



A Work Project, presented as part of the requirements for the Award of a Master's degree in Management from the Nova School of Business and Economics.

What are the drivers of brand perception and preferences in the German and Portuguese energy drink market?

Zhuang Yuan (48036)

Work project carried out under the supervision of:

Pedro Gardete

Abstract

This master thesis aims to investigate the perceptions and preferences of German and Portuguese consumers towards the fast-growing energy drink market. The study is divided into individual and group parts. My individual parts include 2 Research Status, 3.1 A Theoretical Context of Consumer Behaviour & Motivation, and 5.3 Quantitative Research via Perceptual Mapping which includes 5.3 Introduction of Quantitative Research , 5.3.2 Analysis & Evaluation and 5.3.3.3 Results and Comparison. The group parts consist of the 1 Introduction, 5 Methodology and Results, 5.3 Quantitative Research, and 6 Conclusion and Discussion. The findings of this study contribute to a better understanding of the energy drink market and provide valuable insights for companies operating in this industry.

Keywords

Perceptual Map; Attributes; Energy Drinks, Consumer Behaviour, Beverage Industry, Brand Perception; Conjoint Analysis, Consumer Goods

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List of Acronyms

ED	=	Energy drinks
CAGR	=	Compound Annual Growth Rate
Etc.	=	et cetera
mg.	=	milligram
ml.	=	millilitres
L	=	Litre
GmbH	=	limited liability company
PR	=	Public Relations
CI	=	Corporate Identity
CD	=	Corporate Design
CL	=	Corporate Language
BCAA	=	branched chain amino acids

1 Introduction (Group Part)

The energy drink category is, despite growing concerns about negative health effects, increasing in popularity. Energy drinks (ED) themselves are defined as non-alcoholic soft drink beverages usually containing high levels of caffeine, varying across brands, in combination with other ingredients such as amino acids, sugars (Galimov et al., 2019). Besides broadly named health concerns in regard to the amount of caffeine content of these drinks, energy drinks also show positive effects regarding blood pressure, pain tolerance and especially improved performance, concentration as well as endurance (İncedayı et al., 2019).

1.1 Problem Definition and Goal Setting

As mentioned within the previous part, due to changes in consumer behaviour, current brand perceptions, especially within the overall food and beverage industry, are changing. Brands are aware of these changes and are already trying to adapt. The presented thesis, therefore, deals on one hand with an overview of the current market and consumer trends within the energy drink market and secondly, focuses on the analysis of current brand perceptions while also giving an overview of preferences that might help to overcome negative perceptions due to the change in consumer behaviour. For this, a conjoint analysis as well as a perceptual maps survey have been carried out while guideline-based interviews with industry experts have been conducted in order to gain further insides about the market. The goal of the survey is not just to analyse current brand perceptions but also to use the preferences to come up with new suggestions and proof if negative perceptions are dominating. Since there is already a trend to change to product while adding sugar free option and more flavours this report wants to test if this trend is justified by the consumer preferences and tries to find different features that might increase the revenue in energy drinks. That is why this report test as well if a drink with a different amount of caffeine, would increase revenue. Since it is one of the main ingredients in

energy drinks. Moreover, since usually beverages are sold also in bottles this report wants to test if the fact that most of the energy drinks are sold in cans is based on preferences or if selling those also in bottles could be a future growth factor.

1.2 Structure

Six main sections are dealt with in this thesis. These sections build up from the basic, theoretical section to the empirical part. Chapter 2 gives an introduction to the current research and the possible connection to other research. Chapter 3 briefly discusses the theoretical foundations and technical terms relating to brand management and consumer behaviour. Chapter 4 serves as a beginning of the practical part and gives an overview of current trends within the consumption and energy drink market. Chapter 4.3 discusses the five brands chosen to be analysed and used as examples within the research. Within chapter 5, the empirical research methods used to analyse the hypothesis are going to be explained. Chapter 6 serves as the main part of the thesis and is dedicated to the presentation and comparison of the research results. The results of each research method are going to be analysed individually and compared with each other in chapter 6.3 through which the Hypothesis can be reviewed in 6.4. With the help of these findings, the last chapter devoted itself to as an overview of the research results and results of the comparison with the hypotheses while being discussed. Lastly it serves to give recommendations for actions in order for brands to deal with those brand perceptions and most important findings are going to be summarized and supplemented by an outlook.

2 Research status (Zhuang Yuan)

Due to the fact that the global energy drinks market was valued at USD 86.35 billion in 2021 and is anticipated to expand at a compound annual growth rate (CAGR) of 8.3% from 2022 to 2030, the market's size is projected to increase from its current level of USD 86.35 billion

(“Energy Drinks Market Size, Share, and Industry Report [2030]” 2020). There has been an increase in research interest in exploring this market's potential and the key growth drivers for the energy drinks industry. Previous research has examined the topic from multiple perspectives. Current research on the energy drink market focuses primarily on: Firstly, the physical effects of energy drinks, particularly the consumption of energy drinks by children and young people and their perceptions of caffeinated energy drinks, to determine the drivers behind these trends and explore children and young generations' attitudes and perceptions towards energy drinks. Second, the purchasing preferences of the younger generation, how they use energy drinks, and which factors are most likely to influence their consumption behaviour, including taste quality, brand image, the influence of social media marketing, lifestyle factors, Etc. Moreover, there are marketing reports that focus on identifying the key concerns that drive negative customer experience and the critical category drivers of energy drinks that drive positive customer experience to stimulate the consumption of energy drinks and alleviate consumer concerns about the ingredients in energy drinks (“Key Drivers of Customer Experience: Energy Drinks Industry In the USA” 2022). In addition, since the high taste quality and variety of flavour options are the primary motivators for consumption, this research field also examines the most popular flavours favoured by energy drink consumers and the rising trends in energy drink types. Moreover, brands such as Red Bull and Monster have dominated the energy drink market (“Energy Drinks Market Size, Share, and Industry Report [2030]” 2020). There are analysis of the competitive landscape and profiles of major players operating in the market to help the leading brands maintain a competitive advantage at all times, as well as to help niche brands and private labels find the market positioning that best suits them and formulate a reasonable brand strategy based on the competition. In this research, the German and Portuguese markets were our target energy drink markets. Through surveys, consumers'

brand perceptions and preferences can be understood in these two countries to summarize the drivers of energy drinks in these markets.

3 Theoretical Context

Within the next two main chapters, a literature review has been made in order to present theoretical context of consumer behaviour as well as brand management, which can be connected to the context of the consumer goods industry and the soft drink market including energy drinks.

3.1 Consumer motivations and behaviour (Zhuang Yuan)

According to the definition of Consumer Behaviour, consumer behaviour is the decision-making processes and bodily activities that individuals engage in when evaluating, acquiring, using, or disposing goods and services (Tyagi and Kumar 2004). Consumer behaviour involves decision-making processes and bodily activities and can usually be understood by studying the disciplines of economics, sociology, psychology, social psychology, and anthropology (Tyagi and Kumar 2004). In the marketplace, understanding consumer behaviour is essential to market opportunity analysis and target market selection for marketing programs. At the same time, if consumer behaviour is unknown in a marketing program, then the marketing mix variables (product, price, place, and promotion) and the why, how, when, and where questions associated with these variables cannot be answered. Instead, in this thesis, the discussion will focus on the aspects of consumer decision-making and motivation.

Early consumer behaviour and consumer decisions were discussed only in terms of economics, where consumers were, by default, rational and only concerned with self-interest when making purchase decisions. The most common model representing this view is the "utility theory," which proposes that consumers make choices based on the expected outcomes of their

decisions (Bray 2008). However, consumers are usually not wholly rational, and most consumers need to be aware of the various factors that affect their decision-making. Thus, in contemporary research, consumer behaviour has been studied more regarding the factors influencing consumers. Many different approaches have been used in the study of consumer decision-making and draw on different psychological traditions. The main approaches are: Economic Man, Psychodynamic, Behaviourist, Cognitive, and Humanistic (Jeff Bray 2008).

Economic Man and Psychodynamic cannot be considered realistic explanations of human decision-making behaviour. Economic Man continues to be identified by consumers as entirely rational, while Psychodynamic ignores the possible influence of individual perceptions and the environment on consumer decisions. The three models of consumer decision-making that fit the concept and growth of modern marketing are Behaviourist, Cognitive and Humanistic. The Behaviourist approach is primarily a study of human behaviour. It provides psychological and philosophical support for the study of consumer behaviour. However, it is not suitable for explaining complex consumer behaviour and situations where similar consumer traits have widely varying consumer behaviour. The Cognitive approach compensates for the Behaviourist's limitations in its ability to explain complex consumer behaviours and consider how environmental and social stimuli are used to help consumers make internal decisions. Although Cognitive has been able to cover general consumer behaviour well, it ignores the impact of emotion on consumers in the consumer decision-making process, and the introduction of Humanistic makes up for this limitation. Humanistic approach helps researchers further understand specific aspects of consumer behaviour, the gap between consumers' declared purchase intentions and actual final purchase behaviour, and the impact of altruistic motivation on consumer behaviour. Humanistic approach can be seen as a new way of balancing the rational, cognitive aspects of marketing thought and practice with the emotional aspects of marketing behaviour.

The question of why customers exhibit certain behaviours has always been the centre of marketing research since consumer behaviour has become a subject of interest for marketing researchers and practitioners. Consumer decision-making requires motivation for consumption. The direct prerequisite for promoting consumption decision-making is motivation. In general, consumer motivations were described as the factors underlying their needs and wants-based behaviour in the market. One of the most fundamental theoretical frameworks for comprehending human motivation is Maslow's Hierarchy of Needs (1943). This theory also has a direct connection to the study of consumer behaviour. The psychological, safety, social, and esteem hierarchies can be used to categorize basic human needs (Maslow 1943). The key elements determining customer motivation are often emotions, situations, and personality, which typically combine to predict consumer behaviour (Bajger 2020).

5 Methodology and results (Group Part)

Within the following chapter, a qualitative as well as two quantitative research methods have been used in order to provide answers to the research question and to be able to review the mentioned hypothesis. The aim is to use the brand perception survey findings as well as the conjoint analysis findings to confirm theses developed in the course of the work besides finding additional perceptions, preferences (through perceptual maps) and thus to create a basis for evaluating the results of the work. The guidelines based expert interviews are carried out with the intention of gaining further market and consumer knowledge (Gläser and Laudel 2004).

5.1 Subject of study

In this paper, the subject of study will be the Portuguese and German energy drink market and to understand how perceptions and preferences change along with the characteristics of the product being offered. Energy drinks consumption have been increasing in past few years and

in order to study the market, two surveys were conducted: one to analyse how consumers perceive the in chapter 4 mentioned brands studied, and another survey to study how distinctive features offered affect the decision-making process people go through when given a choice between multiple brands. By conducting these surveys, a comparison between perceptions regarding energy drinks and their quality was made. The goal was to have a clear image of what consumers value the most and which characteristics are most important for them when they are presented with multiple products.

5.3 Quantitative Research (Zhuang Yuan)

Perceptual mapping will be used to implement the following work project. The method will represent consumer perceptions of the German and Portuguese energy drinks markets in relation to the five brands chosen: Red Bull, Monster, Kong Strong, Nocco, and Coca-Cola Energy. In marketing research, perceptual maps have played an essential role as analytical tools for determining brand perceptions (Chadha and Kapoor 2008). The map provides a clear illustration of consumer perceptions based on particular attributes (Chadha and Kapoor 2008). The techniques of perceptual mapping aid marketing managers in making product positioning decisions and identifying the essential elements of a competitive marketing strategy. In this context, perception maps will provide insights into how consumers in different countries value the characteristics of these five energy drink brands and the similarities and differences of the brand perceptions of German and Portuguese consumers. The perceptual map online survey (Appendix 1) was built and assembled via Qualtrics and accessible for 14 days, before the guideline-based interviews but after the literature review. It was shared via different ways in order to reach German as well as Portuguese participants: First, as a survey link within WhatsApp Groups containing German and Portuguese students as well as young professionals. Second, through Social Media Platforms such as Instagram, Facebook and Reddit blogs. To

reach a younger participant group, the survey has also been shared via TikTok. The final step, to receive more answers of Portuguese participants, lied within the direct field research in which students have been directly asked to participate at the Nova SBE campus. To come up with perceptual data, respondents should rate each attribute, so that a comparison across brands is enabled. With the help of the survey, using perceptual mapping, consumers perceptions concerning the mentioned brands in the Portuguese and German market will be analysed. Respondents were asked to rate on a series of attributes to compute mean values per attribute and brand. The brands decided to study are based on reasons explained in previous chapters: Red Bull, Monster Energy, Coca-Cola Energy, Nocco, and Kong Strong. The survey had a total number of twenty-one questions, and it was decided to narrow down the study to investigate the German and Portuguese markets since these markets were the easiest to access in form of respondents. Thus, the surveys first question focuses on three demographic questions: Firstly, the nationality of the respondent so that the answers could be separated and just focused on the German and Portuguese ones, which are the countries of interest. Then finally, age and gender, to see if they have any correlation to the results. The second part includes main questions, asked to gain insights into the respondents' perceptions on energy drinks. These questions were constructed using the Likert-scale matrix. The participants had to choose numbers based on the scales at the bottom of the questions which were all personalised to the features assessed. In order to understand consumers' perceptions regarding the energy drinks brand selected, it is vital to explore the relevant aspect to test. The attributes considered were: **product price, quality, nutritional value of the product, perceived brand image, design, taste and sense of community.**

Product price: Within the energy drink category, the prices of the various brands are relatively similar, but still differ between low price and high price categories. However, considering the fact that consumers may associate the pricing of a brand with the level of the brand's value in

the category, price was selected as one of the attributes in order to investigate and determine the sensitivity of energy drink consumers to the price of each energy drink brand and to compare the variation in the price acceptance range of energy drinks between the Portuguese and German energy drink consumer groups.

Quality: Energy drinks belong to the food category among consumer goods categories, thus product quality is unintentionally one of the most critical factors for consumers. On the other hand, exploring consumers' perceptions of product quality can reflect consumers' perceptions of product value and brand satisfaction.

Nutritional value of the product: According to our research on the growth of the energy drink market as well as trends, there is an abundance of research on the contents of energy drinks and whether or not they are damaging to the human body. Another primary motivation for introducing this factor was determining whether nutritional ingredients may significantly impact consumer brand preferences. Comparing the position of NOCCO as a new brand in the healthier energy drink brand category and Red Bull as the market leader, on the perceptual maps helps understand the relative value of nutritional ingredients and brand influence in consumers' thoughts. Second, the consumer's perspective on the nutritional value of an energy drink brand's product and their knowledge of the various nutritional ingredients. Thirdly, differences between Portuguese and German customers on the value of nutrients in energy drink were compared.

Perceived brand image: Consumers may feel fun, relaxed, happy, playful, and cheerful with a particular brand (Keller, 2001). Fun is also part of the brand personality, and a direct relationship exists between brand loyalty and the sense of entertainment and extroversion that a brand brings to consumers. To some extent, brands that bring positive feelings to consumers can promote continued purchase of the brand's products. This attribute will be labelled as Extrovert in perceptual maps.

Design: Consumers' associations with a product may go beyond its physical elements and include more aesthetic aspects—consequently, sensory elements such as product design and aesthetic attractiveness influence product sales. The design may also indicate whether Portuguese and German consumers perceive the packaging of the same brand of product differently. Lastly, as mentioned within the previous chapters, consumption trends indicate certain preferences for “loud” design in the case of Monster Energy, or bold and simplistic design.

Taste: The taste of energy drinks, particularly the innovation of energy drink flavours, can considerably boost the sales of a brand of energy drink. According to the estimate on the consumption of energy drinks in 2022, 17% of sports and energy drink consumers actively seek out new flavours. Consumers hope that various new products and flavour expansions across brands will satisfy their needs (Arthur, 2022). Additionally, broadening the flavour's appeal beyond its present audience with new products and innovations could help the energy drink category reach its full development potential (Arthur, 2022). According to our research, it is crucial for the competitiveness of energy drink brands to meet consumer demand for various energy drink flavours in the present market context. Therefore, taste has been chosen as one of the factors to further explore how Portuguese and German consumers evaluate the taste of each selected brand.

Sense of community: A related aspect of testing brand equity is the sense of community that consumers develop with the brand under consideration. Red Bull and Monster, for instance, both have their own sports clubs or e-sports clubs to encourage consumers to participate in brand events and to increase the interaction between the brand and consumers through events organized by the brand in order to strengthen consumers' brand loyalty and indirectly enhance the consumption experience of consumers. These factors are also essential to purchase

considerations. In perceptual maps, the factor sense of community as social responsibility shall be designated.

The final part of the survey is represented through an open-ended question to gain insights about the importance of expressive design, if healthy or functional nutrients are more relevant and check for correlations with the question if energy drinks are perceived as healthy or unhealthy. Furthermore, recipients should indicate if they are concerned about health aspects of energy drinks in order to check for correlations with other research findings and previous questions of the health concerned perception of energy drinks. Through the last open-ended sentence, participants should indicate cases in which they would consume more energy drinks to find correlations with current trends, findings of the interviews as well as combinations with results of the conjoint analysis.

5.3.2 Analysis and evaluation (Zhuang Yuan)

Before the extracted data from the survey could be used, it had to determine which survey questions and responses could be quantified for analysis. These questions are also intended to collect information regarding consumers' perceptions of the packaging, taste, nutrition, and quality of each energy drink brand's products, as well as brand image, extroverted behaviour, and social responsibilities. These aspects are also used to label the questions it was chosen to simplify the subsequent analysis in the perceptual map and as attributes in SPSS. Table 2 Appendix 1 lists the questions used and variables analysed. Subsequently, the average scores of each attribute for each brand were calculated and brands have been calculated and input to SPSS manually. With this information, a two-dimensional analysis for the German and Portuguese markets has been computed, descriptive statistics and a scree plot for each component retrieved. The factor analysis also assisted in positioning the brands in different market component plots. Finally, different multidimensional perceptual maps were initiated

capable of visually displaying the perceptions of consumers in different markets regarding attributes and energy drink brands.

5.3.3.3 Results and Comparison (Zhuang Yuan)

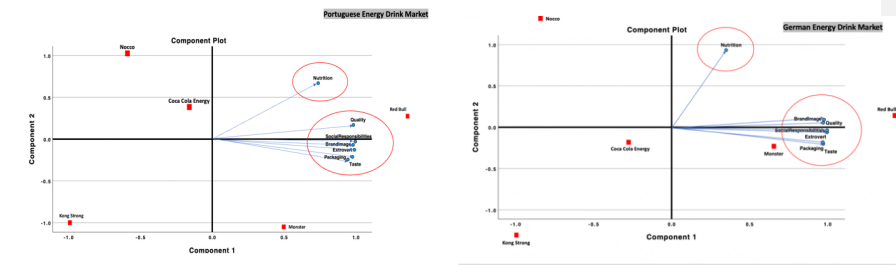


Figure 5 – Portuguese Market Perceptual Map with identified clusters. (Source: own illustration)

Figure 5 – German Market Perceptual Map with identified clusters. (Source: own illustration)

As illustrated in the following graph, one may also examine factor loading tables by observing the proximity of vectors to the axes where two-dimensional groups are present (DeCoster 1998). From the above component plots, it is evident that Packaging, Taste, Extrovert, Social Responsibilities, and Brand Image have a strong aggregate in both the Portuguese and German markets component plots, while nutrition is the most isolated component in both markets. From this, it can be concluded that these two groups have distinct perception characteristics, the first pertaining to the quality of the products and the social activation of the brands and the second to nutrition.

The graphics above depict the positioning of five energy drink brands in relation to the seven predetermined attributes used to evaluate the brands with the two groups of components (component/Cluster 1: global brand value and Component/Cluster 2: Nutrition). Then, the graph can be interpreted using the vectors' length and direction. First, it is feasible to identify two clusters of attributes: one containing merely Nutrition and the other containing Quality, Taste, Extrovert, Social Responsibilities, and Brand Image. Given the similar directions given by the two clusters, it was possible to establish a positive association between the considered

批注 [F1]: 批注 [F1]: Zhuang Yuan Lets put this in the results comparison

批注 [62]: label components

attributes. If one of the attributes has a high rating, the other attributes will also have a similar score (DeCoster 1998). In this case, for both Portuguese and German market, a high rate of social responsibilities will implicitly cause a high rate in both brand image, extrovert, taste, packaging, and quality, and vice versa. From the graphics, it is relatively predictable that for German market, quality, brand image, extrovert and social responsibilities are somehow highly correlated, taste and packaging attribute is also potentially correlating with these perceptions. Additionally, if the directions of the attributes are opposed, the attributes are negatively correlated (DeCoster 1998). In this case, however, it was hard to observe this phenomenon due to the absence of an opposite vector, which also indicates a potential positive correlation between nutritional attributes of cluster 2 for the Portuguese and German markets. Therefore, it can be concluded that, the improvement of any aspect of the product in these attributes can bring different degrees of positive impact on the other attributes. Furthermore, the higher the value assigned to a factor, the greater its capability to differentiate between brands under consideration (DeCoster1998). The attributes with the longest vector are Social Responsibilities and Extrovert in Portuguese market, and for German market, the attributes with the longest vector are Social Responsibilities, Extrovert and Quality, this indicates that consumers of energy drinks in both nations place a high value on the social activities of the brand and whether the brand image makes them feel good or intrigued. Compared to Portuguese consumers, German energy drink consumers are more concerned about product quality.

After this review, it is possible to proceed with a merged analysis of the attributes and the energy drink brands based on their positioning on the two-component plots. Starting with Red Bull, in both perceptual maps of the Portuguese and German markets, Red bull occupied a dominant position from each attribute. Its location can be explained by associating with high popularity, interesting and reliable brand image, the taste and packaging of the product are

批注 [63]: positive correlations between the attributes

批注 [64]: German consumers pay extra attention to quality

批注 [65]: social activities and brand image are the attributes consumers value most, for both markets

批注 [66]: red bull, the 1st in every attributes

recognized by consumers and increased social activity. Considering that not all consumers are familiar with the nutritional content of energy drinks, it is reasonable to speculate that Red Bull's dominant position in nutrition may come from its brand reputation. Regarding Monster, the attitudes of Portuguese and German energy drink customers toward this brand are relatively similar. This brand occupied the second most favorable position for the nutrition dimension on both the Portuguese and German market perceptual maps. Its nutritious content and other attributes of component 1 are second only to Red Bull in the minds of Portuguese and German customers, which can be considered to mean that if Red Bull were the dominant energy drink brand in the Portuguese and German markets, Monster would be second. Coca-Cola Energy is neutral in both the Portuguese and German perceptual maps. On the Portuguese market, Coca-Cola Energy ranked third in both components 1 and 2, outperforming Nocco and Kong Strong. This might be interpreted to indicate that, compared to market leaders Red Bull and Monster, consumers perceived Coca-Cola Energy's packaging and brand as less appealing. Additionally, consumers could be more satisfied with the taste. In the German market, except for the nutrition attribute, which has been seen as low nutrition, only better than Kong Strong. In other attributes, Coca-Cola Energy always has the third position, more down than Red Bull and Monster. Regarding the status of Coca-Cola Energy in both the Portuguese and German perceptual maps, being in a relatively mid-stream position is a good sign, but this also reflected that consumers need to be more interested and willing to pay more attention to this brand. Nocco is another brand whose position on the perception maps of these two markets is rather stable. For components 1 and 2, Nocco's position on the Portuguese market is more negative than on the German market. Its rank is only slightly higher than Kong Strong, indicating that Portuguese consumers may not be familiar with this brand and did not see Nocco as nutritious, despite the fact that it advertised itself as a healthy energy drink. Except for the nutrition attribute, Nocco had the third position on the German market, behind Red Bull and Monster. For component 1

(global brand value), Nocco's position is only slightly better than Kong Strong, and for packaging and taste attribute, Nocco's position is closely similar to Kong Strong, indicating that German consumers do not perceive Nocco's product as having attractive packaging and a good taste. Therefore, if Nocco desires to boost its brand competitiveness in the German market, it may need to focus on these aspects. In comparison to the other four energy drink brands, Kong Strong has the lowest rank on the Portuguese and German market perception maps. As previously indicated, labeling Kong Strong as a Lidl brand may cause consumers to undervalue the product's worth. Additionally, considering Kong Strong was only introduced in 2017 and has a relatively low private label market share in Portuguese (17%) and German (16%), consumers' unfamiliarity with the brand may be a contributing factor to its poor position.

6 Conclusion and Discussion (Group Part)

This dissertation was conducted to deeper analyse consumers perceptions and preferences, as well as to collect valuable insights on how the energy drink market in Germany and Portugal is evolving, how consumers behave and in which way the mentioned brands could adapt. First, the guideline-based interviews were conducted in order to understand the current market and consumer behaviour. Afterwards, the conjoint analysis was introduced, to comprehend consumers preferences concerning five key attributes: Amount of caffeine, sugar, price, nutrients, flavour, package. The last step laid within the performance of perceptual maps in order to understand how consumers perceive the mentioned energy drink brands through seven attributes (Nutrition, Quality, Social Responsibility, Taste, Packaging, Brand Image and Extrovert/Outgoing) as well as to gain further insights for preferences. By overlooking results on the analyses, it is possible to point out concluding findings, helpful for future studies. Overall, it becomes obvious that energy drinks are still badly perceived, independent of new organic and healthy brand such as Nocco or already well-established brand such as Red Bull

or Monster Energy. In addition to that, Red Bull, as the brand with the highest market share and biggest marketing efforts, is topping on all attributes for both markets which indicates, in combination with findings of the perceptual maps, that social activities and brand image are valued most, for both markets. Healthier brands such as Nocco seems to be better valued for Portuguese people, while high market share brands such as Monster have better perception from Germans. It can also be noticed that all five brands are poorly perceived on a nutritional value level which is a major reason for some people not to consume energy drinks frequently. Additionally, most of the consumers believe that energy drinks are not good for their health regardless of how it scores on other features perception. Both countries value a zero-sugar option the most, while both tend to prefer bottled drinks over canned ones. Speaking about health aspects, consumers from both nations like to have natural extracts inside their drinks. Also, the price sensitivity is different in both countries.

6.1 Limitations and future directions of research

Even while this research tries to give a detailed overview about the energy drink market and their consumers, it has its limitations. First, due to limited resources only a part of the market and aspects of the market could be analysed. Among others, just a part of all combinations were tested, which could have influenced the decision-making of the participants. Given that, it was just possible to test a few options for each category. Moreover, no substitute products such as coffee, booster or caffeinated soft drinks were included in the research. Besides that, too many participants did not know the brands Kong Strong and Nocco, which made it harder to identify perceptions about these brands. These seem to be outliers because of this, especially in the perceptual mapping. Moreover, Kong Strong was labelled as a Lidl brand to help the participants to understand what it is, even if they were not aware of it, could associate the brand as a lower quality brand with no nutritional value. This might have influenced the answers in the surveys. In addition to that the answers of the surveys could be biased due to the fact that

the majority of the participants were of groups and field research at one university context belonging to one University. Even though it was tried to ask a lot of people outside this Nova SBE, it could have an impact - since people from this university share a community and been part of a higher educated group focusing on the field of business and economics that it could influenced their way of thinking and how they perceived things. Moreover, the perceptual map survey conducted was not ideal. First of all, theoretical brand personality frameworks could have been considered in order to create questions for attributes aligning and connecting to those mentioned within the framework. Additionally, there were questions with different rating grades which could not be used further on SPSS for analysis. Questions had to be filtered and those with a non-convertible rating to a grade from 1 to 5 have been lost and could have been insightful for this report's results. Given that one of the biggest turn downs of energy drink consumption is the health repercussion that might exist, this research can be further explored to analyse which of these respondents are most afraid of. This is still a big stigma regarding the energy drink market.

6.2 Possible implications for the industry

While the German market and the Portuguese market are similar in many things the researched brands should not treat the markets the same. For packaging, while each of the five brands would profit from offering their drinks in Germany also in bottles, in Portugal just small brands such as Kong Strong and Nocco should introduce it. Regarding the aspect of packaging design, German consumers do not perceive the product packaging of Nocco, Coca Cola Energy and Kong Strong attractive, just as Portuguese. To remedy this problem, these brands might develop regionally limited products that satisfy the packaging design preferences of local consumers based on the packing capacity that local consumers desire. For emerging brands like Kong Strong and Nocco, starting with a price-oriented marketing campaign to increase consumer familiarity with the brand can also help solve this problem. Launching a drink with

a different amount of caffeine seems as favourable in Germany. While Monster Energy and Coca Cola Energy should launch a version with 212mg of caffeine per 100ml, Red Bull and Kong Strong would profit more from a 40mg version. Nocco, as a health concerned brand, should include a version with 15mg of caffeine per 100ml. Just Monster Energy and Nocco should launch a product with the same amount of caffeine as in Germany. Red Bull and Coca Cola Energy should not launch products with a different amount of caffeine in Portugal. Kong Strong would benefit more if they launch a version with reduced caffeine in Portugal with 15mg per 100ml instead of increasing it as they should do in Germany. Moreover, from a more holistic perspective, since consumers' high concern with possible bad repercussions of caffeine consumption is highly connected to consumers' bad perception of energy drinks as well, brands should invest in research to find a stimulant capable of substituting caffeine, in addition to adjusting the caffeine content in energy drinks in future product development. In the context of marketing, advertising and promotion activities for each of these five brands will improve consumer preference for the product's other attributes, especially for brand image and brand extroversion.

Even though, the energy drink industry is growing, brands must be careful with how potential consumers are still being hold back due to its health repercussions. This might cause consumers to shift their consumptions to caffeinated soft drinks, caffeine capsules, coffee or boosters. Scientific research regarding some stimulants used such as taurine (which Ricardo Cotovio said it was still unclear, even for athletes, if the use of this stimulant is beneficial or not), is needed and should be a priority for these brands to demystify, once and for all, the benefits of what is used in their composition.

Appendix

Appendix 1 - Perceptual Map Survey and Variables Considered for SPSS

Table 1 - Perceptual Map Survey

Survey for perceptions in the energy drink market
Hello! Welcomes to this study!

Our research is all about "Energy Drinks"
Currently we are writing our Master Thesis about the energy drink market in Portugal and Germany. We would like to find out what your preferences are. So there is no wrong answer
Because this is as part of our Master in Management at Nova SBE, so we would be happy if you take your time and answer this properly.

It will require less than 10 minutes of your time.
Just click on the option you like the most!

We appreciate your participation. Thank you a lot!

Sections	Description	Question	Answer
Section 1	Analyze the demographic features of the collected sample	1. What is your gender?	1. Male 2. Female 3. Non binary
		2. Please indicate your age	Free-form answer
		3. What is your nationality?	1. Germany 2. Portugal 3. Other 4. Free-form answer
Section 2	Determine the frequency distribution of the collected sample in energy drink industry	1. How often do you consume energy drinks?	1. Daily 2. 1-3 times per week 3. 1-3 times per month 4. Never/Why (Free-form Answer)
Section 3	Access the motivations of the consumers that drive to purchase energy drinks	1. In which occasions do you usually consume energy drinks?	1. Office 2. Sports 3. Gaming 4. Partying 5. Other (Free-form answer)
		2. Which adjectives or attributes come to your mind when thinking about energy drinks?	Free-form Answer
		3. I associate the brand with the following categories (Multisw)	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo
		4. I would buy more energy drinks if...	☐ 1. Sports ☐ 2. Gaming ☐ 3. Partying ☐ 4. Greater Focus ☐ 5. Neither/Nor
Section 4	Assess the perceptions of the different aspects of provided by the energy drink brands	1. Are you aware of the following brands?	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo
		2. I believe the packaging of the brand has an attractive design (Please order for each brand)	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 1 to 5 where 1 = Best and 5 = Worst
		3. I believe the brand contains healthy nutrition	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 1 to 5 where 1 = Unhealthy and 5 = Healthy
		4. How do you perceive the image of the following brand	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 0 to 100 where 0 = Cheap/Low Cost and 100 = Expensive
		5. Do you perceive the brand as boring or interesting?	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 0 to 100 where 0 = Boring and 100 = Interesting/Fun/Diversified
		6. I associate the brand with event&community	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 0 to 100 where 0 = Not at all and 100 = Very true
		7. I associate the following brand with high quality	☐ Red Bull ☐ Monster Energy ☐ Coca Cola Energy ☐ Kong Strong (Lidl) ☐ Nococo Rate on the scale of 0 to 100 where 0 = Strongly disagree and 100 = Strongly agree
		8. How much do you value a flavorful taste?	☐ Expressive ☐ Simplistic, Minimalistic Rate on the scale of 0 to 100 where 0 = Not important and 100 = Very important
		9. How much do you value the following nutrients for energy drink	☐ Healthy (Vitamins, Minerals, Guarana etc) ☐ Functional (Caffeine, Taurin, BCCA, Electrolytes etc) Rate on the scale of 0 to 100 where 0 = Not important and 100 = Very important
		9. How much do you value the following design attribute?	☐ Rate on the scale of 0 to 100 where 0 = Not important and 100 = Very important
		10. I am concern about health aspects of energy drinks	1. Yes 2. No

Table 2 - Variables considered for the SPSS analysis

Question	Variable	Rating
I believe the packaging of the brand has an attractive design.	Packaging	(1 = Don't agree, 5 = Agree)
How do you perceive the taste of the following brands.	Taste	(1 = bad taste, 5 = good taste)
I believe the brand contains healthy nutrition.	Nutrition	(1 star = unhealthy, 5 stars = healthy)
How do you perceive the image of the following brand.	Brand Image	(1 = cheap/low cost, 5 = expensive)
Do you perceive the brand as boring or interesting?	Extrovert	(1 = boring, 5 = interesting, diversified, fun)
I associate the following brand with high quality.	Quality	(Strongly disagree = 1; strongly agree = 5)
I associate the brand with events & community.	Social Responsibility	(1 = not at all; 5 = true)

Appendix 2 - Portuguese Market SPSS Output

Table 3 - Descriptive Statistics

Descriptive Statistics			
	Mean	Std. Deviation	Analysis N
Packaging	3.0020	1.01137	5
Taste	2.5260	.52085	5
Nutrition	1.7720	.17006	5
BrandImage	2.9640	.71325	5
Extrovert	2.7940	.67434	5
Quality	3.1860	.58183	5
SocialResponsibilities	2.7840	1.01790	5

Table 4 – Total variance explained

Total Variance Explained			
Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	6.287	89.810	89.810
2	.605	8.642	98.453

Extraction Method: Principal Component Analysis.

Graphic 1 – Scree Plot

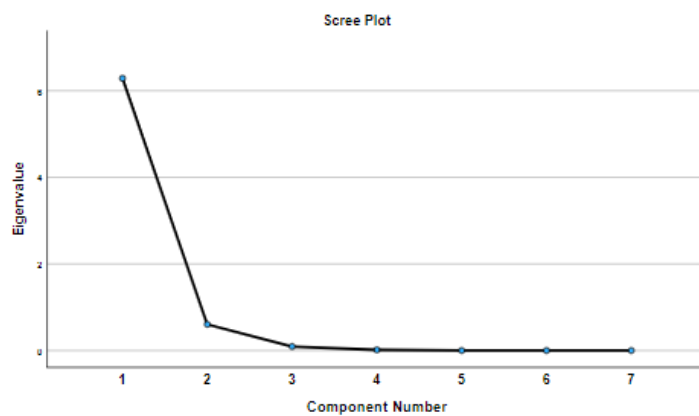


Table 5 – Communalities

	Extraction
Packaging	.998
Taste	.951
Nutrition	.993
BrandImage	.966
Extrovert	.996
Quality	.993
SocialResponsibilities	.993

Extraction Method: Principal Component Analysis.

Table 6 – Correlation Matrix

		Packaging	Taste	Nutrition	BrandImage	Extrovert
Correlation	Packaging	1.000	.973	.579	.972	.996
	Taste	.973	1.000	.549	.902	.962
	Nutrition	.579	.549	1.000	.664	.645
	BrandImage	.972	.902	.664	1.000	.983
	Extrovert	.996	.962	.645	.983	1.000
	Quality	.921	.871	.831	.964	.950
	SocialResponsibilities	.974	.948	.712	.978	.985

Correlation Matrix^a

		Quality	SocialResponsibilities
Correlation	Packaging	.921	.974
	Taste	.871	.948
	Nutrition	.831	.712
	BrandImage	.964	.978
	Extrovert	.950	.985
	Quality	1.000	.977
	SocialResponsibilities	.977	1.000

a. This matrix is not positive definite.

Table 7 – Component Matrix

	Component	
	1	2
SocialResponsibilities	.996	-.029
Extrovert	.990	-.128
Quality	.982	.169
BrandImage	.981	-.069
Packaging	.976	-.212
Taste	.944	-.244
Nutrition	.737	.671

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Graphic 2 – Energy drinks brands relative positioning

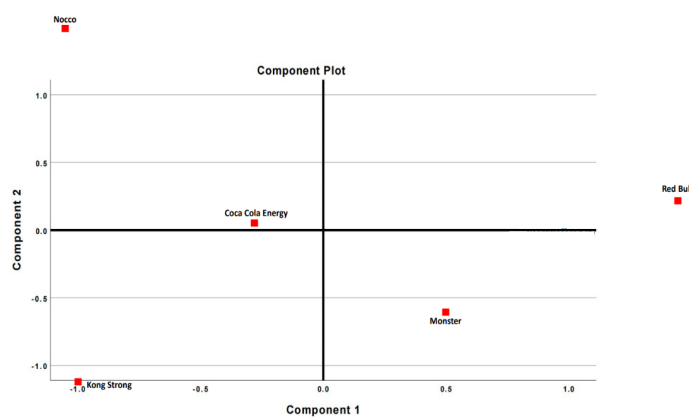


Table 8 – Brand Factors / Coordinates (Portuguese Market)

Brand	Factor Component 1	Factor Component 2
Red Bull	1,47490	0,29077
Monster	0,45521	-1,07767
Kong Strong	-1,05897	-0,95717
NOCCO	-0,67701	1,27017
Coca Cola Energy	-0,19413	0,47390

Graphic 3 – Example for perceptual map interpretation (Nutrition)

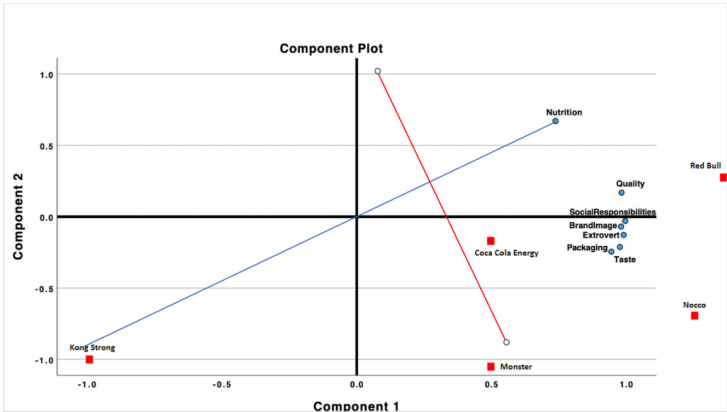


Table 9 – Component Score Coefficient Matrix

Table 10 – Component Score Covariance Matrix

Component	1	2
1	1.000	.000
2	.000	1.000

Extraction Method: Principal Component Analysis.
Component Scores.

Appendix 3 – Rotated output (Portuguese Market)

Graphic 4 – Component Plot in Rotated Space

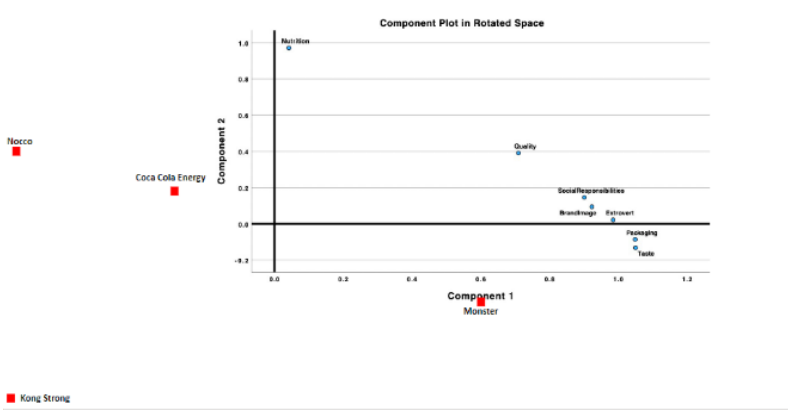


Table 11 – Rotated Brand Factors / Coordinates

Brand	Factor Component 1	Factor Component 2
Red Bull	1,41702	1,26020
Monster	0,60693	-0,42482
Kong Strong	-0,90869	-1,42650
NOCCO	-0,85435	0,39997
Coca Cola Energy	-0,26091	0,19115

Table 12- Pattern Matrix

	Component	
	1	2
Taste	1.050	-.132
Packaging	1.049	-.086
Extrovert	.985	.022
BrandImage	.923	.094
SocialResponsibilities	.901	.146
Quality	.709	.391
Nutrition	.042	.971

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 13 – Structure matrix / Rotated Component Matrix

	Component	
	1	2
Extrovert	.998	.621
Packaging	.997	.552
SocialResponsibilities	.990	.694
BrandImage	.980	.655
Taste	.970	.507
Quality	.947	.822
Nutrition	.632	.996

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Table 14 – Component Correlation Matrix

Component	1	2
1	1.000	.608
2	.608	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Table 15 – Component Score Coefficient Matrix

	Component	
	1	2
Packaging	.205	-.133
Taste	.207	-.174
Nutrition	-.045	.857
BrandImage	.171	.033
Extrovert	.186	-.034
Quality	.114	.307
SocialResponsibilities	.164	.080

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Component Scores.

Table 16 – Component Score Covariance Matrix

Component	1	2
1	1.370	1.216
2	1.216	1.370

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Component Scores.

Appendix 4 – German Market SPSS Output

Table 17 – Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Packaging	3.0000	1.02925	5
Taste	2.6180	.58747	5
Nutrition	1.6260	.15307	5
BrandImage	3.0040	.89291	5
Extrovert	2.6600	.87881	5
Quality	3.1140	.52733	5
SocialResponsibilities	2.6600	1.25158	5

Table 18 – Correlation Matrix

	Packaging	Taste	Nutrition	BrandImage	Extrovert
Correlation					
Packaging	1.000	.999	.163	.911	.980
Taste	.999	1.000	.183	.906	.975
Nutrition	.163	.183	1.000	.413	.292
BrandImage	.911	.906	.413	1.000	.961
Extrovert	.980	.975	.292	.961	1.000
Quality	.910	.897	.374	.971	.973
SocialResponsibilities	.980	.980	.316	.971	.991

		Correlation Matrix ^a	
		Quality	SocialResponsibilities
Correlation	Packaging	.910	.980
	Taste	.897	.980
	Nutrition	.374	.316
	BrandImage	.971	.971
	Extrovert	.973	.991
	Quality	1.000	.950
	SocialResponsibilities	.950	1.000

a. This matrix is not positive definite.

Table 19 – Total Variance Explained

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	5.889	84.132	84.132
2	.960	13.718	97.851

Extraction Method: Principal Component Analysis.

Graphic 5 – Scree Plot

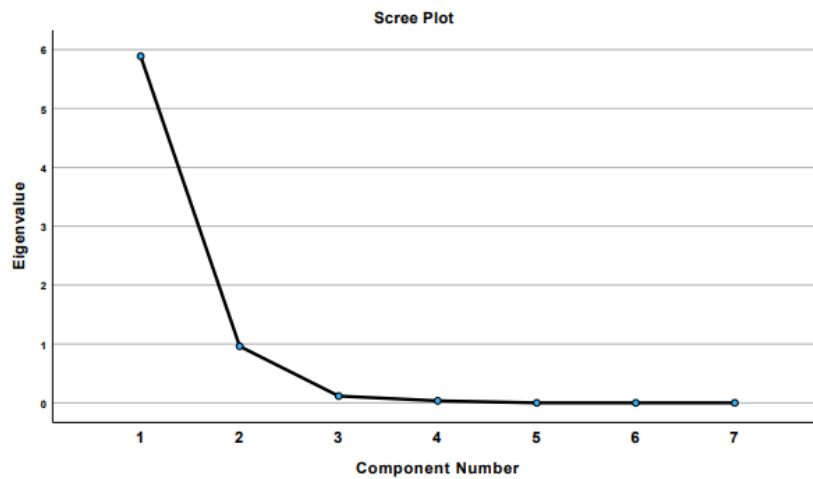


Table 20 – Component Matrix

	Component	
	1	2
SocialResponsibilities	.996	-.037
Extrovert	.996	-.060
BrandImage	.977	.092
Packaging	.972	-.201
Quality	.971	.055
Taste	.969	-.182
Nutrition	.349	.933

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Table 21 – Communalities

	Extraction
Packaging	.985
Taste	.972
Nutrition	.992
BrandImage	.962
Extrovert	.996
Quality	.947
SocialResponsibilities	.994

Extraction Method: Principal Component Analysis.

Graphic 6 – Component Plot

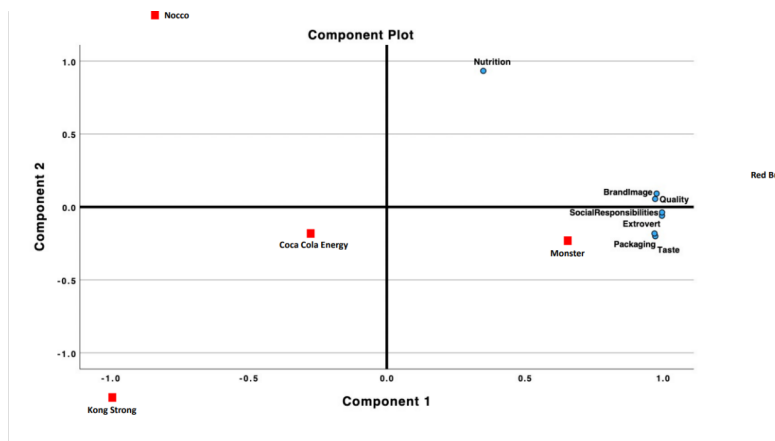


Table 22 – Brand Factors / Coordinates (German Market)

Brand	Factor Component 1	Factor Component 2
Red Bull	1,45063	0,09567
Monster	0,55812	-0,21815
Kong Strong	-0,93771	-1,23002
NOCCO	-0,79176	1,54679
Coca Cola Energy	-0,27928	-0,19430

Table 23 – Component Score Covariance Matrix

Component	1	2
1	1.000	.000
2	.000	1.000

Extraction Method: Principal Component Analysis.
Component Scores.

Appendix 5 – Rotated output (German Market)

Table 24 – Pattern Matrix

	Component	
	1	2
Packaging	1.020	-.137
Taste	1.011	-.118
Extrovert	.995	.010
SocialResponsibilities	.988	.034
Quality	.931	.127
BrandImage	.924	.166
Nutrition	.019	.991

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table 25 – Structure Matrix

	Component	
	1	2
Extrovert	.998	.276
SocialResponsibilities	.997	.297
Packaging	.984	.135
Taste	.980	.152
BrandImage	.968	.412
Quality	.965	.376
Nutrition	.283	.996

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Graphic 7- Component Plot in Rotated Space

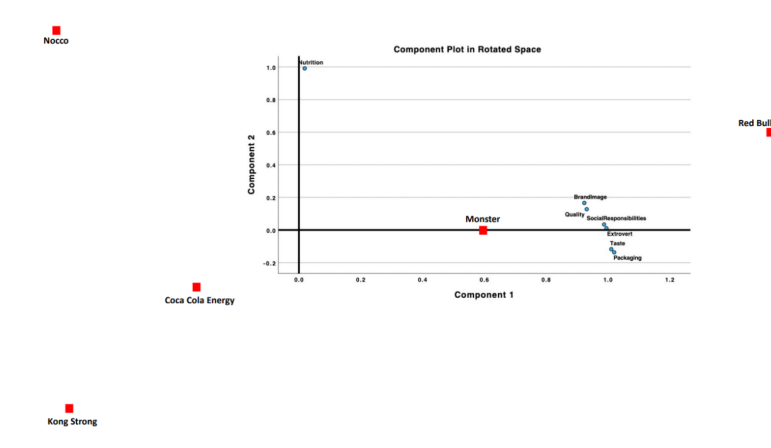


Table 26 – Component Correlation Matrix

Component	1	2
1	1.000	.267
2	.267	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Table 27 – Component Score Coefficient Matrix

	Component	
	1	2
Packaging	.179	-.142
Taste	.177	-.124
Nutrition	-.009	.936
Brandimage	.159	.145
Extrovert	.173	-.003
Quality	.161	.109
SocialResponsibilities	.172	.020

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Component Scores.

Table 28 – Brand Factors / Coordinates in Rotated Space (German Market)

Brand	Factor Component 1	Factor Component 2
Red Bull	1,44034	0,57424
Monster	0,57205	-0,01941
Kong Strong	-0,84906	-1,47242
NOCCO	-0,89838	1,19394
Coca Cola Energy	-0,26495	-0,27635

Table 29 – Component Score Covariance Matrix

Component	1	2
1	1.071	.533
2	.533	1.071

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Component Scores.

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