female	14	16	7
Other	0	1	0
Marital status			
Unmarried	14	16	16
Married	11	17	15
Living together/partnership registration	10	1	4
Divorced	0	1	0
Widow	0	0	0
Living situation			
With partner and one or more children living at home	11	10	15
Together with one or more persons of 18 years or older	9	9	5
With partner without children	8	0	1
With partner and children away from home	3	8	4
Living alone	3	2	3
Single parent	1	0	0
Living at parent(s)	0	6	7
Origin			
Netherlands, parents as well	32	29	33
Netherlands, one parent not	3	6	2
Netherlands, both parents not	0	0	0
Foreign country, both parents as well	0	0	0
Foreign country, one parent as well	0	0	0
Foreign country, both parents Netherlands	0	0	0
Highest level education			
Bachelor’s degree hbo/University	22	23	15
Master's degree	8	8	9
Mbo degree	5	2	5
Secondary school	0	2	3
Elementary school	0	0	2
PhD	0	0	1
No diploma	0	0	0
Gross income in euros per month			
0-500	0	6	7
500-1000	4	4	3
1000-2000	4	2	0
2000-3000	3	3	7
3000-4000	11	8	6
4000-5000	9	8	4
5000-7500	1	2	7
7500-10.000	3	0	0
>10.000	0	2	1

Results show no significant differences between the participant groups for gender, marital status, origin, and highest level of education achieved.

Regarding gender, existing customers are mostly men. Continuing with marital status, existing customers are either unmarried, married or living together/partnership registration. Concerning living situation, existing customers mostly live with a partner and one or more children at home, together with one or more persons above the age of 18, or with a partner without children.

Notably, the results show a significant difference in living situation between the three participant groups (p=0.008). Similarly to existing customers, most liquor store and supermarket participants live with partner and one or more children at home. However, quite some liquor store participants live together with one or more persons above the age of 18 as well, whereas this is less common for supermarket participants. Additionally, living with a partner without children is uncommon for both liquor store and supermarket participants. Another notable difference is that no existing customers live at their parents, while liquor store and supermarket participants do. As for origin, nearly all existing customers are Dutch and their parents as well, with only a few having one non-Dutch parent. Continuing with education, most customers have a hbo/university bachelor's degree, with some possessing a master's degree or mbo degree. Existing customers earn a relatively high income per month, primarily between €3000-€4000 and €4000-€5000 per month. This makes sense as beer from microbreweries is typified by higher prices and as premium products. The high incomes also align with the literature stating that higher incomes among beer consumers is a driver for premium products like specialty beers from microbreweries (Garavaglia & Swinnen, 2017). The results show a significant difference in income between the three participant groups (p=0.014). Where none of the existing customers earn €0-€500 per month, quite a few liquor store and supermarket participants do. Conversely, a few existing customers earn €7500-€10.000 per month, while none of the liquor store and supermarket participants do. The high levels of education and incomes are expected results as existing customers bought beer from a microbrewery, known for offering higher-priced products.

Given the numerous expected frequencies below 5, the Whitney U test is additionally performed using SPSS. Specifically, one Whitney U test is carried out to compare the demographic characteristics of existing customers with liquor store participants, and another to compare with supermarket participants. However, neither of the Whitney U tests yielded significant p-values, indicating an absence of differences in demographic characteristics between existing customers an both liquor store and supermarket participants. Details on the Whitney U test outputs can be found in Appendix VIII.

4.4 Interpretation results by the microbrewery

The excel sheet with the comparisons of existing customers with the liquor store and supermarket participants as well as the responses of the three participant groups were presented to the owner of the microbrewery. Initially, the owner was asked how he would read the results and if he understood what was presented. Subsequently, the owner provided interpretations per construct. Furthermore, the owner was asked to assess the usefulness of the results and to identify key takeaways for decision-making regarding the brewery.

The owner comprehended the presented information and interpreted the results correctly. Moreover, the owner was able to draw conclusions and expressed confidence in their ability to conduct the data analysis independently in the future. The results proved valuable to the brewery, exceeding the owner's initial expectations in terms of insights gained. Prior to the study, the brewery lacked knowledge of their end consumers and did not engage in marketing activities. However, the brewery intends to invest time and effort into marketing initiatives as part of their expansion plans. The brewery's ambition is to acquire additional tanks and increase production volume and variety of beers, as well establishing their own location to directly serve their end consumers. The results provided the brewery with insights into their target group and its characteristics, as well as guidance on where to concentrate efforts regarding each P of the marketing mix. Key takeaways from the results include the decision to stick with bottle packaging rather than switching to cans, the importance of a low price for supermarket participants is a confirmation that the brewery's beer will not survive in the supermarket, increased focus will be directed towards terrace and café sales channels, and the importance of storytelling for branding is an eye-opener and will be incorporated more.

Interpretations variety seeking behavior

The brewery observed that their existing customers are more into trying out new beer brands than trying out new beer styles compared to the other participant groups. The owner provided an explanation, suggesting that individuals purchasing their beer tend to buy it at beer specialty shops, where they typically seek specific beer style preferences. Conversely, individuals buying from supermarkets often lack specific preferences and are more inclined to buy various beer styles. Furthermore, the owner indicated that the brewery offers a limited variety of beer styles, primarily consisting of the standard beer styles. Consequently, the fact that their existing customers do not give high importance to trying out new beer styles was viewed favorable by the brewery.

Interpretations product

The highest score on blond beer by its customers did not come as a surprise, given that blond beer is the most consumed specialty beer overall, as well as the best-selling beer from the brewery. The low scores on stout beer and radler beer were also not surprising. The brewery explained that not a lot of people like stout beer, and radler beer is not typically considered a real beer. However, the high score on weizen beer by its customers did come as a surprise, especially since it scored higher than triple beer, and because the brewery is not offering weizen beer. Moreover, the brewery had anticipated higher scores on double beer by its customers as double beer is one of the beers they offer.

There were no surprises for the brewery regarding scores on beer tastes. The brewery noted that supermarkets typically offer less distinctive flavors, explaining the highest score for mild tastes among supermarket participants. The brewery interpreted high scores on both strong and mild tastes among its customers as a desire for recognizable yet distinctive flavors. This aligns with the brewery's approach of offering relatively standard beer styles that are easily identifiable.

Scores on beer colors also aligned with the expectations of the brewery. Gold and yellow colored beer received the highest scores, which the brewery identified as the typical pilsner color. The brewery attributed this preference to familiarity, as people are grown up with regular pilsner and the idea that beer should be gold/yellow (goudgele rakker). The low score on black beer was expected, given its appeal to a small niche.

As for alcohol percentage, the brewery does not sell beer below 6%, consistent with the typical specialty beer standards. Therefore, the brewery was surprised that an average alcohol percentage received the highest score from its existing customers. However, they reasoned that consumers who buy specialty beer also buy pilsner beer, which typically has an average alcohol

percentage. Given that most specialty beer has a high alcohol percentage, the high score on a high alcohol percentage did not come as a surprise.
The brewery was pleased to see the preference for bottle packaging, as the brewery exclusively uses this form of packaging. While considering the possibility of packaging their beer in cans to align with industry trends, the brewery reconfirmed its commitment to bottling its beer. The brewery noted the slightly higher score on can packaging among supermarket consumers, which was unsurprising given the availability of canned beers in supermarkets.
Regarding brand, the results served as a validation for the brewery. As a small brewery that locally produces beer, the brewery was pleased to receive high scores from its customers on these items. The brewery was considering increasing the locally sourcing of their raw materials, and it was insightful to learn that existing customers did not give high importance to that.

Interpretations price
The brewery noticed the importance of a low price for supermarket participants. The prospect of introducing their beer to supermarket shelves is something the brewery has been considering. However, they acknowledge the necessity of reducing prices which is not a possibility.

Interpretations place
The high score on drinking beer at a terrace did not come as a surprise and provided the owner insights into the importance of customers from terraces and cafes, suggesting these places may not be optimally utilized yet. The brewery expected more of their customers to drink beer at home. As for preferred places to buy beer, the brewery comprehended the high score on supermarket. The owner emphasized the convenience factor, noting that people (including himself) prioritize convenience, hence the preference for buying beer at supermarkets where everything is in one place.

Interpretations promotion
The brewery gained an important insight regarding the importance of storytelling. The brewery was already considering to tell more about the brewery and putting the brewers more in the spotlight. Additionally, the brewery was surprised that its customers gave such a high importance to a brewery supporting local charities, and this aspect will be explored.

Interpretations demographic information
The brewery was already aware that their beer was predominantly purchased by men. The brewery indicated that they are brainstorming for a specialty beer tailored specifically for women. Additionally, the brewery was not surprised that a significant percentage of their customers live with partner and children. The brewery highlighted the phenomenon of young families going to terraces on weekends, with their beer emerging as the top-selling specialty beer in a restaurant in a neighborhood in Utrecht that is known for its large population of young families. Similarly, their customers being mostly Dutch and highly educated was not surprising. The brewery pointed out that specialty beer is perceived as a luxury product with a corresponding price tag, typically favored by individuals with higher education levels and income.

5 Conclusion

This study aimed to develop an effective and feasible market segmentation method tailored for Dutch microbreweries. Through a bottom-up market segmentation conducted for a specific microbrewery, valuable insights were gained, indicating an effective method. The brewery was able to interpret the data and gained insights into their target customers' preferences and characteristics that were previously unknown to them. Despite the insights gained, concerns arise regarding the feasibility of the market segmentation method. The data collection process is too time-consuming for microbreweries to perform besides their day-to-day tasks. Moreover, reaching end-consumers to participate in the survey poses a challenge when beer is not directly sold to them. Nonetheless, the brewery expressed confidence in interpreting and analyzing the results in excel independently, which enhances the feasibility of the market segmentation method.

Existing customers have a strong preference for trying out new beer brands. Other preferences include blond, weizen, and triple beer styles, with strong, mild, and bitter beer tastes. They also prefer gold, yellow and copper-colored beer, with average to high alcohol percentages. Furthermore, bottled beer that is locally produced by a small brewing company is preferred. Interestingly, neither a low nor a high price is important. The most preferred places to drink beer are terraces, cafes, and bars, and the supermarket is the most preferred place to buy beer. Additionally, existing customers prefer reading stories about the brewery when buying beer. As for characteristics, existing customers are mostly male, aged between 20-29 or 50-59 years. They are predominantly fully Dutch, with high levels of education and gross income per month. Married is the most common marital status, and living situations mostly vary from living with partner and children, living with partner without children, or living with one or more persons of above the age of 18.

A difference from individuals who buy beer at the supermarket or liquor store is that existing customers like trying out new beer brands more but trying out new beer styles less. Additionally, existing customers have a higher preference for weizen and triple beer than liquor store participants, and a lower preference for pilsner and radler beer compared to both liquor store and supermarket participants. Moreover, existing customers place greater importance on a higher alcohol percentage when buying beer. Furthermore, existing customers gave higher importance to small breweries and locally produced beer. While price if not an important attribute for existing customers, they place lower importance to a low price compared to liquor store and supermarket participants.

6 Discussion

6.1 Scientific implications

This study introduces a new segmentation method that adopts a bottom-up approach instead of the conventional top-down approach. In the bottom-up approach, the process begins with existing customers and thus the target market of a company rather than the entire market. This makes it possible for micro companies to perform market segmentation in an environment with limited financial resources, time, and marketing knowledge. The segmentation method helps micro companies understand their target customer segment and how to deliver superior value to this segment. Consequently, micro companies can avoid competition from macro companies and survive the competition of other micro companies and move towards a competitive advantage market position. This, in turn, contributes to the financial performance and success rates of micro companies. Hence, a marketing problem for micro companies is solved. This study can serve as a guidance for micro companies seeking to understand the preferences and characteristics of their target market preferences and their characteristics. With that information, micro companies can tailor their marketing activities regarding each P of the marketing mix to satisfy the needs of their target group.

The literature highlighted that due to limited resources and marketing expertise, micro companies struggle to exploit marketing opportunities and perform market research (Bodlaj & Rojšek, 2014; Walsh & Lipinski, 2009; Mc Cartan-Quinn & Carson, 2003). While this might hold true for top-down approaches, this research demonstrates that bottom-up market segmentation, despite being time-consuming, is possible for micro companies. Micro companies possess the ability to interpret results, draw accurate conclusions, and gain relevant insights. Besides the insights gained from the study, questions arise regarding the feasibility of the segmentation method. While the literature emphasizes the usefulness of a bottom-up market segmentation method for micro companies, this is not universally recognized among them. It proved challenging to find companies willing to participate in the market segmentation. From the list of microbreweries in Utrecht, only one expressed interest in gaining insights in their target market. Other microbreweries pointed out that they directly sell to their customers, thus already know and understand their target market. For micro companies that do not directly sell to end consumers, gaining insights in their target market is relevant, making this study valuable for them. Moreover, the data collection process proves to be time-consuming, posing challenges for micro companies constrained by limited time. This raises doubts about the feasibility of the market segmentation method, which ideally should be integrated into day-to-day tasks.

6.2 Managerial implications

This study helps microbreweries in understanding their existing customers and how they differ in preferences and characteristics from individuals who buy beer at supermarkets or liquor stores. Other microbreweries have the opportunity to replicate this study. A possible approach to address the time-consuming data collection process for microbreweries located in Utrecht is to collect additional data from existing customers and to reuse data from supermarket and liquor store participants.

Findings of the study reveal that existing customers of a microbrewery exhibit variety seeking behavior. However, contrary to the expectations based on existing literature suggesting increased demand for variety in beer styles as the main driver for the microbrewery movement (Garavaglia & Swinnen, 2017), this study highlights a greater demand for variety in beer brands than in beer styles. Factor analysis showed that trying out new beer brands and beer styles align with variety seeking behavior. However, reliability analysis and absolute scores suggest that variety-seeking behavior differs between beer styles and beer brands, underscoring an important realization for microbreweries. Given that existing customers prefer trying out new beer brands over trying out new beer styles, breweries may consider collaborating with other breweries or offering bundled deals with beer from different brands. Regarding product, microbreweries are advised to assess importance assigned to various beer styles. Those with low importance among existing customers may warrant discontinuation, while styles deemed important and not yet produced by the brewery present an opportunity to explore. Additionally, the production of alcohol-free or low alcohol beer does not align with the interests of existing customers, thus does not have to be explored. Similarly, existing customers have a strong packaging preference for bottled beer, indicating that canned beer does not have to be explored. Concerning price, neither a low nor a high price are given high importance, though a low price holds a higher importance. Therefore, it is advisable for microbreweries to avoid setting their beer prices too high. As for place, findings reveal that beer is mainly consumed at terraces and cafes rather than at home, implying that that selling beer at liquor stores or beer specialty shops may be less of a priority. Instead, microbreweries should focus on expanding sales channels in the form of restaurants and cafes. Finally, promotional efforts should emphasize storytelling about the brewery and the brewery process. Since additional steps to gain the information are not likely performed, breweries may consider incorporating additional information on beer packaging or providing QR codes on the packaging directing customers to an informative page like a website.

6.3 Limitations

Data collection proved to be challenging, requiring significant time and effort to gather data from all three participant groups. Collecting data in January presented additional difficulties due to the cold and rainy weather, which are not the best circumstances for encouraging people to participate in a survey as they exit a supermarket or liquor store. Furthermore, January is typically not a month associated with high beer purchases. It is possible that people still had leftover beer from the holidays or were beer left from the holidays or were not drinking beer as part of "Dry January". Consequently, few people walked out the supermarket and liquor store visibly carrying beer. Moreover, most people place their groceries in bags, which makes addressing only people who are visibly carrying beer not the most efficient approach. To continue, the length of the survey made it impractical for participants to complete the survey on the spot, especially considering their busy schedules while grocery shopping. Although an option was provided to complete the survey at home, not a lot of people did this.

Obtaining data from existing customers also poses challenges and consumed considerable time. Initially, the aim was to conduct market segmentation for multiple microbreweries in Utrecht, but this is not accomplished. Conducting market segmentation for multiple breweries would have enabled comparison of target markets and assessment of direct competition or niche operations. While this study serves as an initial step in developing a bottom-up market segmentation method, conducting market segmentation for only one microbrewery may not suffice to determine the effectiveness of the method. Furthermore, acquiring existing customers participants took several weeks. Given that the brewery does not directly sell to end consumers, reaching them involved intermediaries such as restaurants and specialty beer shops where the brewery's beer is sold.

Another limitation concerns the formulation of the demographic questions in the survey. As the research sample consisted of beer drinkers from Utrecht, demographic characteristics were compared to the population of Utrecht to assess representativeness. However, the demographic questions were not structured in same format as the website presenting demographic data of the population of Utrecht. This posed difficulties in comparing demographic information between the research sample the population of Utrecht. The survey questions were adapted to match the format on the website "Utrecht in Cijfers", a process that was time-consuming and resulted in incomplete accuracy in the presentation of demographic information.

Moreover, not all data could be analyzed using Excel alone; factor analysis and Whitney U tests were conducted in SPSS. The demographic characteristics of the three participant groups were compared using chi-square tests. However, since the Whitney U showed no significance differences in demographic characteristics, the significant differences based on the chi-square might not be reliable.

6.4 Future research suggestions

The study does not address the issue of intense competition among microbreweries and its impact on market position and financial performance. Hence, future research could extend this study by including additional microbreweries in Utrecht. This could reveal whether microbreweries in Utrecht directly compete or operate in unique niches, thereby determining the vulnerability of their market position.

Given that the bottom-up market segmentation approach is new, it is necessary to replicate the study across additional microbreweries before concluding its feasibility as a segmentation method. Furthermore, besides microbreweries, exploring the applicability of this method to other types of micro companies would enhance our understanding of its generalizability. Micro companies that can identify additional customer segments beyond their existing customers group could tailor the survey and replicate this study within their product category.

A notable finding of the study is the disparity in existing customers' preferences regarding trying out new beer styles versus trying out new beer brands. Future research could delve into variety-seeking behavior and assess how customers of additional microbreweries or other type of micro companies would score on these items.

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Appendices

I. Systematic literature review

Keywords for the literature search were ‘micro companies’ and ‘market segmentation’. Synonyms for the keywords were identified, and the keywords and synonyms were combined into search terms by using Boolean operators (AND, OR) and wildcard characters (*). The overview of keywords, synonyms and search terms is presented below in table 1. The final search term comprised (“micro company*” OR “micro firm*” OR “micro enterprise*” OR “micro organization*”) AND (“market segment*” OR “target market*” OR “strategic market*”). The search term was performed in Scopus on abstract, title, and keywords. The requirements for an article to be included in the literature review were that the article needs to be peer reviewed, the article should be available to the researcher in full text, and the article should regard micro companies in combination with market segmentation.

Table 1: keywords, synonyms, and search terms used for the systematic literature review

Keyword	**Synonym(s)**	**Search term**
Micro company	Micro firm, micro enterprise, micro business, micro organization	“Micro company*” OR “micro firm*” OR “micro enterprise*” OR “micro business*” OR “micro organization*”
Market segmentation	Target marketing, strategic marketing	“Market segment*” OR “target market*” OR “strategic market*”

With the search in Scopus, ten publications were identified. The abstracts of these ten articles were read. Only one out of the ten articles regarded micro companies in combination with market segmentation as the article was about strategic marketing application in Czech small and medium-sized enterprises. Nevertheless, this article was not included in a literature review because the article was about the application and not the actual market segmentation process.

When including parts of the final search term in Scopus, the results were very different. When searching for (“micro company*” OR “micro firm*” OR “micro enterprise*” OR “micro organization*”), 3,259 publications were found. When searching for (“market segment*” OR “target market*” OR “strategic market*”), 19,799 publications were found. Though when combining the two, only ten documents are found which, as explained above, cannot be included in a literature review. Therefore, it can be concluded that there is widely available literature regarding micro companies and marketing segmentation, but literature regarding marketing segmentation in combination with micro companies is lacking.

To continue the search for literature on micro companies and market segmentation, the search term was extended. It was decided to also look for literature on small companies, since looking for micro companies did not give useful results. The keywords for this search were ‘small companies’ and ‘market segmentation’. The overview of keywords, synonyms and search terms is presented below in table 2. The final search term was (“small company*” OR “small firm*” OR “small enterprise*” OR “small business*” OR “small organization*”) AND (“market segment*” OR “target market*” OR “strategic market*”). The search term was again performed in Scopus on abstract, title, and keywords, and the same requirements for an article to be included applied.

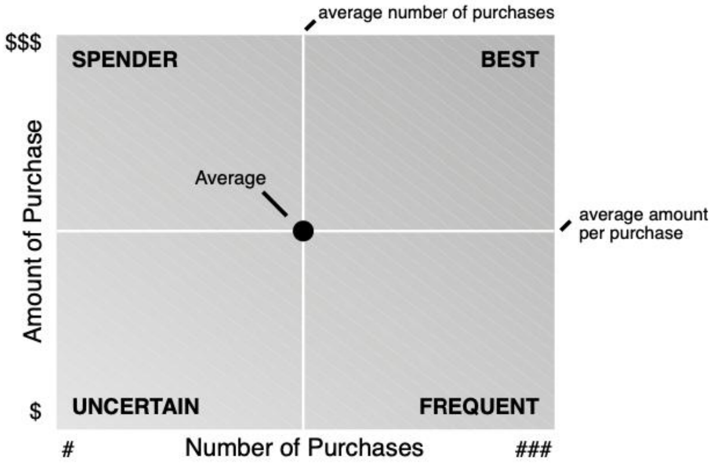
Table 2: keywords, synonyms, and search terms used for the systematic literature review

Keyword	Synonym(s)	Search term
Small company	Small firm, small enterprise, small business, small organization	"Small company*" OR "small firm*" OR "small enterprise*" OR "small business*" OR "small organization*"
Market segmentation	Target marketing, strategic marketing	"Market segment*" OR "target market*" OR "strategic market*"

199 publications were identified by performing the search in Scopus, which is substantially more than when looking for micro companies. The articles were screened to determine which articles could be included in the literature review. First, the publications were screened based on their titles. When the title did not mention the keywords of interest or aspects of micro companies or the segmentation of the customer market, it was decided to skip the article. This resulted in 33 potential articles regarding small companies and market segmentation. Second, the abstracts of the articles were read to identify whether the articles were actually about small companies in combination with market segmentation. After that, eight articles were left to be included in the literature review. Yet, when reading the complete articles, only one article appeared to be relevant to include in the literature review. This article about the actual process of market segmentation.

According to the article about a customer segmentation method for small companies, the Customer Value Matrix is a powerful approach for small companies to segment customers (Marcus, 1998). The Customer Value Matrix identifies key customer segments and highlights suitable marketing strategies. The matrix was developed to apply RFM (recency, frequency, and monetary value) analysis to small business as RFM was to complex and time consuming for small businesses. The Customer Value Matrix focusses on the number of purchases and average purchase amount and uses a two-by-two matrix to communicate the resulting segmentation. The number of purchases represents the x-axis in the matrix, and the amount of purchases represents the y-axis in the matrix. The customer quadrants within the matrix are Spenders, Best Customers, Uncertain Customers, and Frequent Customers (Marcus, 1998). Figure 3 below shows the Customer Value Matrix. Necessary data to develop the Customer Value Matrix are a customer identification (ID) number, the date of purchase, and the total amount of the purchase (Marcus, 1998). The first step is to determine the average values of the axis, and thus the average value for the number of purchases (total number of purchases for the customer base divided by total customer in the customer base) and the average amount spent (total revenue divided by total number of purchases). After that, each customer can be allocated to one of the four quadrants (Marcus, 1998).
Each customer quadrant has specific preferred strategies. Best Customers are essential because they represent the foundation of the business. Moreover, Best Customer are most worthy of appreciation and special treatment. They should be rewarded in the form of discounts or timely information about new products or special events. The best strategy for Spenders is to build purchase frequency. The best strategy for Frequent Customers is to increase the average purchase amount via budling, cross-selling and up-selling. The best strategy for Uncertain Customers is to focus efforts only on those uncertain customers who are new or who have great affinity to a specific product (Marcus, 1998).

Figure 1: the Customer Value Matrix



Source: Marcus (1998)

II. Overview constructs, items, and scales

Table 3: overview constructs and items measured, and the scales used

Construct and items	Scale
Variety seeking behavior	5-point Likert scale (1=totally disagree to 5=totally agree)
I like trying out new beer brands	
I like trying out new beer styles	
I always buy beer from the same brand	
Importance product attributes	5-point Likert scale (1=totally disagree to 5=totally agree)
1. **Style** (pilsner, white, weizen, blond, double, triple, IPA, stout, radler, bock, seasonal)	
2. **Taste** (mild, strong, sweet, sour, bitter, fruity, spiced)	
3. **Color** (yellow, gold, copper, brown, black)	
4. **Alcohol percentage** (alcohol free, low, average, high, very high)	
5. **Packaging** (bottle, can)	
6. **Brand** (well-known national brand, big brewing company, small brewing company, locally produced, ingredients locally sourced)	
Importance price	5-point Likert scale (1=totally disagree to 5=totally agree)
Low price	
High price	
Common places to drink beer	5-point Likert scale (1=totally disagree to 5=totally agree)
Home	
Terrace	
Restaurant	
Cafe	
Bar	
Club	
Importance of places to buy beer	5-point Likert scale (1=totally disagree to 5=totally agree)
Supermarket	
Liquor store	
Directly from local brewer	
Importance of ways to promote beer offer	5-point Likert scale (1=totally disagree to 5=totally agree)
Reading stories about brewery	
Brewery supporting local charities	
Knowing how the beer is brewed	
Visiting website of the brewery	
Using beer rating apps to get information about the beer	
Visiting social media pages of the brewery	
Demographic characteristics	
Age	Open question year of birth
Gender	1= male, 2=female, 3=other
Marital status	1=married, 2=living together/partnership registration, 3=divorced, 4=widow, 5=unmarried
Living situation	1=living with partner and one or more children living at home, 2=living with partner and children away from home, 3=living with partner without children, 4=single parent, 5=living alone, 6=living

	at parent(s), 7=living together with one or more persons of 18 years old or older
Origin	1=Netherlands, parents as well, 2=Netherlands, one parent not, 3=Netherlands, both parents not, 4=foreign country, both parents as well, 5=foreign country, one parent as well, 6=foreign country, both parent Netherlands
Education	1=no diploma, 2=elementary school, 3=secondary school, 4= MBO degree, 5=bachelor’s degree HBO/University, 6=master’s degree, 7=PhD
Income	1=0-500 euros, 2=500-1000 euros, 3=1000-2000 euros, 4=2000-3000 euros, 5=3000-4000 euros, 6=4000-5000 euros, 7=5000-7500 euros, 8=7500-10.000 euros, 9=more than 10.000 euros

III. Survey questions

Dear respondent,
Thank you for taking the time to fill in this survey. I am currently working on my Msc Thesis at Wageningen University about the segmentation of the beer market for microbreweries. Completing the survey will take about 7 minutes. There are no right or wrong answers, so please answer based on your own opinion.
You can participate in this study if you meet the following criteria:

- You shop your foodstuffs in Utrecht
- You are above the age of 18
- You drink beer at least once a month

You can be assured that your answers will remain anonymous and that the data collected will be used solely for this study. By continuing to answer the questions, you agree to your data being used as part of this study You have the option to leave the questionnaire at any time without consequences.

This study is carried out by Lindy Velthuis. If you have any questions, please contact lindy.velthuis@wur.nl

Thank you in advance for your contribution.

Variety seeking behavior

To what extent do you agree with the following statements? Please provide your answer to every question by clicking on the best-fitting answer for you. The possible answers range from 1=totally disagree to 5=totally agree.

- I always buy beer from the same brand
- I like trying out new beer brands
- I like trying out new beer styles (white, blond, double, triple, IPA etc.)

Product

To what extent do you agree with the following statements? Please provide your answer to every question by clicking on the best-fitting answer for you. The possible answers range from 1=totally disagree to 5=totally agree.

Style

When I buy beer, it is important that the beer is…

- Pilsner
- A White beer
- A Weizen beer
- A Blond beer
- A Double beer
- A Triple beer
- An IPA beer
- A Stout beer

- A Radler beer
- A Bock beer
- A seasonal beer
- When I buy beer, it is important the beer is (option to fill in another beer style).
    - ➢ Optional question

Taste

When I buy beer, it is important that the taste of the beer is…

- Mild
- Strong
- Sweet
- Sour
- Bitter
- Fruity
- Spiced

Color

When I buy beer, it is important that the color of the beer is…

- Yellow
- Gold
- Copper-colored
- Brown
- Black

Alcohol percentage

When I buy beer, it is important that the beer…

- Is alcohol free; less than 1%
- Has a low-alcohol percentage; between 1% and 4%
- Has an average alcohol percentage; between 4% and 6%
- Has a high alcohol percentage; between 6% and 8%
- Has a very high alcohol percentage; above 8%

Packaging

When I buy beer, it is important that the beer is packaged…

- In a bottle
- In a can

Brand

- When I buy beer, it is important that the beer is from a well-known national brand
- When I buy beer, it is important that the beer is produced by a big brewing company
- When I buy beer, it is important the beer is produced by a small brewing company
- When I buy beer, it is important that the beer is produced locally
- When I buy beer, it is important that the raw ingredients are sourced locally

Price

To what extent do you agree with the following statements? Please provide your answer to every question by clicking on the best-fitting answer for you. The possible answers range from 1=totally disagree to 5=totally agree.
When I buy beer, it is important that the price is…

- Low
- High

Place

To what extent do you agree with the following statements? Please provide your answer to every question by clicking on the best-fitting answer for you. The possible answers range from 1=totally disagree to 5=totally agree.
I often drink beer when…

- I am at home
- I am at a terrace
- I am in a restaurant
- I am in a café
- I am at a bar
- I am at a nightclub

For me it is important that I can buy the beer…

- In the supermarket
- In the liquor store
- Directly from the local brewer

Promotion

To what extent do you agree with the following statements? Please provide your answer to every question by clicking on the best-fitting answer for you. The possible answers range from 1=totally disagree to 5=totally agree.

- When I buy beer, I like to know how the beer is brewed
- When I buy beer, I like to read stories about the brewery
- When I buy beer, I like to visit the website of the brewery
- When I buy beer, I like to visit social media pages of the brewery
- When I buy beer, I like to use beer rating apps to get information about the beer
- When I buy beer, I like that the brewery supports local charities

Demographics

- In what year are you born? (fill in year of birth)
- What is your gender? (1=male/ 2=female/3=other)
- What is your marital status? (1=married, 2=living together/partnership registration, 3=divorced, 4=widow, 5=unmarried)
- What is your living situation? (1=living with partner and one or more children living at home, 2=living with partner and children away from home, 3=living with partner without children, 4=single parent, 5=living alone, 6=living at parent(s), 7=living together with one or more persons of 18 years old or older)

- What is your origin? (1=Netherlands, parents as well/2=Netherlands, one parent not/ 3=Netherlands, both parents not, 4=foreign country, both parents as well/ 5=foreign country, one parent as well/6=foreign country, both parent Netherlands)
- What is your highest level of education achieved? (1=no diploma, 2=elementary school, 3=secondary school, 3= MBO degree, 4=bachelor degree HBO/University, 4=master's degree, 5=Phd)
- What is your gross income per month? (1=0-500 euros, 2=500-1000 euros, 3=1000-2000 euros, 4=2000-3000 euros, 5=3000-4000, 6=4000-5000 euros, 7=5000-7500 euros, 8=7500-10.000 euros, 9=more than 10.000 euros

End (Image beer package)
Thankyou for participating!
Would you like to win a beer package from a microbrewery? Leave your email address below:
This email address is solely used to contact you if you won the beer package.

IV. Survey questions in Dutch

Beste respondent,
Hartelijk dank dat u de tijd wilt nemen om deze enquête in te vullen. Momenteel ben ik bezig met mijn masterscriptie aan de Universiteit van Wageningen. Ik doe onderzoek naar de segmentatie van de biermarkt voor microbrouwerijen. Met deze enquête wil ik graag inzichten krijgen in wat bierdrinkers belangrijk vinden in een bieraanbod. Het invullen van de enquête duurt ongeveer 7 minuten. Er zijn geen goede of foute antwoorden, dus antwoord alstublieft op basis van uw eigen mening.

U kunt deelnemen aan dit onderzoek als u aan de volgende criteria voldoet:

- U doet uw boodschappen in Utrecht
- U bent ouder dan 18 jaar
- U drinkt minimaal één keer per maand bier

Uw deelname is volledig anoniem en de verzamelde gegevens zullen uitsluitend voor dit onderzoek worden gebruikt. Door verder te gaan met het beantwoorden van de vragen, gaat u ermee akkoord dat uw gegevens worden gebruikt in het kader van dit onderzoek. U heeft op elk moment de mogelijkheid om de vragenlijst zonder gevolgen te verlaten.

Dit onderzoek wordt uitgevoerd door Lindy Velthuis. Als u vragen heeft kunt u contact opnemen door te mailen naar lindy.velthuis@wur.nl

Bij voorbaat dank voor uw bijdrage!

Variatiezoekend gedrag

(In forms: 3x meerkeuze vraag)
In hoeverre bent u het eens met de volgende stellingen? Geef op elke vraag antwoord door op het voor u best passende antwoord te klikken. De mogelijke antwoorden variëren van helemaal niet mee eens tot helemaal mee eens.

- Ik koop altijd bier van hetzelfde merk
- Ik probeer graag nieuwe biermerken uit
- Ik probeer graag nieuwe bierstijlen uit (wit, blond, dubbel, triple, IPA, etc.)

Product

(In forms: 5x meerkeuzeraster vraag en 5x dropdownmenu voor merk)
In hoeverre bent u het eens met de volgende stellingen? Geef op elke vraag uw antwoord door op het voor u best passende antwoord te klikken. De mogelijke antwoorden variëren van helemaal niet mee eens tot helemaal mee eens.

Biersoort
Als ik bier koop, vind ik het belangrijk dat het bier…

- Pils is
- Witbier is
- Weizen bier is
- Blond bier is

- Dubbelbier is
- Triple bier is
- IPA bier is
- Stout bier is
- Radler bier is
- Bockbier is
- Seizoenbier is
- Als ik bier koop, is het belangrijk dat het bier (*mogelijkheid om een biersoort in te vullen die er nog niet tussen staat)* is.
    - Optionele vraag

Smaak
Als ik bier koop, vind ik het belangrijk dat de *smaak* van het bier…
- Mild is
- Sterk is
- Zoet is
- Zuur is
- Bitter is
- Fruitig is
- Kruidig is

Kleur
Als ik bier koop, vind ik het belangrijk dat de *kleur* van het bier…
- Een gele kleur heeft
- Een gouden kleur heeft
- Koperkleurig is
- Een bruine kleur heeft
- Een zwarte kleur heeft

Alcoholpercentage
Als ik bier koop, vind ik het belangrijk dat het bier…
- Alcoholvrij is; minder dan 1%
- Een laag alcoholpercentage heeft; tussen 1% en 4%
- Een gemiddeld alcoholpercentage heeft; tussen 4% en 6%
- Een hoog alcoholpercentage heeft; tussen 6% en 8%
- Een zeer hoog alcoholpercentage heeft; boven 8%

Verpakking
Als ik bier koop, vind ik het belangrijk dat het bier verpakt is in…
- Een flesje
- Een blikje

Merk
- Als ik bier koop, vind ik het belangrijk dat het bier van een bekend nationaal merk is

- Als ik bier koop, vind ik het belangrijk dat het bier is geproduceerd door een grote brouwerij
- Als ik bier koop, vind ik het belangrijk dat het bier is geproduceerd door een kleine brouwerij
- Als ik bier koop, vind ik het belangrijk dat het bier lokaal is geproduceerd
- Als ik bier koop, vind ik het belangrijk dat de grondstoffen lokaal zijn ingekocht

Prijs

(In forms: meurkeuzeraster)
Als ik bier koop, vind ik het belangrijk dat de prijs…

- Laag is
- Hoog is

Plaats

(In forms: 2x meurkeuzeraster)
In hoeverre bent u het eens met de volgende stellingen? Geef op elke vraag antwoord door op het voor u best passende antwoord te klikken. De mogelijke antwoorden variëren van helemaal niet mee eens tot helemaal mee eens.

Ik drink vaak bier als ik

- Thuis ben
- Op een terras zit
- In een restaurant ben
- In een café ben
- In een bar ben
- In een nachtclub ben

Ik vind het belangrijk dat ik bier kan kopen…

- In de supermarkt
- In de slijterij kan kopen
- Rechtstreeks bij de lokale brouwer

Promotie

(In forms: 6x dropdownmenu)
In hoeverre bent u het eens met de volgende stellingen? Geef op elke vraag antwoord door op het voor u best passende antwoord te klikken. De mogelijke antwoorden variëren van helemaal niet mee eens tot helemaal mee eens.

- Als ik bier koop, wil ik graag weten hoe het bier is gebrouwen
- Als ik bier koop, lees ik graag verhalen over de brouwerij
- Als ik bier koop, bezoek ik graag de website van de brouwerij
- Als ik bier koop, bezoek ik graag de social media pagina’s van de brouwerij
- Als ik bier koop, gebruik ik graag bier apps om informatie over het bier te krijgen
- Als ik bier koop, vind ik het leuk als de brouwerij lokale goede doelen steunt

Demografische gegevens

- In welk jaar bent u geboren? (jaartal invullen; kort antwoord in forms) (leeftijd)
- Wat is uw geslacht? (1=man/ 2=vrouw/3=anders (geslacht)

Kies het antwoord dat het meest van toepassing is

- Wat is uw burgerlijke staat? (1=gehuwd, 2=samenwonend of partnerschapsregistratie, 3=gescheiden, 4=weduwe, 5=ongehuwd)
- Wat is uw woonsituatie? (1=samenwonend met partner en één of meer thuiswonende kinderen, 2=samenwonend met partner en uitwonende kinderen, 3=samenwonend met partner zonder kinderen, 4=alleenstaande ouder, 5=alleenwonend, 6=thuiswonend bij ouder(s), 7=samenwonend met één of meer personen van 18 jaar of ouder)
- Wat is uw herkomst? (1=Nederland, beide ouders ook/2=Nederland, één ouder niet, 3=Nederland, beide ouders niet/ 4=buitenland, beide ouders ook/ 5=buitenland, één ouder ook/6=buitenland, beide ouders Nederland)
- Wat is uw hoogst behaalde opleiding? (1=geen diploma, 2=basisschool, 3=middelbare school, 4= mbo-diploma, 5=bachelor diploma hbo/universiteit, 6=master diploma, 5=PhD)
- Wat is uw bruto inkomen per maand (1=0-500 euro, 2=500-1000 euro, 3=1000-2000 euro, 4=2000-3000 euro, 5=3000-4000 euro, 6=4000-5000, 7=5000-7500 euro, 8=7500-10.000 euro, 9=meer dan 10.000 euro

Einde (Afbeelding bierpakket)

Hartelijk dank voor uw deelname!

Wilt u een bierpakket van een microbrouwerij winnen? Laat hieronder uw e-mailadres achter: Dit e-mailadres wordt uitsluitend gebruikt om contact met u op te nemen indien u het bierpakket heeft gewonnen.

V. Demographic characteristics research sample

Figure 2: Age distribution research sample

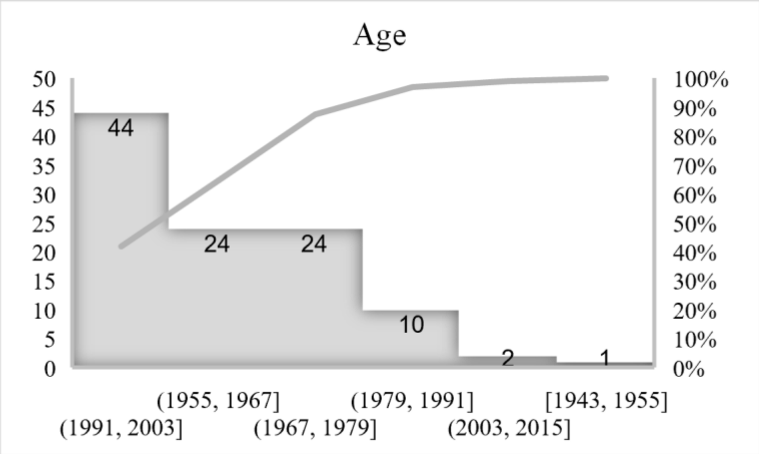


Figure 3: Gender distribution sample

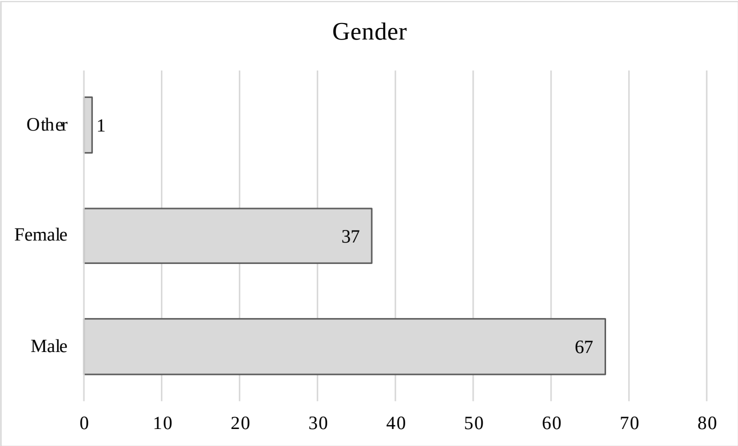


Figure 4: Marital status distribution sample

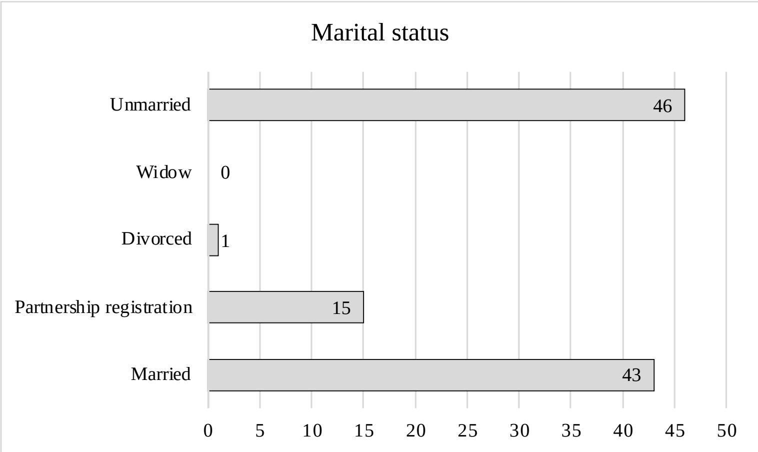


Figure 5: Living situation distribution sample

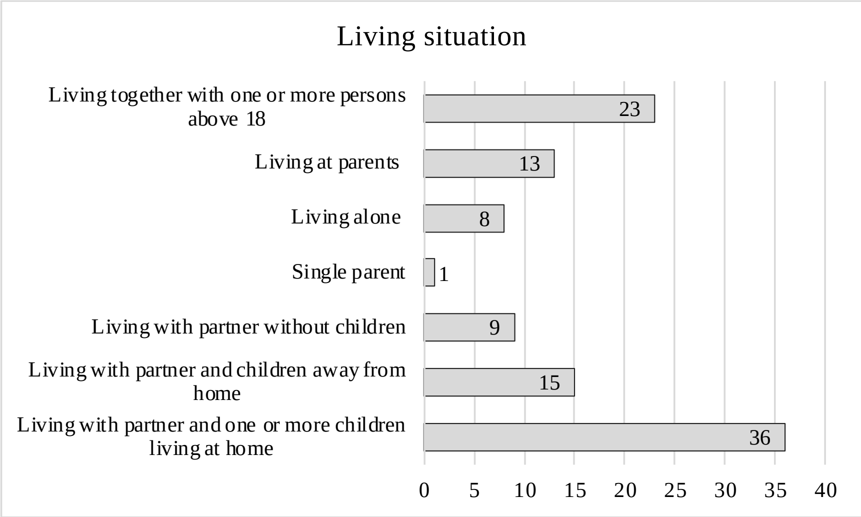


Figure 6: Origin distribution sample

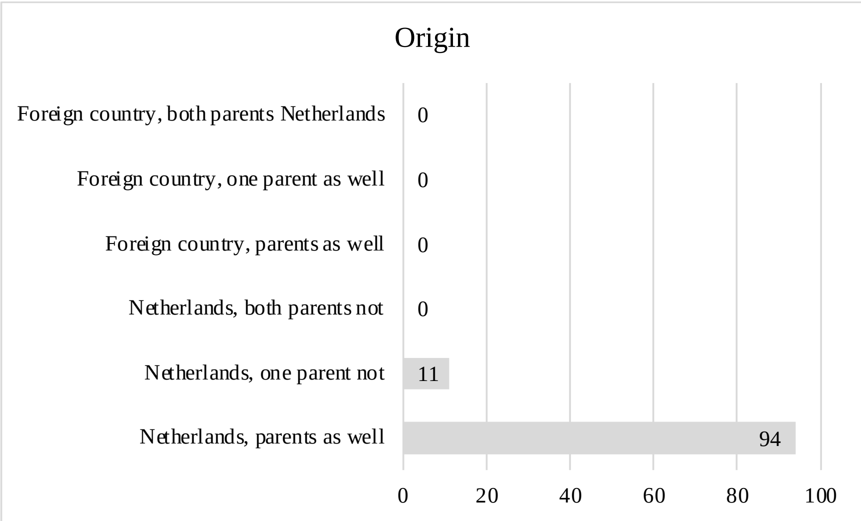


Figure 7: Distribution of highest level of education achieved of sample

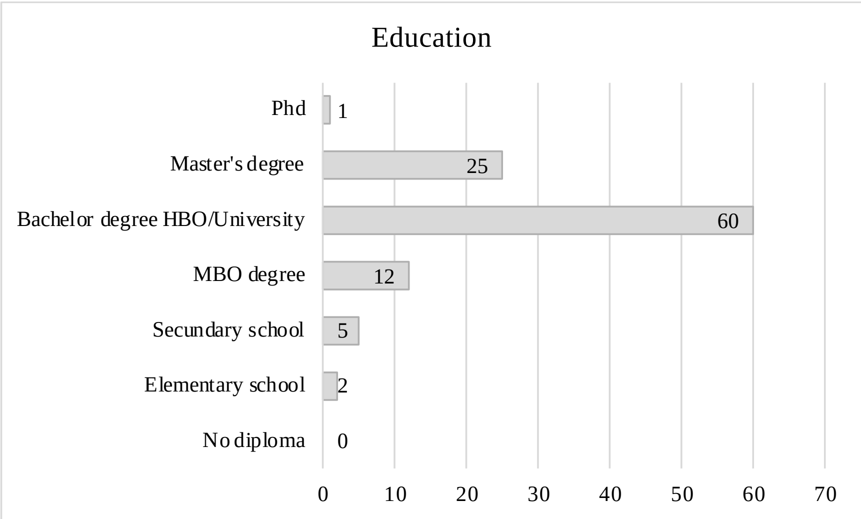
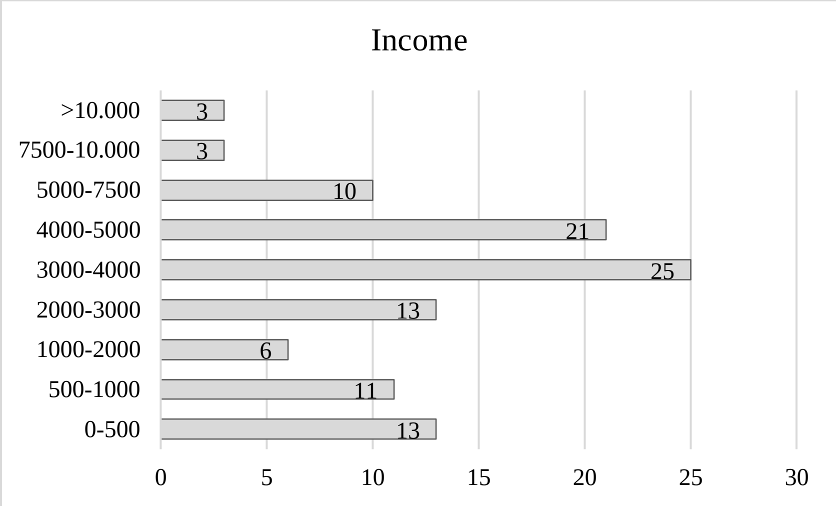


Figure 8: Gross income per month distribution sample



Note: income is in euros

VI. Factor analysis and reliability analysis outputs SPSS

Table 4: Correlation matrix

		I always buy beer from the same brand	I like trying out new beer brands	I like trying out new beer styles
Correlation	I always buy beer from the same brand	1.000	-.504	-.077
	I like trying out new beer brands	-.504	1.000	.321
	I like trying out new beer styles	-.077	.321	1.000

a. Determinant = .662

Table 5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.491
Bartlett's Test of Sphericity	Approx. Chi-Square	42.159
	df	3
	Sig.	<.001

Table 6: Communalities

	Initial	Extraction
I always buy beer from the same brand	1.000	.579
I like trying out new beer brands	1.000	.768
I like trying out new beer styles	1.000	.288

Extraction Method: Principal Component Analysis.

Table 7: Total Variance Explained

Component	Total	Initial Eigenvalues % of Variance	Cumulative %	Extraction Total	Sums of Squared % of Variance	Loadings Cumulative %
1	1.634	54.481	54.481	1.634	54.481	54.481
2	.930	31.007	85.488			
3	.435	14.512	100.000			

Extraction Method: Principal Component Analysis.

Table 8: Component matrix

	Component 1
I always buy beer from the same brand	-.761
I like trying out new beer brands	.876
I like trying out new beer styles	.536

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 9: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.550	0.536	3

Table 10: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I like trying out new beer styles	7.1714	3.009	.215	.113	.661
I like trying out new beer brands	6.8476	2.342	.569	.334	.142
Reversed - I always buy beer from the same brand	7.3143	2.333	.345	.262	.485

VII. Expected frequencies demographic characteristics

Table 10: Expected frequencies demographic characteristics.

Demographic characteristic	Items	Expected F existing customers	Expected F liquor store	Expected F super-market
	Male	22,33	22,33	22,33
Gender	Female	12,33	12,33	12,33
	Other	3,00	3,00	3,00
Marital status	Married	14,33	14,33	14,33
	Living together/partnership registration	5,00	5,00	5,00
	Divorced	3,00	3,00	3,00
	Widow	0,00	0,00	0,00
	Unmarried			
Living situation	Living with partner and one or more children living at home	12,00	12,00	12,00
	Living with partner and children away from home	5,00	5,00	5,00
	Living with partner without children	3,00	3,00	3,00
	Single parent	0,33	0,33	0,33
	Living alone	2,67	2,67	2,67
	Living at parent(s)	4,33	4,33	4,33
	Living together with one or more persons of 18 years or older	7,67	7,67	7,67
Origin	Netherlands, parents as well	31,33	31,33	31,33
	Netherlands, one parent not	3,67	3,67	3,67
	Netherlands, both parents not	0,00	0,00	0,00
	Foreign country, both parents as well	0,00	0,00	0,00
	Foreign country, one parent as well	0,00	0,00	0,00
	Foreign country, both parents Netherlands	0,00	0,00	0,00
Highest level education	No diploma			
	Elementary school	0,00	0,00	0,00
	Secondary school	0,67	0,67	0,67
	MBO degree	1,67	1,67	1,67
	Bachelor’s degree HBO/University	4,00	4,00	4,00
	Master's degree	20,00	20,00	20,00
	PhD	8,33	8,33	8,33
Gross income (€/month)	0-500	4,33	4,33	4,33
	500-1000	3,67	3,67	3,67
	1000-2000	2,00	2,00	2,00
	2000-3000	4,33	4,33	4,33
	3000-4000	8,33	8,33	8,33
	4000-5000	7,00	7,00	7,00
	5000-7500	3,33	3,33	3,33
	7500-10.000	1,00	1,00	1,00
	>10.000	1,00	1,00	1,00

Note: formula used to calculate expected frequencies: expected value = (row total observed frequencies * column total observed frequencies) / overall total. Calculation are based on the numbers in the contingency table in results section 4.3.

VIII. Whitney U test outputs SPSS

Table 11: hypothesis test summary existing customers compared to liquor store participants

	Null Hypothesis	Test	Sig.a,b	Decision
1	The distribution of Gender is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.419	Retain the null hypothesis.
2	The distribution of Living is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.791	Retain the null hypothesis.
3	The distribution of Marital is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.700	Retain the null hypothesis.
4	The distribution of Origin is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.288	Retain the null hypothesis.
5	The distribution of Education is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.906	Retain the null hypothesis.
6	The distribution of Income is the same across categories of Participant Group.	Independent-Samples Mann-Whitney U Test	.298	Retain the null hypothesis.

a The significance level is .050.

b Asymptotic significance is displayed.

Table 12: hypotheses test summary existing customers compared to supermarket participants

	Null Hypothesis	Test	Sig.a,b	Decision
1	The distribution of Gender is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.070	Retain the null hypothesis.
2	The distribution of Living is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.512	Retain the null hypothesis.
3	The distribution of Marital is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.820	Retain the null hypothesis.
4	The distribution of Origin is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.645	Retain the null hypothesis.
5	The distribution of Eduction is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.554	Retain the null hypothesis.
6	The distribution of Income is the same across categories of ParticipantGroup.	Independent-Samples Mann-Whitney U Test	.344	Retain the null hypothesis.

a The significance level is .050.

b Asymptotic significance is displayed.