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HOW DOES GENERATION Z PERCEIVE AND ENGAGE WITH NON-ALOHOLIC BEER IN THE PORTUGUESE MARKET?

COMPREHENSIVE ANALYSIS OF GENERATION Z CONSUMER PERCEPTIONS IN THE PORTUGUESE NON-ALCOHOLIC BEER MARKET

VERA DE FRANCO E SANTOS DA CUNHA LUCAS

Work project carried out under the supervision of:

Daniela Schmitt

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Abstract

In the evolving Portuguese beverage market, non-alcoholic beer (NAB) has gained visibility. However, its integration into the drinking habits of younger consumers remains limited. Thus, the purpose of this thesis is to examine how Generation Z perceives and engages with NAB, and to identify the factors that either encourage or inhibit its adoption. A perceptual analysis revealed that NAB brands are primarily associated with credibility and familiarity yet lack aspirational and sensory-driven attributes. The findings indicated that although health consciousness and curiosity promote initial trial, taste limitations, unclear social legitimacy, and weak emotional relevance continue to restrict broader adoption.

Keywords: Perceptual Map, Consumer Perceptions, Generation Z, Non-Alcoholic Beer, Portuguese Market, Non-Alcoholic Beer Brands

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1. Introduction

In recent years, the beverage industry has experienced a significant shift toward alcohol moderation, with No and Low-alcohol (NoLo) beverages, particularly beer, expanding rapidly across global markets (Kokole et al. 2022). This category has demonstrated strong momentum, achieving double-digit growth in key markets and significantly outperforming the traditional alcohol sector (IWSR 2024). As a result, non-alcoholic beer (NAB) now constitutes an increasing share of total beer sales worldwide, and industry leaders have committed to expanding their lower-alcohol portfolios in the coming years (AB InBev 2024). These developments position NAB as a strategically important segment within the current beverage industry.

Simultaneously, evolving consumer values, especially among younger generations, have accelerated this transition. Recent studies indicate that Millennials and Generation Z consumers are increasingly prioritizing brand authenticity, sensory quality, and balanced lifestyles when selecting beverages (IWSR 2025). Over the past decade, alcohol consumption among young adults has declined, with NoLo alternatives progressively replacing full-strength alcoholic drinks (Kokole et al. 2021). Gen Z is characterized by a focus on self-improvement, health consciousness, and purposeful decision-making (Seemiller & Grace 2017). Moreover, evidence demonstrates that Gen Z consumes less alcohol than Millennials, underscoring their alignment with moderation-oriented categories such as NAB (Ball et al. 2022).

Within this global context, the Portuguese market presents distinct characteristics, representing a particularly relevant case for marketing analysis. Although the NAB market in Portugal has demonstrated steady growth (Statista 2025), national consumption remains significantly lower than in other European markets (Euromonitor 2025), suggesting a gap between market potential and actual consumer adoption. Addressing this gap requires a deeper understanding of Gen Z

consumer insights to inform effective brand positioning, product development, and communication strategies within the Portuguese market.

Given the limited and inconsistent availability of public data on brand shares, Sonae MC, Portugal's largest retailer (Statista 2024), was consulted to obtain an informed overview of the competitive landscape. Based on Sonae MC's sales records, the five best-selling NAB brands were identified as Super Bock (1st), Heineken (2nd), Sagres (3rd), Guinness (4th), and Estrella Damm (Free Damm) (5th). Therefore, these brands were selected for analysis in this thesis as they provide a credible and pragmatic basis for market dynamics of the Portuguese NAB market in the absence of comprehensive public data.

Furthermore, understanding Gen Z perceptions of NAB, including aspects such as taste, image, and social significance, is essential for developing effective brand strategies and advancing category development. However, despite NAB's increasing visibility, academic research on this topic remains limited. Few studies have examined the psychological drivers and behavioral barriers influencing NAB adoption among younger consumers, and none have explicitly focused on Gen Z in Portugal. This gap presents both a research opportunity and a managerial challenge. From a practical perspective, understanding this generation's motivations can assist breweries in refining their brand positioning, developing more effective communication strategies, and normalizing NAB consumption within social contexts. Academically, this study contributes to the expanding literature on NAB consumption behavior, brand management, and product innovation, including line extension and portfolio development strategies.

2. Consumer Perceptions

Perceptual mapping is one of the most important analytical tools in marketing research (Chadha & Kapoor 2008; Green et al. 1998; Steenkamp et al. 1994). A perceptual map visually represents consumers' perceptions of competing brands by highlighting the attributes that

influence purchase decisions, revealing competitive strengths and weaknesses, identifying market opportunities and ideal points, and supporting assessments of market evolution and potential repositioning opportunities (Gigauri 2019).

The most frequently used perceptual mapping techniques include factor analysis, discriminant analysis, and multidimensional scaling (Gigauri 2019). Factor analysis reduces a large set of attribute ratings into a smaller number of underlying dimensions, positioning brands accordingly; discriminant analysis identifies attribute combinations that most effectively differentiate competing brands; and multidimensional scaling generates a spatial representation of brands based on perceived similarity rather than attribute ratings (Kohli & Leuthesser 1993).

These techniques are classified into two methodological categories. Factor analysis and discriminant analysis are compositional methods, as they rely on attribute ratings combined to derive underlying perceptual dimensions. In contrast, multidimensional scaling is a decompositional method that uses overall similarity judgments, which are then decomposed into latent dimensions (Bhattacharyya & Dasgupt 2014).

Within this set of methods, factor analysis is recognized for providing richer and more interpretable solutions, particularly in categories characterized by numerous attributes (Hausser & Koppelman 1979; Gigauri 2019). Conversely, discriminant analysis yields fewer and less robust dimensions, while multidimensional scaling is most suitable when many stimuli are present and only a limited set of attributes is identified (Gigauri 2019).

2.1. Research Design

2.1.1. Factor Analysis

The perceptual mapping technique chosen was factor analysis. Factor analysis is a data reduction method that groups correlated attributes into a smaller set of underlying factors and positions brands within the perceptual space based on their factor scores (Kohli & Leuthesser

1993; Hausser & Koppelman 1979). In contrast to similarity-scaling methods such as multidimensional scaling, factor analysis employs an attribute-rating approach requiring respondents to evaluate each brand on each attribute using a Likert scale (Gigauri 2019; Rekettye & Liu 2001). By structuring complex data, factor analysis identifies the dimensions consumers use to differentiate brands, determines each brand's position along these dimensions, and reveals the characteristics of the underlying perceptual structure (Chadha & Kapoor 2008). It therefore provides a statistically coherent framework for analyzing how Gen Z perceives and evaluates NAB brands.

2.1.1. Survey

A structured online survey (Table 1, Appendix 1), with twenty-nine questions organized into four sections, was used to collect quantitative data. The first section comprised screening questions to ensure respondents were eligible. The initial question verified age, retaining only Gen Z participants (McKinsey 2024) who are legally permitted to consume alcohol in Portugal (Statista 2025). Consequently, only individuals aged 18 to 29 years old were included. Subsequent questions assessed current residency in Portugal and prior experience with NAB. Respondents who had not tried NAB were asked whether they would be willing to try it; only those who responded "Yes" proceeded to the next section.

The second section contained twenty questions that used an attribute-based approach. For each attribute, respondents ranked five NAB brands (Super Bock, Sagres, Heineken, Guinness, and Estrella Damm) on a scale from 1 to 5. The third section included four demographic questions to characterize the sample. It addressed gender, nationality, employment status, and approximate monthly personal income. Finally, the fourth section consisted of an optional open-ended question that allowed respondents to share additional comments about NAB.

2.1.2. Choice of Attributes

The twenty attributes on which respondents rated the five NAB brands were chosen based on insights from the literature review and preliminary interviews and reflect the key perceptual dimensions Gen Z considers when evaluating NAB brands:

- ***Affordable***: represents the perception of price fairness and economic accessibility, which directly influences Gen Z's willingness to purchase NAB. This generation demonstrates cautious spending behavior (Rodrigues 2023), and price remains a primary determinant in their purchase decisions (Gliszczyńska-Świgło et al. 2025). Therefore, affordability can motivate purchases when prices are perceived as fair, but becomes a barrier when NAB is considered overpriced, resulting in reluctance to purchase (Spence 2025).
- ***Tasty***: captures perceptions of flavor quality, a direct driver of NAB acceptance and market growth (De Francesco et al. 2021). This attribute is relevant for Gen Z, who are increasingly guided by sensory quality (IWSR, 2024). Thus, taste motivates NAB purchases when expectations are met (Gliszczyńska-Świgło et al. 2025), whereas unmet expectations turn taste into a barrier.
- ***Healthy***: represents the perceived alignment between NAB and consumers' health-conscious preferences, which is relevant as Gen Z prioritizes health in their daily lives (Yeomans & Fenton 2022). Increasing health consciousness has become a core driver of Gen Z's purchasing decisions (Market Line 2022), reshaping the NoLo beverage market (IWSR 2024). This tendency was also evident within the preliminary interviews, as many consumers identified health as a primary reason for choosing NoLo beverages. Consequently, health perceptions motivate both the initial trial of NAB and its ongoing acceptance as a preferred alternative to regular beer.
- ***Accessible***: captures perceptions of availability and is a key determinant of NAB adoption and market evolution (Spence 2025), influencing purchase decisions. Accessibility

facilitates purchases, normalization, and reduces stigma through increased visibility (Gliszczyńska-Świgło et al. 2025). In contrast, limited or absent availability in desired contexts remains a barrier to broader adoption (Spence 2025).

- ***Well-Known***: reflects familiarity and recognition. These attributes have become increasingly important (IWSR 2024) and are significant factors influencing purchase decisions (Gliszczyńska-Świgło et al. 2025). Expert interviews indicate that familiarity increases trust, as awareness reduces stigma and increases the likelihood of brand choice. As a result, consumers often initially purchase familiar brands and remain loyal, reinforcing recognition as a driver of NAB adoption.
- ***Authentic***: represents perceptions of genuine identity, aligning with Gen Z's preference for real brands. Literature indicates that Gen Z favors authenticity in the brands and products they choose (König 2024). Interview insights revealed that some Portuguese Gen Z consumers perceive traditional beverages as more authentic, highlighting ongoing NAB authenticity concerns and their desire for intentionally distinct products. Experts noted NAB's growing credibility, supported by marketing and sports and entertainment associations, emphasizing the need for authentic and independent identities rather than imitations of alcoholic counterparts.
- ***Responsible***: reflects alignment with moderation and conscious consumption, which are reshaping the NoLo beverage market (IWSR 2024). This attribute corresponds to a broader cultural shift that prioritizes self-control (Yeomans & Fenton 2022). According to experts, Gen Z is the most conscious and self-controlled generation to date. Literature further indicates that Gen Z tends to favor brands and products that demonstrate social consciousness (König 2024), reinforcing the importance of responsibility.
- ***Social***: captures perceptions of suitability for social occasions, which aligns with Portuguese cultural norms, where alcohol remains central to social engagement. Social

norms influence behavior, as individuals are more likely to choose alcohol when they perceive it to be approved or expected (Fang et al. 2017; Wang 2020). Preliminary interviews reinforced this dynamic by showing that social settings are the primary context for alcohol consumption, typically associated with group interaction and motivated by socializing, while also revealing concerns about the social legitimacy of NAB and indicating that future openness may depend on greater situational relevance.

- ***Extrovert***: represents expressiveness and self-confidence, traits frequently associated with alcohol consumption. Gen Z often consumes alcohol to facilitate interaction (Kaylor et al. 2024), cope with social anxiety, or enhance experiences (Lyvers et al. 2010). Preliminary interviews confirmed this pattern, as increased confidence was described as a motivation for drinking, and alcohol was emphasized as a social facilitator that reduces interpersonal barriers and fosters connections.
- ***Trendy***: reflects alignment with current culture and lifestyle, as social media, trends, and peers influence Gen Z. Social media plays a significant role in shaping behavior (Spence 2025), and this generation relies extensively on online information. Friends' opinions are also among the main factors influencing purchase decisions (Gliszczyńska-Świgło et al. 2025), with motivations often linked to social validation, cultural norms, and expectations.
- ***Cool***: captures perceptions of social admiration, emphasizing how image and social acceptance influence purchase decisions. People often infer traits about others based on their drinking habits, and such stereotypes shape behavior (Staub et al. 2022). A broader cultural redefinition of drinking norms is emerging with NAB, as NoLo drinkers are increasingly perceived as "cool" and "respectable" rather than "boring" or "uncool", which potentially increases the consumption of these beverages (Spence 2025).
- ***Youthful***: represents alignment with young individuals, characterized by strong personality, proactivity, and open-mindedness. Preliminary interviews indicated that Gen Z exhibits

unique personality traits and dynamics shaping their consumption behavior (Kaylor et al. 2024). This attribute is therefore relevant, as it captures the extent to which NAB brands can resonate with Gen Z by aligning with their identity and communication style.

- ***Reliable***: reflects perceptions of consistency and trustworthiness, delivering on promises without disappointment. This attribute is relevant since many consumers still view NAB not as a replacement for regular beer, as brands often claim, but as an alternative suited for specific occasions (Silva et al. 2016; Vasiljevic et al. 2019). Preliminary interviews highlighted disappointment with taste, noting that the flavor does not match that of regular beer. However, experts emphasized that innovations in brewing methods and recipe development have improved and continue to improve product quality, reinforcing the role of reliability in building credibility.
- ***Innovative***: captures associations with diversification, novelty, and creativity. According to experts from the preliminary interviews, product innovation has been central to NAB's acceptance and growth in Portugal and is expected to continue. From the consumer perspective, broader experimentation requires more engaging and creative options, indicating a desire for differentiation and novel product concepts.
- ***Glamorous***: reflects perceptions of sophistication, prestige, and high status, which may increase NAB's appeal. Preliminary interviews noted the category's potential aspirational appeal, although current marketing often targets individuals who do not consume alcohol for health or lifestyle reasons, which may limit broader glamour perceptions.
- ***Aesthetic***: captures perceptions of overall attractiveness. Preliminary interviews indicated greater consumer openness if NAB were more fashionable, highlighting the importance of packaging and format as purchase drivers that can normalize consumption by reducing external judgment.

- ***Premium***: represents perceptions of superior quality and higher value, shaping Gen Z's evaluation and willingness to pay. Interview insights indicated reluctance to buy when NAB is perceived as lacking value, consistent with Gen Z's selective, pragmatic, value-driven approach to spending behavior (Rodrigues 2022). However, NAB is evolving into a more desirable category, and consumers are willing to pay premium prices when justified by technological complexity, quality, or perceived benefits (Charmaine 2021).
- ***Bold***: captures perceptions of confidence and distinctiveness, resonating with Gen Z's desire for expressive brands. Interview findings revealed that willingness to try NAB increases when products appear truly different or are promoted through distinctive brand activations, reinforcing the need for authentic differentiation and aligning with Gen Z's proactive tendencies (Seemiller & Grace 2017).
- ***Strong***: reflects perceptions of robustness, consistent with the association of beer with strength that persists among some segments. This is particularly evident in advertising, where visual and verbal elements promote notions of strength and power linked to masculinity (Islentyeva et al. 2023). Beer consumption is frequently portrayed as a masculine behavior, exemplified by slogans such as "The strong beer for real men" (Islentyeva et al. 2023). Social pressure remains stronger for men, with some Gen Z individuals reporting feelings of social exclusion when choosing NAB (Spence 2025).
- ***Adventurous***: represents associations with exploration and openness to new experiences, consistent with younger generations, who are more experimental and receptive to new formats and flavors, as indicated in the preliminary interviews. This openness is further supported by declining stigma, driven by the rise of "sober curiosity" movements (Lunnay et al. 2022; Roberts 2024), which encourage experimentation and acceptance of NoLo alternatives.

2.1.3. Data Collection

Data was collected using an online survey developed in Microsoft Forms, available from September 26th, 2025, to October 7th, 2025. To effectively reach the target audience, the survey was shared across social networks, including Instagram, LinkedIn, and WhatsApp groups. The questionnaire, available in English, required approximately four minutes to complete. Participation was voluntary and anonymous, consistent with data privacy regulations. A total of 157 responses were collected, of which 89 were considered valid and retained for analysis. Valid responses were identified through a data cleaning procedure conducted in Microsoft Excel to verify compliance with predefined eligibility criteria related to age, residency, and prior or potential engagement with the NAB category.

2.2. Results

2.2.1. Sample Description

Demographic data were collected through the survey (Table 1, Appendix 1) to characterize the sample. Among respondents, 64% were female, 34% were male, and 2% preferred not to disclose their gender (Figure 7, Appendix 2). Regarding nationality, 93% of respondents were Portuguese. The sample also included 6% from other European countries, 1% from Asia, and 1% from South Africa (Figure 8, Appendix 2). This composition reflects the eligibility criteria applied, which admitted only residents of Portugal, resulting in a predominance of Portuguese respondents.

In terms of employment status (Figure 9, Appendix 2), 51% of respondents were full-time students, 22% were working students, 17% were early workers with less than two years of work experience, 9% were workers for more than two years, and 1% were unemployed. Regarding monthly income (Figure 10, Appendix 2), 37% reported earning less than €250, 6% between €250 and €499, 7% between €500 and €749, 7% between €750 and €999, 11% between €1,000

and €1,259, 22% above €1,250, and 10% preferred not to disclose their income. This distribution reflects the typical profile of Gen Z, as many are still pursuing their studies or beginning their careers, which also explains the variety of income levels observed.

2.2.2. SPSS Analysis

IBM SPSS Statistics was employed to aggregate the survey responses and perform factor analysis, which served as the basis for constructing a two-dimensional perceptual map. This procedure addresses RQ1: *How do Gen Z consumers in Portugal perceive NAB brands?* and RQ2: *What perceptual gaps and opportunities exist in the Portuguese market that NAB brands could leverage to enhance their appeal among Gen Z?*

The analysis output included descriptive statistics, correlation matrix, scree plot, component matrix, communalities, total variance explained, component score coefficient matrix, component score covariance matrix, and component plot. Each of these outputs contributed to understanding brand positioning within the perceptual space.

Descriptive Statistics

Descriptive statistics (Figure 11, Appendix 3) provide a summary of the dataset by presenting measures of central tendency and dispersion. These include statistics such as the mean and the standard deviation, which quantify average ratings and response variability (IBM 2025).

The mean represents the average rating, on a scale from 1 to 5, assigned by respondents to each attribute for each brand. In this analysis, mean values ranged from 2.136 to 4.304. The attributes Well-Known (4.304), Social (3.902), Authentic (3.878), Reliable (3.858), and Accessible (3.776) recorded the highest mean values, indicating strong associations with NAB brands. Attributes with moderate mean values, such as Adventurous (3.252), Responsible (3.270), Innovative (3.284), Aesthetic (3.356), Youthful (3.390), Strong (3.436), Affordable (3.452), Trendy (3.590), Cool (3.614), and Extrovert (3.618), suggest neutral associations. The lowest

mean values observed for Healthy (2.136), Glamorous (2.916), Premium (3.068), Bold (3.184), and Tasty (3.228) indicate weaker associations with NAB brands.

The standard deviation quantifies the degree of agreement among respondents in their attribute rankings. In this analysis, standard deviation values ranged from 0.145 to 1.138. The lowest values observed for Healthy (0.145), Responsible (0.248), Authentic (0.327), and Adventurous (0.400), indicate a high level of consensus among consumers. Moderate values for attributes such as Reliable (0.420), Bold (0.432), Tasty (0.439), Aesthetic (0.540), Strong (0.562), Extrovert (0.596), Cool (0.600), Well-Known (0.607), Affordable (0.659), Innovative (0.663), and Glamorous (0.670) suggest a moderate range of opinions. Higher standard deviation values for Social (0.713), Trendy (0.768), Youthful (0.857), Premium (0.953), and Accessible (1.138) reflect greater dispersion in consumer perceptions.

Overall, NAB brands are primarily perceived as Authentic, Well-Known, and Reliable, reflecting strong credibility and brand awareness. However, there is less agreement regarding their accessibility and social suitability. Additionally, NAB brands are not typically associated with Healthy, suggesting that, despite being considered healthier than regular beer, they are not yet linked to wellness. Moreover, weak associations with attributes such as Tasty, Glamorous, and Bold suggest a lack of sensory and aspirational appeal.

Correlation Matrix

The correlation matrix (Figure 12, Appendix 3) measures the linear relationships between pairs of variables, with coefficients ranging from -1 to 1. Values near 1 indicate a strong positive correlation, while values near -1 indicate a strong negative correlation. Coefficients close to 0 reflect no linear correlation, indicating that the variables are independent (IBM 2025).

Strong positive relationships were identified, indicating significant interconnections among attributes. NAB brands perceived as Social are strongly correlated with Extrovert (0.976), and

both attributes are positively associated with Responsible (0.962 and 0.952), Reliable (0.924 and 0.938), and Innovative (0.941 and 0.989). This pattern suggests that social suitability and expansiveness are closely linked to perceptions of credibility and innovation. Additionally, Social and Extrovert are positively related to Accessible (0.942 and 0.873) and Youthful (0.922 and 0.895), indicating that socially engaging brands are viewed as reachable and compatible with Gen Z's lifestyle. Furthermore, Youthful is correlated with Accessible (0.974) and Affordable (0.877), demonstrating that these attributes are associated with brands aligned with younger generations. Likewise, NAB brands perceived as Cool exhibit a strong correlation with Trendy (0.973). Both attributes are also positively associated with Reliable (0.900 and 0.962), Authentic (0.969 and 0.983), Well-Known (0.895 and 0.941), Innovative (0.821 and 0.910), Adventurous (0.930 and 0.967), and Bold (0.921 and 0.825). These findings indicate that brands seen as desirable and contemporary are also seen as credible and daring. Moreover, Glamorous and Premium are nearly perfectly correlated (0.993), and both attributes are positively associated with Aesthetic (0.900 and 0.847). This suggests that Gen Z perceives prestige, quality, and visual appeal as closely interconnected.

On the other hand, strong negative correlations were observed, indicating that some attributes are perceived as opposites. NAB brands viewed as Affordable and Accessible are less likely to be considered Glamorous (-0.945 and -0.654), Premium (-0.977 and -0.737), and Aesthetic (-0.722 and -0.306). Likewise, brands perceived as Glamorous and Premium are less likely to be associated with Social (-0.406 and -0.511), Extrovert (-0.328 and -0.434), and Youthful (-0.684 and -0.762). These findings highlight a clear opposition between aspirational attributes and those linked to affordability, accessibility, social suitability, and youthfulness.

Lastly, a small number of attribute pairs exhibited correlations close to 0, indicating that these attributes are perceived independently, such as Premium and Well-Known (-0.007), Premium and Trendy (-0.018), Glamorous and Adventurous (-0.002), Aesthetic and Social (-0.003),

Affordable and Cool (0.004), and Tasty and Strong (0.004). These results suggest that aspirational attributes such as Premium, Glamorous, and Aesthetic are independent of attributes related to brand recognition, trendiness, social suitability, adventurousness, and coolness. Similarly, Tasty is unrelated to Strong, indicating that flavor perceptions are independent of the traditional symbolic associations of strength, power, and masculinity linked to beer (Islentyeva et al. 2023). Therefore, although NAB is often perceived as weaker than regular beer, these associations do not influence respondents' taste evaluations.

Scree Plot

The scree plot (Figure 13, Appendix 3) displays the eigenvalues associated with each component, thereby indicating the proportion of variance explained by each factor. This visualization helps determine the optimal number of components to retain (IBM 2025).

Component 1 demonstrates a high eigenvalue (slightly above 12), accounting for a substantial proportion of the total variance. Component 2, with an eigenvalue of 6, also explains a significant portion of the data's variability. From Component 3 to Component 20, the eigenvalues decrease gradually and stabilize, indicating that these components explain only a small fraction of the overall variability. Therefore, only the first two components were retained for further analysis and the construction of the perceptual map, as they collectively accounted for the majority of the dataset's variance.

Component Matrix

The component matrix (Figure 14, Appendix 3) presents the factor loadings of each attribute for the two extracted components. These loadings reveal how much each factor explains each attribute. Loadings close to 1 indicate that the attribute substantially contributes to the factor, while loadings near -1 suggest that the attribute has minimal influence on the factor's definition (IBM 2025).

Component 1 is primarily defined by attributes with high loadings, such as Reliable (0.984), Extrovert (0.982), Innovative (0.972), Responsible (0.968), Social (0.966), and Trendy (0.950). In contrast, attributes such as Premium (-0.293) and Glamorous (-0.178) have low loadings and do not define this component. As a result, Component 1 represents a Contemporary dimension. It distinguishes brands seen as modern, relevant, and aligned with current social contexts and values from those viewed as unrelatable and less culturally and socially aligned.

Component 2 is primarily defined by attributes with high loadings, such as Glamorous (0.954), Premium (0.926), Aesthetic (0.916), Strong (0.872), and Bold (0.728). Conversely, Affordable (-0.849), Youthful (-0.570), and Accessible (-0.541) load negatively on this factor. This pattern shows that Component 2 reflects an Aspirational dimension that is associated with perceptions of sophistication, higher value, and exclusivity, in contrast with brands that seem more casual, affordable, and less differentiated.

Communalities

Communalities (Figure 15, Appendix 3) indicate the proportion of each variable's variance explained by the two extracted factors, reflecting the extent to which each attribute is represented. A communality value of 1 indicates that the factor model fully explains the variance, while a value of 0 signifies weak representation (IBM 2025).

The results indicate that the two components explain most attributes well. Specifically, Cool (0.997), Youthful (0.994), Trendy (0.993), Social (0.992), Extrovert (0.986), Reliable (0.981), Accessible (0.975), and Affordable (0.959) exhibit particularly high communalities values. Healthy (0.414) is the only attribute with a low communality, indicating that it is less strongly represented by the Contemporary and Aspirational dimensions. This result shows that, despite Gen Z's increasing interest in wellness and balanced lifestyles highlighted in the literature and preliminary interviews, health does not emerge as a central element of NAB brand perceptions.

Although NAB is perceived as a healthier alternative to regular beer, health appears to remain a functional attribute that is not yet fully integrated into the overall image of NAB brands.

Total Variance Explained

The total variance explained table (Figure 16, Appendix 3) demonstrates the proportion of variability in the dataset that is explained by the extracted components (IBM 2025). Component 1 yields an eigenvalue of 12.228, which reflects 61.14% of the total variance. Component 2 has an eigenvalue of 6.010, explaining an additional 30.05%. Combined, these two components have a total eigenvalue of 18.238, representing 91.19% of the dataset's total variance. These results reveal that the retained components capture most of the dataset's variability, thereby providing a practical summary of the initial set of twenty attributes and capturing Gen Z's overall perceptions of NAB brands.

Component Score Coefficient Matrix

The component score coefficient matrix (Figure 17, Appendix 3) displays the weights assigned to each attribute in the calculation of component scores (IBM 2025). For Component 1, the attributes with the highest coefficients are Extrovert (0.080), Reliable (0.080), Innovative (0.080), Responsible (0.079), Social (0.079), and Trendy (0.078). Conversely, the attributes with the lowest coefficients are Premium (-0.024) and Glamorous (-0.015). For Component 2, the attributes with the highest coefficients are Glamorous (0.159), Premium (0.154), Aesthetic (0.152), Strong (0.145), and Bold (0.121). In contrast, the attributes with the lowest coefficients are Affordable (-0.141), Youthful (-0.095), and Accessible (-0.090). These results confirm the composition of the two extracted components, reinforcing the interpretation of Component 1 as Contemporary and Component 2 as Aspirational.

Component Score Covariance Matrix

The component score covariance matrix (Figure 18, Appendix 3) shows the covariance between the extracted factors, indicating the extent to which they vary together. A covariance of 1 indicates perfect correlation, while a value of 0 indicates independence (IBM 2025). The results show that each component correlates perfectly with itself (1) and not with the others (0), confirming that the two extracted components are independent and represent distinct dimensions of Gen Z's perceptions of NAB brands.

Component Plot

The component plot (Figure 1) is a two-dimensional map that provides a visual representation of the initial attributes, based on the factor loadings obtained from the component matrix. It illustrates the relationship between each attribute and the two extracted components, indicating how attributes are positioned relative to each perceptual dimension (IBM 2025).

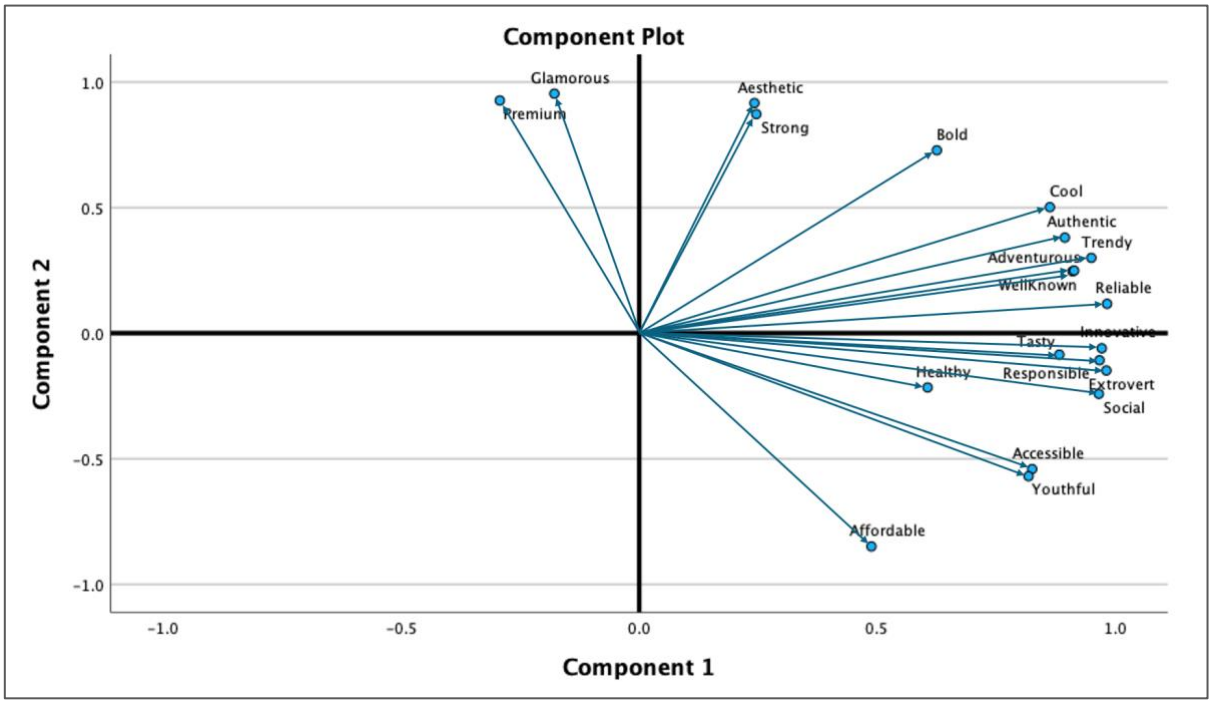

Figure 1: *Component Plot retrieved from SPSS*

Component 1 and Component 2, represented on the horizontal (x) and vertical (y) axes, respectively, correspond to the extracted components that summarize the twenty initial

attributes and capture the main perceptual dimensions. Component 1, labeled Contemporary, is defined by attributes with the highest loadings, including Reliable, Extrovert, Innovative, Responsible, Social, and Trendy. Component 2, labeled Aspirational, is characterized by high loadings for Glamorous, Premium, Aesthetic, Strong, and Bold.

Moreover, the component plot allows for the interpretation of relationships among attributes. Attributes positioned close to each other are highly correlated, reflecting similar perceptions, whereas those located on opposite sides are negatively correlated, indicating contrasting perceptions. In addition, the length of each vector, relative to the origin, reflects the strength of the association between each attribute and the components. Longer vectors, such as those for Extrovert, Reliable, and Social, indicate stronger representation by both components, whereas shorter vectors, such as Healthy, indicate weaker representation. Furthermore, the direction of each vector reveals the component to which the attribute is more closely related. Vectors pointing to the right, such as Reliable, Extrovert, and Innovative, are more aligned with Component 1, while those pointing upward, such as Glamorous and Premium, are more aligned with Component 2.

Regarding the map's quadrants, attributes in the top-right quadrant, such as Reliable, Trendy, Well-Known, and Adventurous, are positively related to both dimensions. Attributes in the top-left quadrant, such as Glamorous and Premium, exhibit a positive relationship with Component 2 but not with Component 1. Attributes in the bottom-right quadrant, including Extrovert, Social, and Innovative, are positively associated with Component 1 but not with Component 2. Finally, the bottom-left quadrant, which would represent negative associations between the two components, is empty. This indicates that the two dimensions are distinct and that overall coherence is maintained, as all attributes relate positively to at least one component.

Perceptual Map

The perceptual map (Figure 2) is a two-dimensional representation derived from SPSS factor analysis outputs (Appendix 3), in which brands are positioned in a perceptual space based on their factor scores (Kohli & Leuthesser 1993). The spatial distances between brands indicate perceived similarities and differences, supporting a comparative evaluation of competitive positioning (Dallakyan 2014). The map is structured across two key perceptual dimensions, identified through factor analysis and labeled as Contemporary and Aspirational. This visualization supports the analysis of Gen Z consumers' perceptions and competitive dynamics within the emerging NAB category in Portugal, thereby addressing RQ2: *What perceptual gaps and opportunities exist in the Portuguese market that NAB brands could leverage to enhance their appeal among Gen Z?*

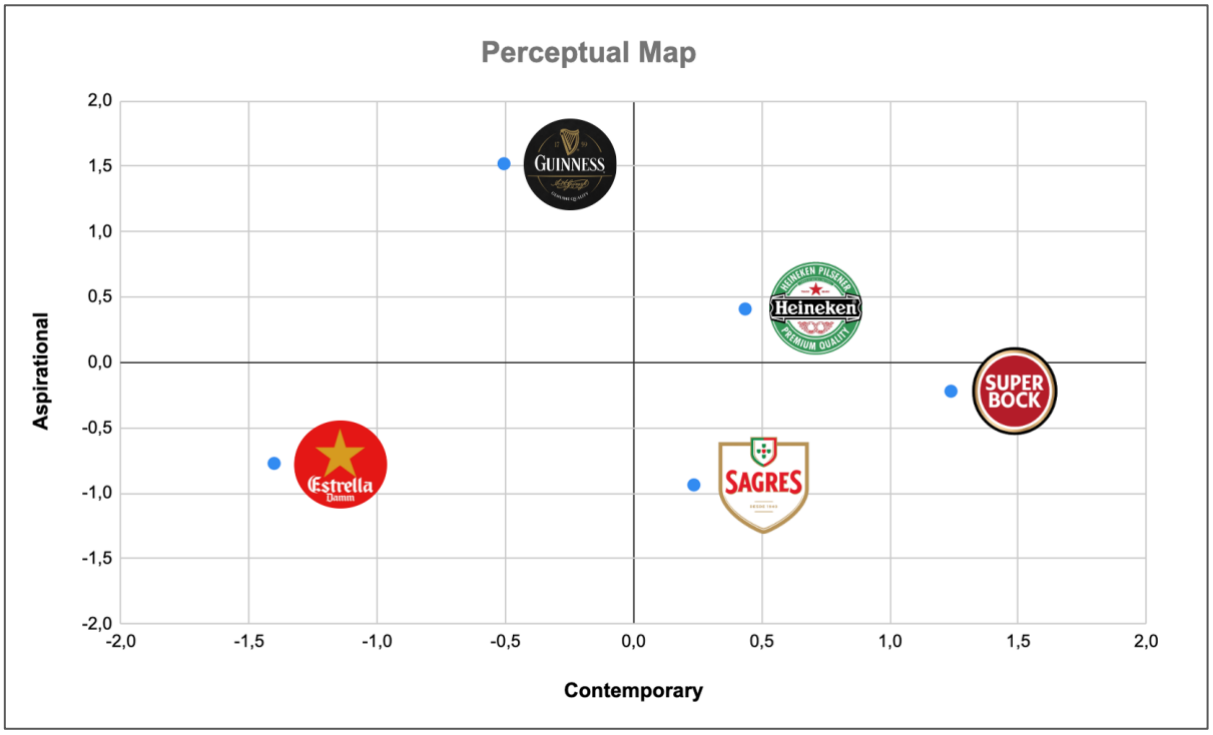

Figure 2: *Perceptual Map*

The horizontal (x) axis, labeled Contemporary, reflects perceptions of modernity, relevance, and alignment with current social and cultural values. Brands positioned on the right side of the map are perceived as more contemporary, which is advantageous for brands aiming to resonate with Gen Z. Conversely, brands on the left are viewed as less relatable, indicating weaker

cultural and social alignment and, consequently, lower relevance among this generation. The vertical (y) axis, labeled Aspirational, represents perceptions of sophistication, higher value, and exclusivity. Brands positioned higher on the map are seen as more aspirational, while those lower are associated with a casual image, perceived as more accessible, affordable, and less differentiated. Although a casual perception may attract some younger consumers, aspirational associations are generally preferred, as Gen Z frequently perceives NAB products as refined alternatives to traditional beers.

The perceptual map also enables analysis of relationships among NAB brands. Brands positioned close to each other share similar perceptual associations, while those further apart are perceived as contrasting. The four quadrants of the map illustrate distinct perceptual orientations: the top-right quadrant includes brands perceived positively on both Contemporary and Aspirational dimensions; the top-left quadrant contains brands seen as aspirational but not contemporary; the bottom-right quadrant integrates brands viewed as contemporary but less aspirational; and the bottom-left quadrant reflects brands perceived negatively on both dimensions.

Heineken is the only brand in the top-right quadrant, exhibiting moderately positive scores on both Contemporary and Aspirational dimensions. It is the most favorably perceived brand, combining contemporary and aspirational associations. However, since both values are moderate, Heineken has an opportunity to strengthen its association with these desirable dimensions among Gen Z consumers. Super Bock, located in the bottom-right quadrant, is perceived as the most contemporary brand. However, its slightly negative value on the vertical (y) axis indicates it is not viewed as distinctly aspirational. This represents an opportunity for Super Bock to enhance its aspirational appeal while maintaining strong contemporary relevance. Sagres, also positioned in the bottom-right quadrant, demonstrates slightly lower contemporary values and the lowest aspirational score among all brands. This indicates that

Sagres lacks both contemporary and aspirational associations, highlighting opportunities for improvement across both dimensions. Guinness, positioned in the top-left quadrant, exhibits high aspirational but low contemporary values. It stands out as the most aspirational brand; however, its low contemporary score indicates a need to modernize and increase social and cultural resonance to connect more effectively with Gen Z consumers. Estrella Damm, located in the bottom-left quadrant, scores low on both dimensions, indicating weak associations with Contemporary and Aspirational dimensions. This suggests limited differentiation and low relevance in the Portuguese market. From a strategic perspective, Estrella Damm could benefit from redefining its positioning to strengthen both its contemporary and aspirational images.

Among the five brands, Heineken and Super Bock are the closest competitors, with Super Bock perceived as having a more contemporary image and Heineken as having a more aspirational one. Sagres occupies a similar perceptual space but is weaker across both dimensions. Guinness leads in aspirational appeal but lacks contemporary relevance, while Estrella Damm is the least differentiated, demonstrating low relevance on both dimensions. The absence of brands with strong positive scores in the top-right quadrant, characterized by high contemporary and high aspirational associations, reveals a clear market gap and an opportunity for NAB brands to occupy this desirable perceptual space. This pattern indicates that the Portuguese NAB market is shaped by more casual perceptions, with brands generally performing better in contemporary associations than in aspirational ones.

3. Conclusion

3.1. Discussion

This thesis investigates how Gen Z perceives and engages with NAB in the Portuguese market, a context characterized by high levels of beer consumption and a strong integration of alcohol into everyday social practices (Eurostat 2021), alongside growing exposure to NoLo

alternatives (Statista 2025). Taken together, the findings reveal a more ambivalent and nuanced relationship with NAB than is often suggested in the existing literature, highlighting important gaps between attitudes, stated intentions, and actual consumption behavior.

First, the perceptual analysis reveals that Gen Z primarily associates NAB brands with familiarity, credibility, and functional acceptability, rather than with aspirational or symbolic meaning. At the category level, NAB is regarded as a socially legitimate choice for specific situations, such as driving, professional settings, or occasions requiring moderation, rather than as a beverage selected for broader contexts, aligning with prior evidence that NAB is typically consumed in context-dependent situations (Silva et al. 2016; Vasiljevic et al. 2019). This suggests that NAB serves a risk-minimizing function within Gen Z's consumption patterns, facilitating social participation while mitigating the negative consequences of alcohol consumption. This finding aligns with existing literature and preliminary interviews, which highlight the importance of brand familiarity and peer validation in NAB adoption (Gliszczyńska-Świgło et al. 2025; Silva et al. 2016), while simultaneously revealing a limited degree of emotional and symbolic engagement with the category. In contrast, regular beer remains deeply integrated into practices of sociability and enjoyment, continuing to convey identity and experiential value, and is frequently associated with fun, confidence, and social bonding, as documented in both the literature and preliminary interviews (Silva et al. 2016; Spence 2025).

An important and partly unexpected tension concerns the role of health as a motivational driver. Consistent with the literature, respondents frequently referred to health, moderation, and self-regulation as relevant considerations when discussing NAB and NoLo beverages (Mellor et al. 2020; Steedley & Thomas 2025). However, these motivations proved insufficient to overcome key barriers identified above. Notably, perceptual mapping results revealed that Healthy was not a strongly associated attribute for NAB brands, even though NAB was generally regarded

in the expert interviews as a healthier and more responsible alternative to regular beer. Instead, health-related considerations primarily serve to legitimize NAB consumption in specific contexts, rather than motivating proactive, well-being-oriented choices. Consequently, health primarily serves as a justificatory factor for trial and situational adoption rather than as a foundation for aspirational brand positioning. As a result, although functional health benefits are relevant, they are insufficient to serve as a primary perceptual driver of desirability within the category.

From a brand and positioning perspective, the distinction between the Contemporary and Aspirational dimensions in the perceptual map offers additional insight into the category's perceptions. NAB brands are primarily situated on the Contemporary side of the perceptual space, reflecting perceptions of modernity, relevance, and alignment with current social and cultural values. However, associations with the Aspirational dimension, which encompasses sophistication, status, and exclusivity, remain limited across the category. This suggests that while the category is not viewed as outdated or socially inappropriate, it is still perceived as casual and insufficiently differentiated, rather than as a product that conveys distinction or symbolic value. Preliminary interviews reinforce this structural pattern, with respondents describing NAB as suitable for specific situations rather than as a beverage selected for pleasure or self-expression, indicating that NAB has not yet advanced from acceptance to genuine desirability among Gen Z.

3.2. Managerial Implications

Overall, the research provided insights into NAB's perceptions. After developing the perceptual map, it was observed that, positionally, there is no current brand in the market that has strong positive perception in both Contemporary and Aspirational scale, representing a significant opportunity for a new market entrant. To address this challenge, companies could either launch

a different brand to fill this space or adapt their existing offering. Focusing specifically within each brand, Super Bock could enhance its aspirational appeal while maintaining a contemporary style to reach this untapped market segment. Heineken is the brand that is best positioned to take advantage of the current market gap, with positively moderate values on Contemporary and Aspirational, and could reinforce both these perceptions with marketing campaigns targeting Gen Z consumers. Guinness was considered the most Aspirational brand in the analysis; as a result, their efforts should focus on improving their Contemporary appeal. Estrella Damm's performance in both the consumers' perception survey and consumer preferences survey revealed deficient brand recognition and awareness among the Portuguese public. The primary strategic focus should be to address this challenge.

3.3. Limitations and Implications for Future Research

Although this research provides valuable insights into Gen Z's perceptions and choices regarding NAB in Portugal, several limitations must be acknowledged.

First, the survey sample exhibited a gender imbalance, with a higher proportion of female respondents and a notably low unemployment rate, which may limit their representativeness. As employment status and income level affect both affordability and consumption frequency (Ganong & Noel 2019), the findings may disproportionately reflect the perspectives of individuals with greater purchasing power. Future research could address this limitation by adopting more balanced and targeted recruitment strategies to ensure greater representation across gender and employment status.

Second, the study also presented methodological limitations. The brand selection was restricted to five NAB brands, all of which also produce alcoholic versions. This overlap likely introduced brand association bias, as respondents' prior experiences with the alcoholic parent brand may have influenced their evaluations of NA variants. Moreover, some respondents demonstrated

limited familiarity with certain brands, particularly Estrella Damm, which may have resulted in evaluations based on assumptions rather than direct experience. The brands selected for the survey were based on a general market overview rather than on Gen Z consumption patterns, which may explain the unfamiliarity issue, as older generations may be more likely to consume Estrella Damm. Studies in psychology and marketing indicate that consumers with higher familiarity are more capable of distinguishing between low and high performance, leading to more polarized evaluations (Magnus Söderlund 2002). Consequently, when customers lack information about a product, their evaluations are more likely to be based on assumptions. Future studies should include a brand familiarity screening question to ensure respondents assess only brands they recognize.

Finally, regarding the perceptual map, the limited number of valid responses (89) poses a constraint, as research indicates that determining an appropriate sample size is essential for drawing valid conclusions; factor analysis generally recommends a sample size of 100 or more (Hair et al. 2019), although the ideal sample size depends on the specific study context (Memon et al. 2020). Additionally, the twenty selected attributes, although grounded in literature and preliminary research, may not encompass all relevant perceptual dimensions that influence consumer evaluations, as the resulting perceptual structure may be incomplete if the set of ratings is not carefully developed (Hauser & Koppelman 1979). Factor analysis identified two principal perceptual dimensions, Contemporary and Aspirational, which explained most of the variance; however, the attribute Healthy was less strongly captured within this perceptual structure. Future studies should further investigate the category's dimensionality, potentially isolating certain attributes into distinct perceptual spaces. Incorporating a preliminary attribute-elicitation exercise or qualitative pre-test could also improve construct validity.

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Appendix

Appendix 1 – Perceptual Map Survey

<table>
<tr><th>Sections</th><th>Questions</th></tr>
<tr><td>Screening</td><td>1. How old are you?
o <18 (move to the end of the survey)
o 18-29
o >29 (move to the end of the survey)
2. Do you currently live in Portugal?
o Yes
o No (move to the end of the survey)
3. Have you ever tried non-alcoholic beer?
o Yes (move to question 6)
o No (move to question 5)
4. Are you willing to try non-alcoholic beer?
o Yes (move to question 6)
o No (move to the end of the survey)</td></tr>
<tr><td>Consumer Perceptions</td><td><table><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr><tr><td>Super Bock</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Sagres</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Heineken</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Guinness</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Estrella Damm</td><td></td><td></td><td></td><td></td><td></td></tr></table>5. Please rank the following brands by how affordable you perceive them to be.
(1 = not affordable / 3 = neutral / 5 = affordable)
6. Please rank the following brands by how tasty you perceive them to be.
(1 = not tasty / 3 = neutral / 5 = tasty)
7. Please rank the following brands by how healthy you perceive them to be.
(1 = not healthy / 3 = neutral / 5 = healthy)
8. Please rank the following brands by how accessible (easy to find) you perceive them to be.
(1 = not accessible / 3 = neutral / 5 = accessible)
9. Please rank the following brands by how well-known you perceive them to be.
(1 = not well-known / 3 = neutral / 5 = well-known)
10. Please rank the following brands by how authentic (real) you perceive them to be.
(1 = not authentic / 3 = neutral / 5 = authentic)
11. Please rank the following brands by how responsible you perceive them to be.
(1 = not responsible / 3 = neutral / 5 = responsible)
12. Please rank the following brands by how social you perceive them to be.
(1 = not social / 3 = neutral / 5 = social)</td></tr>
</table>

	13. Please rank the following brands by how extrovert you perceive them to be. (1 = *not extrovert* / 3 = *neutral* / 5 = *extrovert*) 14. Please rank the following brands by how trendy you perceive them to be. (1 = *not trendy* / 3 = *neutral* / 5 = *trendy*) 15. Please rank the following brands by how cool you perceive them to be. (1 = *not cool* / 3 = *neutral* / 5 = *cool*) 16. Please rank the following brands by how youthful you perceive them to be. (1 = *not youthful* / 3 = *neutral* / 5 = *youthful*) 17. Please rank the following brands by how reliable you perceive them to be. (1 = *not reliable* / 3 = *neutral* / 5 = *reliable*) 18. Please rank the following brands by how innovative you perceive them to be. (1 = *not innovative* / 3 = *neutral* / 5 = *innovative*) 19. Please rank the following brands by how glamorous you perceive them to be. (1 = *not glamorous* / 3 = *neutral* / 5 = *glamorous*) 20. Please rank the following brands by how aesthetic you perceive them to be. (1 = *not aesthetic* / 3 = *neutral* / 5 = *aesthetic*) 21. Please rank the following brands by how premium you perceive them to be. (1 = *not premium* / 3 = *neutral* / 5 = *premium*) 22. Please rank the following brands by how bold (daring) you perceive them to be. (1 = *not bold* / 3 = *neutral* / 5 = *bold*) 23. Please rank the following brands by how strong (robust) you perceive them to be. (1 = *not strong* / 3 = *neutral* / 5 = *strong*) 24. Please rank the following brands by how adventurous you perceive them to be. (1 = *not adventurous* / 3 = *neutral* / 5 = *adventurous*)
Demographics	25. Gender o Female o Male o Other o Prefer not to say 26. Nationality o Portuguese o Other (open question) 27. Current status o Student o Working Student o Early worker (< 2 years) o Working > 2 years o Unemployed

	○ Other (open answer) 28. Approximate monthly personal income ○ Less than €250 ○ €250 - €499 ○ €500 - €749 ○ €750 - €999 ○ €1000 - €1249 ○ €1250 or more ○ Prefer not to say
Additional Comments	29. If you have any additional comments or thoughts about NoLo beverages, you can write them below (optional)

***Table 1**: Survey 2 Questions*

Appendix 2 – Survey 2 Results

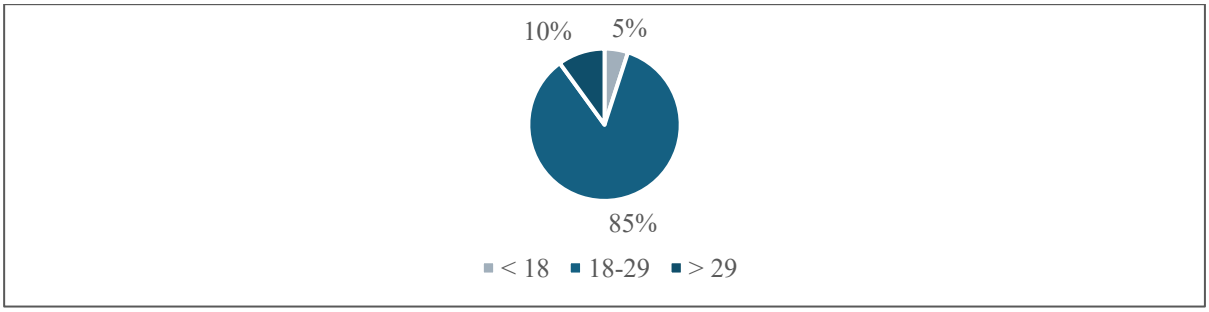

***Figure 3**: Age distribution of survey 2 respondents (N=157). Answer to the question "How old are you?"*

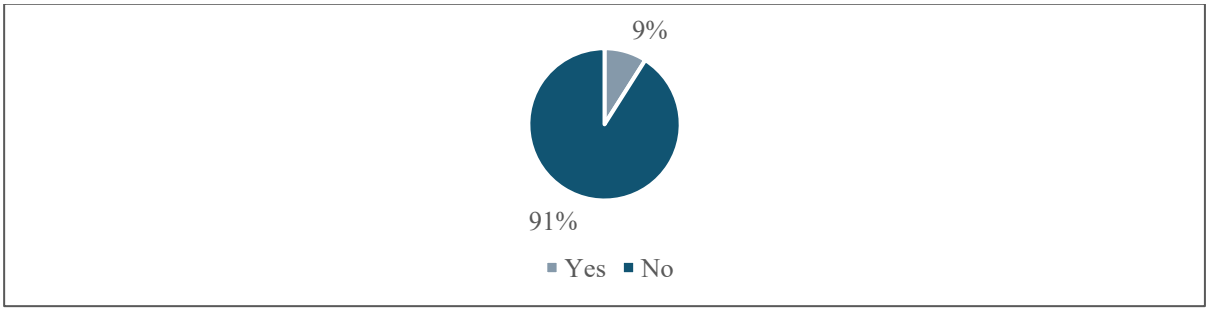

***Figure 4**: Current residency in Portugal distribution among Gen Z respondents of survey 2 (N=134). Answer to the question "Do you currently live in Portugal?"*

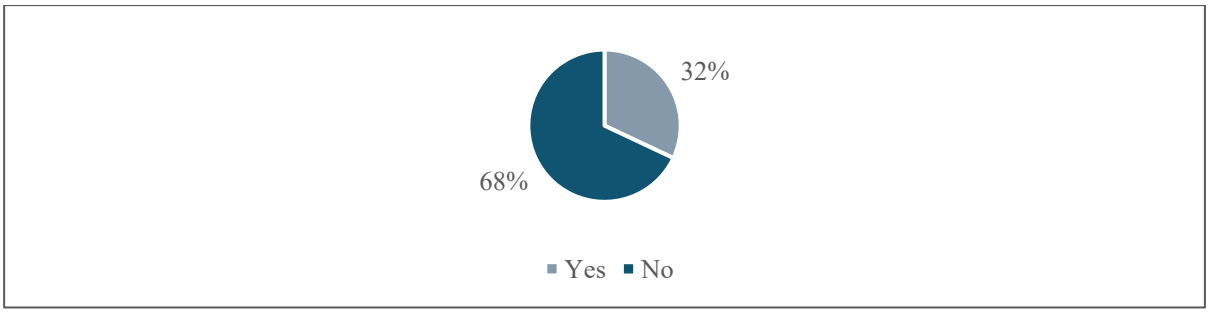

Figure 5: *Experimentation with NAB among Gen Z respondents (N=122). Answer to the question "Have you ever tried NAB?"*

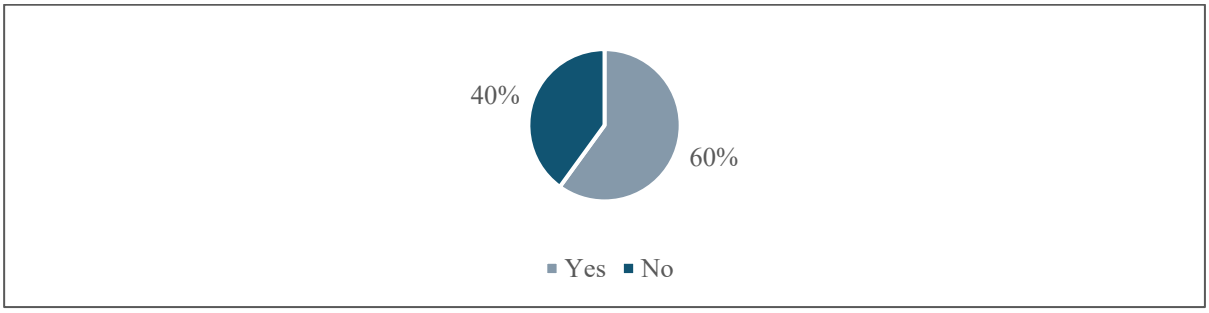

Figure 6: *Willingness to try NAB among Gen Z respondents (N=83). Answer to the question "Are you willing to try NAB?"*

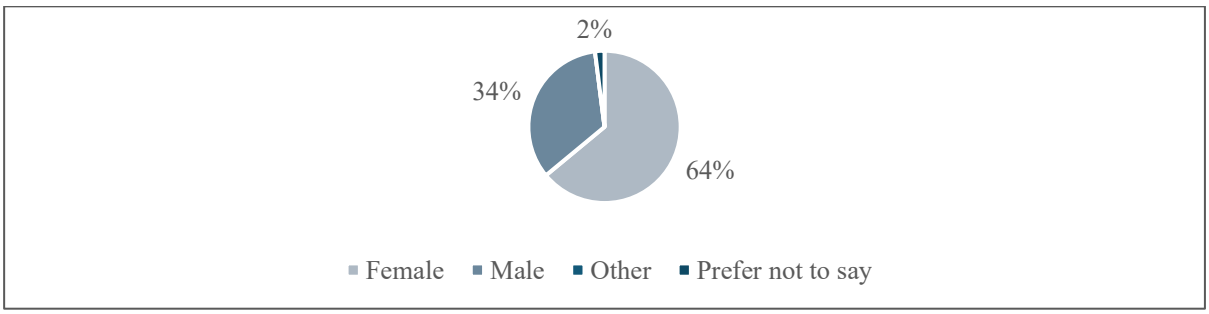

Figure 7*: Gender distribution of survey 2 sample (N=89)*

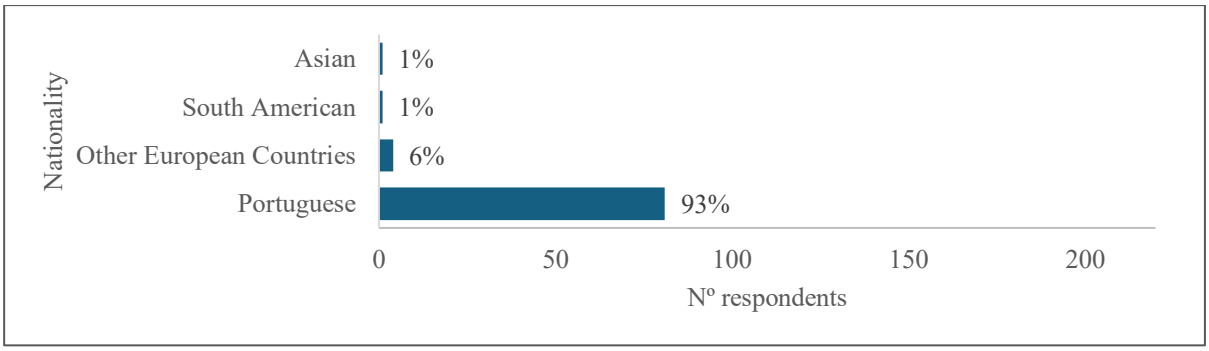

Figure 8: *Nationality distribution of survey 2 sample (N=89)*

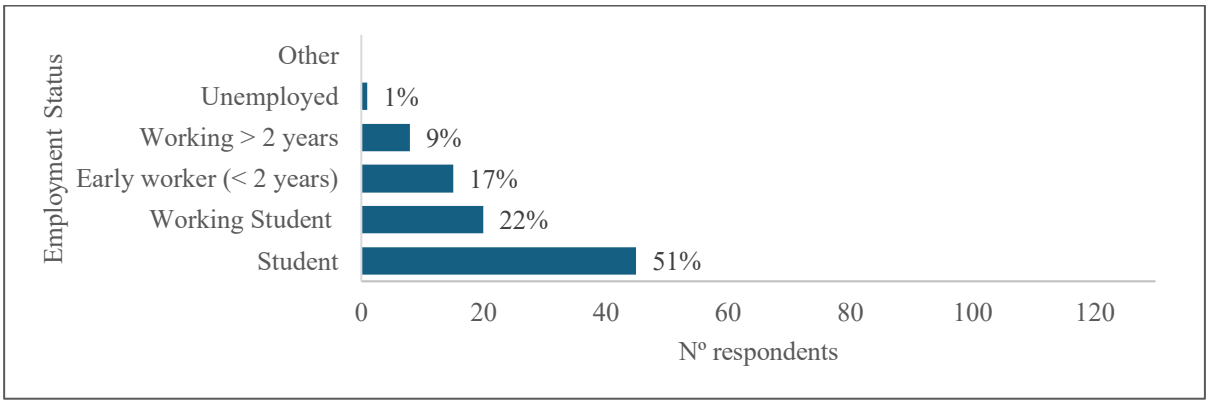

Figure 9: *Current employment and study status of survey 2 sample (N=89)*

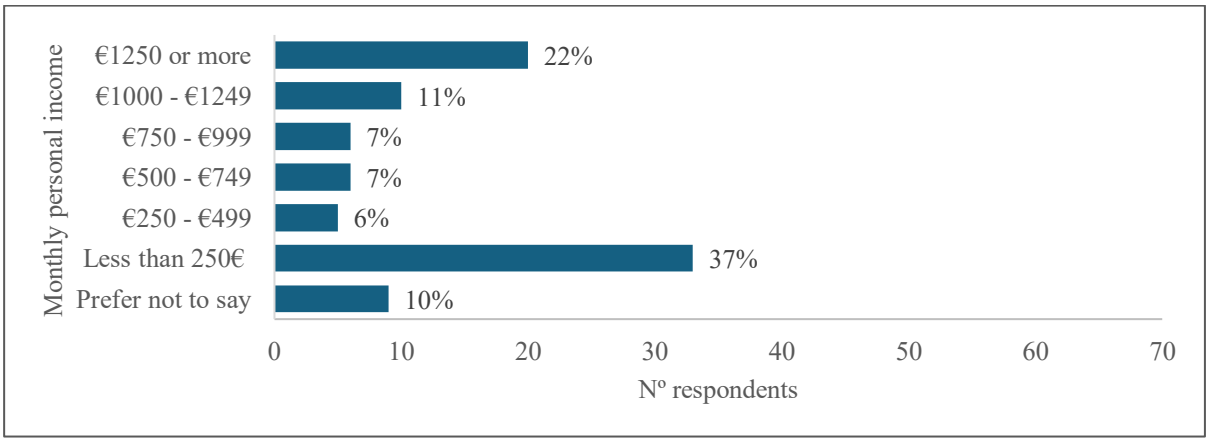

Figure 10: *Monthly personal income distribution of survey 2 sample (N=89)*

Appendix 3 – SPSS Results

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Affordable	3.4520	.65892	5
Tasty	3.2280	.43877	5
Healthy	2.1360	.14450	5
Accessible	3.7760	1.13806	5
WellKnown	4.3040	.60731	5
Authentic	3.8780	.32714	5
Responsible	3.2700	.24749	5
Social	3.9020	.71314	5
Extrovert	3.6180	.59567	5
Trendy	3.5900	.76808	5
Cool	3.6140	.60011	5
Youthful	3.3900	.85729	5
Reliable	3.8580	.41979	5
Innovative	3.2840	.66335	5
Glamorous	2.9160	.66991	5
Aesthetic	3.3560	.54040	5
Premium	3.0680	.95345	5
Bold	3.1840	.43206	5
Strong	3.4360	.56181	5
Adventurous	3.2520	.40046	5

Figure 11: *Descriptive Statistics retrieved from SPSS*

Correlation Matrix[a]

		Affordable	Tasty	Healthy	Accessible	WellKnown	Authentic	Responsible	Social	Extrovert	Trendy	Cool	Youthful	Reliable	Innovative	Glamorous	Aesthetic	Premium	Bold	Strong	Adventurous
Correlation	Affordable	1.000	.452	.329	.861	.217	.155	.521	.683	.610	.225	.004	.877	.357	.550	-.945	-.722	-.977	-.269	-.537	.299
	Tasty	.452	1.000	.680	.717	.686	.661	.888	.834	.917	.783	.721	.806	.864	.907	-.195	.247	-.289	.501	.004	.718
	Healthy	.329	.680	1.000	.651	.623	.328	.783	.631	.590	.459	.376	.632	.672	.481	-.129	.164	-.198	.029	-.333	.258
	Accessible	.861	.717	.651	1.000	.670	.549	.872	.942	.873	.627	.436	.974	.761	.804	-.654	-.306	-.737	.093	-.259	.612
	WellKnown	.217	.686	.623	.670	1.000	.926	.900	.845	.819	.941	.895	.587	.957	.799	.109	.448	-.007	.673	.428	.853
	Authentic	.155	.661	.328	.549	.926	1.000	.790	.788	.814	.983	.969	.501	.907	.849	.160	.493	.046	.861	.646	.973
	Responsible	.521	.888	.783	.872	.900	.790	1.000	.962	.952	.873	.769	.855	.970	.907	-.221	.194	-.331	.466	.063	.787
	Social	.683	.834	.631	.942	.845	.788	.962	1.000	.976	.850	.711	.922	.924	.941	-.406	-.003	-.511	.420	.046	.829
	Extrovert	.610	.917	.590	.873	.819	.814	.952	.976	1.000	.887	.778	.895	.938	.989	-.328	.104	-.434	.531	.112	.873
	Trendy	.225	.783	.459	.627	.941	.983	.873	.850	.887	1.000	.973	.603	.962	.910	.099	.479	-.018	.825	.530	.967
	Cool	.004	.721	.376	.436	.895	.969	.769	.711	.778	.973	1.000	.422	.900	.821	.313	.658	.201	.921	.666	.930
	Youthful	.877	.806	.632	.974	.587	.501	.855	.922	.895	.603	.422	1.000	.738	.839	-.684	-.308	-.762	.102	-.315	.598
	Reliable	.357	.864	.672	.761	.957	.907	.970	.924	.938	.962	.900	.738	1.000	.922	-.032	.377	-.150	.662	.300	.888
	Innovative	.550	.907	.481	.804	.799	.849	.907	.941	.989	.910	.821	.839	.922	1.000	-.268	.160	-.374	.624	.220	.919
	Glamorous	-.945	-.195	-.129	-.654	.109	.160	-.221	-.406	-.328	.099	.313	-.684	-.032	-.268	1.000	.900	.993	.523	.693	-.002
	Aesthetic	-.722	.247	.164	-.306	.448	.493	.194	-.003	.104	.479	.658	-.308	.377	.160	.900	1.000	.847	.767	.724	.355
	Premium	-.977	-.289	-.198	-.737	-.007	.046	-.331	-.511	-.434	-.018	.201	-.762	-.150	-.374	.993	.847	1.000	.435	.642	-.112
	Bold	-.269	.501	.029	.093	.673	.861	.466	.420	.531	.825	.921	.102	.662	.624	.523	.767	.435	1.000	.865	.829
	Strong	-.537	.004	-.333	-.259	.428	.646	.063	.046	.112	.530	.666	-.315	.300	.220	.693	.724	.642	.865	1.000	.571
	Adventurous	.299	.718	.258	.612	.853	.973	.787	.829	.873	.967	.930	.598	.888	.919	-.002	.355	-.112	.829	.571	1.000

a. This matrix is not positive definite.

Figure 12: *Correlation Matrix retrieved from SPSS*

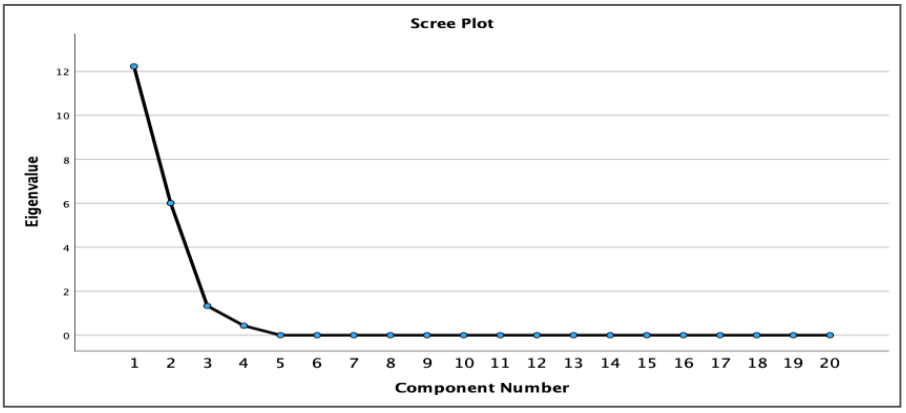

Figure 13: *Scree Plot retrieved from SPSS*

Component Matrix[a]

	Component 1	Component 2
Reliable	.984	.117
Extrovert	.982	-.149
Innovative	.972	-.060
Responsible	.968	-.108
Social	.966	-.242
Trendy	.950	.300
Adventurous	.914	.249
WellKnown	.911	.246
Authentic	.895	.381
Tasty	.883	-.085
Cool	.863	.502
Accessible	.826	-.541
Youthful	.818	-.570
Healthy	.606	-.216
Glamorous	-.178	.954
Premium	-.293	.926
Aesthetic	.242	.916
Strong	.246	.872
Affordable	.488	-.849
Bold	.626	.728

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Figure 14: *Component Matrix retrieved from SPSS*

Communalities

	Extraction
Affordable	.959
Tasty	.787
Healthy	.414
Accessible	.975
WellKnown	.890
Authentic	.945
Responsible	.948
Social	.992
Extrovert	.986
Trendy	.993
Cool	.997
Youthful	.994
Reliable	.981
Innovative	.949
Glamorous	.941
Aesthetic	.898
Premium	.944
Bold	.922
Strong	.821
Adventurous	.898

Extraction Method: Principal Component Analysis.

Figure 15: *Communalities retrieved from SPSS*

Total Variance Explained

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	12.228	61.139	61.139
2	6.010	30.049	91.189

Extraction Method: Principal Component Analysis.

Figure 16: *Total Variance Explained retrieved from SPSS*

Component Score Coefficient Matrix

	Component	
	1	2
Affordable	.040	-.141
Tasty	.072	-.014
Healthy	.050	-.036
Accessible	.068	-.090
WellKnown	.074	.041
Authentic	.073	.063
Responsible	.079	-.018
Social	.079	-.040
Extrovert	.080	-.025
Trendy	.078	.050
Cool	.071	.083
Youthful	.067	-.095
Reliable	.080	.019
Innovative	.080	-.010
Glamorous	-.015	.159
Aesthetic	.020	.152
Premium	-.024	.154
Bold	.051	.121
Strong	.020	.145
Adventurous	.075	.041

Extraction Method: Principal Component Analysis.
Component Scores.

Figure 17: *Component Score Coefficient Matrix retrieved from SPSS*

Component Score Covariance Matrix

Component	1	2
1	1.000	.000
2	.000	1.000

Extraction Method: Principal Component Analysis.
Component Scores.

Figure 18: *Component Score Covariance Matrix retrieved from SPSS*