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PERCEPTIONS AND PREFERENCES OF VEGAN AND CRUELTY-FREE MAKEUP IN PORTUGAL - THE ANALYSIS OF THE VEGAN AND CRUELTY-FREE MAKEUP MARKET AND THE CONCEPTS OF ATTITUDE BEHAVIOR GAP, LOCUS OF CONTROL, AND PERCEPTUAL MAPPING

SOPHIA FRANZISKA SIR (54089)

Work project carried out under the supervision of: Arash Laghaie

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Abstract

Like other industries, the cosmetic industry is experiencing a shift towards more ethical products, like vegan and cruelty-free makeup. The goal of this research is to determine how Portuguese consumers perceive vegan and cruelty-free makeup brands in the market and what product attributes are crucial. This research explores how demographic factors impact consumer purchase intention. In order to do so perceptual mapping and conjoint analysis were employed. Vegan and cruelty-free makeup brands were found to not be perceived as such, suggesting that brands must increase consumer awareness. Besides, price was revealed to be the most important attribute when choosing makeup.

Keywords: Marketing Research, Perceptual Map, Conjoint Analysis, Makeup, Vegan, Cruelty-free, Portugal

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Introduction

The cosmetics industry in Portugal, like many other industries of the world, is experiencing a notable transformation driven by shifting consumer preferences towards ethical and sustainable products. This evolution reflects a broader global trend towards conscious consumption, where consumers are increasingly seeking products that align with their values of compassion and environmental responsibility. According to recent studies by Santos (2023), these changes in consumer behavior are influencing several industries, including the cosmetics market.

Within this landscape, the emergence of the vegan and cruelty-free makeup segment stands out as an interesting topic to be explored. Considering that from the industrial or synthetical chemicals used as ingredients in cosmetic products less then 20 percent are currently declared as safe (Gao, et al. 2018; Bilal, Mehmood, and Iqbal 2020), consumers are showing a growing preference for products that are not only free from animal testing but also devoid of harmful substances such as pesticides and synthetic chemicals (Peter and Olso 2009). This trend highlights a fundamental shift towards sustainable lifestyles, where consumers are making informed choices that prioritize both personal well-being and environmental responsibility.

Despite the increasing demand for cruelty-free cosmetics, the industry continues to face challenges, particularly concerning the ethical dilemma of animal testing. While there is increasing pressure from consumers and advocacy groups to eliminate animal testing altogether, regulatory barriers and varying global policies pose significant obstacles (Magano et al. 2022; Sreedhar et al. 2020). Nonetheless, some governments have taken proactive measures by implementing bans or stringent regulations on cosmetic animal testing, signaling a gradual but steady shift towards ethical practices, as is the case in Europe. However, in contempt to these pushes towards less animal cruelty, animal testing is still legally allowed in 80% of all the countries worldwide (Taylor and Alvarez 2019).

When looking at cosmetic industry, specifically makeup products are used worldwide for aesthetic reasons and in order to enhance the appearance. Especially young women are using makeup as a tool to alter their confidence. Moreover, makeup is known to have a positive effect on the outer appearance judgement done by others which can therefore lead to an enhancement in attractiveness, likableness, and capability. Nowadays studies have also found that roughly a fourth of the interviewed users declare to believe that their usage of makeup even contributes to their mental health and psychological wellbeing (Etcoff, et al. 2011; Global Cosmetic Industry 2023).

Considering these developments in the cosmetic industry and as makeup is such a broadly used product branch within the cosmetics, our research focuses on exploring consumer perceptions and behaviors surrounding the purchase of vegan and cruelty-free makeup in Portugal. We aim to provide valuable insights into the dynamics of the cosmetics industry and contribute to a deeper understanding of ethical consumption patterns in this context.

Problem Statement and Research Question

The cosmetics industry is experiencing a growing demand for vegan and cruelty-free makeup products, driven by evolving consumer preferences and global trends towards ethical consumption. However, despite the increasing popularity of cruelty-free cosmetics, there remains a lack of comprehensive studies on consumer perceptions and behaviors within this niche market segment in Portugal. This gap in the literature highlights the need for research that examines the demographic factors and product attributes influencing purchasing intentions and consumer motivations in the context of vegan and cruelty-free makeup. To contribute to the identified gap in the literature, our research seeks to address the following research question: How do demographic factors and certain products attributes impact the intention to purchase vegan and cruelty-free makeup in the Portuguese market?

Methodology

To answer our research question, we employ several analysis methods. Initially, we conduct preliminary in-depth interviews with consumers and professionals from the Portuguese makeup market to gain insights into industry dynamics and consumer preferences. Subsequently, we designed and implemented two extensive surveys, a brand perception survey and an attribute preference survey, to gather data on consumer brand perceptions and purchasing preferences. Creating a perceptual map regarding brand perception towards the key characteristics of price, quality, product range, brand recognition, and availability and the brand personality attributes of authenticity, vegan, and cruelty-free, we were able to investigate the perceptions consumers have towards vegan and cruelty-free brands in comparison to traditional brands. Followed by a conjoint analysis, which incorporated the product attributes of brand, vegan label, cruelty-free label, price and packaging, we were able to determine the preferred attributes for consumers when choosing their makeup products. Furthermore, the demographic factors of gender, age, education, profession, religion, dietary preferences, social media usage, and owning pets, were analyzed for both analyses to respond to our research question.

Thesis Structure

This dissertation is organized into several chapters, each contributing to a comprehensive exploration of the research topic. The subsequent chapters include, first, a literature review that frames the research and provides definitions and the background of concepts and factors included in this research followed by a hypotheses building, second, an explanation of the methodology employed, third, a presentation and analysis of the results, and lastly a conclusion that synthesizes the findings and implications that may be useful for future research and industry practices.

Issue Background

Ethical Consumption

[contributed by Sophia Franziska Sir]

Crane and Mattern (2004) defined ethical consumption as "the conscious and deliberate choice to make certain consumption choices due to personal and moral beliefs". These decisions can revolve around ethical matters such as health concerns, fair trade, animal welfare, and social aspects such as labor standards (Cowe and Williams 2000; Sheehan and Lee 2014). To express their feelings of social responsibility, consumers partake in ethical consumption either in the form of supporting brands that comply with their ethical convictions or by boycotting those that are perceived as unethical (De Pelsmacker, Driesen, and Rayp 2005). In this way, ethically minded consumers align their consumption with their moral principles and values (Toti, Diallo, and Huaman-Ramirez 2021).

Within this thesis, we will be focusing on the ethical consumption of vegan and cruelty-free makeup. The goal of this work is to examine to which extent demographic factors and certain products attributes impact the intention to purchase vegan and cruelty-free makeup in the Portuguese market.

Worldwide Makeup Market

[contributed by Sophia Franziska Sir]

The term makeup encompasses a broad range of cosmetic products such as lipsticks, mascaras, foundations, and eyeliners which are applied to the face, with the objective of enhancing the wearer's appearance by boosting or covering certain facial features (Statista 2024g). Currently, the global makeup market is estimated to have a value of about 85 billion U.S. dollars (Statista 2024g) and is projected to grow by 6% annually between 2022 and 2027 (McKinsey & Company

n.d.). Within this market, a shift in consumer preferences towards a more conscious lifestyle has become evident, leading to a change in the industry landscape (dos Santos et al. 2023). One ethical concern affecting purchasing behavior is whether a product is vegan. While the vegan makeup market still is a niche segment in the makeup industry (dos Santos et al. 2023), it is projected to experience a yearly growth of 6.3% in the coming years reaching a total market value of 20.8 billion U.S. dollars by 2025 (Statista 2024f). Another development fueled by the increasing demand for sustainable and ethically sourced products is the shift toward cruelty-free products. As consumers become more conscious of the consequences of animal testing in the makeup production process numerous brands are now offering cruelty-free alternatives (Bonifacio et al. 2024). This is also reflected in the numbers. While the global cruelty-free makeup market was worth around 5.1 billion U.S. dollars in 2020 it is predicted to nearly double in value to approximately 9.92 billion U.S. dollars by 2031 (Statista 2022). This change in the market landscape, however, is not solely caused by the shift in consumers' preferences. Technological advancements as well as continuous research and development in the makeup sector have yielded new and innovative products that satisfy not only the evolving demands of existing customers but also attract new ones (MarketResearch.biz. 2023). Additionally, the trend toward vegan and cruelty-free makeup is propelled by favorable changes in the regulatory environment. Several countries have already passed restrictions on animal testing and have encouraged cruelty-free practices instead. These legal changes are supporting the trend towards vegan and cruelty-free makeup and are expected to boost the revenues of companies who are offering them (MarketResearch.biz. 2023).

Summarizing the current status of the vegan and cruelty-free makeup market we can conclude that this sector still makes up a small portion of the overall makeup industry but that it is expected to grow significantly and continuously. This development is driven by a shift in consumer

preferences and regulatory changes in various countries and is additionally supported by advancing technology and ongoing research and development.

Portuguese Makeup Market

[contributed by Sophia Franziska Sir]

Moving away from the broader context of the global makeup market, our focus now shifts to the Portuguese cosmetic industry. In 2024 this industry amounted to a revenue value of 190.20 million U.S. dollars, a number that has constantly grown since the sharp drop in 2020 (Statista 2024c) during the pandemic. This translates to a generated revenue of 18.60 U.S. dollars per capita in the year 2024 (Statista 2024c) which is comparably low to the European per person revenue of 27.22 U.S. dollars in the same year (Statista 2024b). An older study of the European cometic industry conducted by Global Insight (2007) even revealed Portugal to be the country with the lowest spending per capita on cosmetics among the European countries. However, no data could be found indicating whether this still applies today. This aside, the Portuguese cosmetic market is projected to experience an annual growth rate of 2.59% between 2024 and 2028, predicting a total revenue number of 210.69 billion U.S. dollars by 2028 (Statista 2024c).

Sales Channels

In terms of sales channels, Portuguese consumers exhibit a clear preference for offline sales channels, which significantly outweigh online channels with 81.2% of the revenue share (Statista 2024c). Among these, the shoppers favor major retail outlets such as supermarkets and hypermarkets (Global Insight 2007). However, the percentage of the online revenue share is expected to grow in the future. While currently, online purchases of cosmetics in Portugal make up 18.2% of the yearly generated revenue the predicted share for 2027 is 23.4% (Statista 2024c).

Key Players

Regarding the key players within the Portuguese cosmetic market, it can be seen that Maybelline New York is the brand holding the biggest market share of 11%, followed by Chanel and Dior which each come up to a market share of 6%, and CLINIQUE and TOM-FORD-BEAUTY with respective market shares of 4% (Statista 2024c). This distribution of value shares clearly reflects some of the preferences and purchasing behaviors of Portuguese consumers. On the one hand, it illustrates that they favor international brands which is due to their availability and the quality that they offer (Global Insight 2007). On the other hand, it shows the popularity of luxury brands. In 2024, 55% of sales in the cosmetic sector were attributable to luxury goods (Statista 2024c). Besides well-known international and luxury brands, so-called private labels claim a significant market share. According to the Cambridge Dictionary (n.d.) this term is "used to describe goods that are sold using the name of the store, etc. that sells them, rather than the name of the manufacturer". A prominent example hereof are supermarkets that sell products under their private label. In the Portuguese cosmetic market, combined private labels hold a market share of 12% (Statista 2024c), which supports the previous statement that Portuguese consumers prefer to purchase cosmetics in supermarkets and hypermarkets.

Market Developments

Like the global makeup market, the Portuguese one is experiencing an increase in demand for natural, organic (Statista 2024c), and green cosmetics (David 2019). This trend reflects a growing awareness among consumers about the implications of their purchasing decisions. Although concerns for animal welfare are among the contributing factors for the shift in the Portuguese makeup industry, (David 2019) at present only little data can be found regarding the consumers' preferences and purchasing behavior regarding vegan and cruelty-free makeup. Therefore, an investigation hereof as part of this thesis could yield interesting new insights about

how Portuguese consumer value vegan and cruelty-free makeup and if these attributes influence their purchasing decisions.

Literature Review and Hypothesis Development

Locus of Control

[contributed by Sophia Franziska Sir]

Another important factor to consider in the context of ethical purchasing behavior is the locus of control. The term refers to the extent to which individuals believe they can impact outcomes through their own actions and behaviors (Cheng, Chang, and Lee 2020; Toti, Diallo, and Huaman-Ramirez 2021). Hereby, we can distinguish between individuals with an internal locus of control and individuals with an external locus of control. While those with an internal locus of control believe that they can influence situations through their personal abilities and actions, people with an external locus of control consider their lives to be determined by external forces such as luck, fate, or powerful others. Previous studies have found that locus of control plays a significant role in buyer's decision-making and thus impacts ethical behavior (Toti, Diallo, and Huaman-Ramirez 2021). People with an internal locus of control think that their actions directly impact the environment, which makes them more likely to care for the environment (Cheng, Chang, and Lee 2020) and make ethical decisions (Bray, Johns, and Kilburn 2011). On the other hand, individuals with an external locus of control perceive ethical dilemmas to be outside of their control (Bray, Johns, and Kilburn 2011) as they believe to lack the necessary personal abilities and competencies to approach them (Cheng, Chang, and Lee 2020). This thesis is supported by the findings of a study that was conducted by Carrigan and Attalla in 2001. They examined why ethical attitudes in consumers do not necessarily translate into ethical purchasing behavior. Focus group discussions with their participants revealed that the belief, that their behavior could not make a difference kept

many respondents from acting ethically. This demonstrates how locus of control can act as a mediating factor for ethical purchasing behavior.

Values

[contributed by Sophia Franziska Sir]

Furthermore, personal values can influnce a person's consumer choices. Values can be defined as "the moral principles and standards that guide the behavior of individuals or groups" (Muncy and Vitell 1992, as cited in Manchiraju and Sadachar 2014). They are abstract principles that embody fundamental beliefs about what is desirable or good. As such, values function as our behavioral guidelines in various circumstances and throughout time and reflect an individual's self-images (De Pelsmacker, Driesen, and Rayp 2005). Extensive research has revealed a significant link between values and consumer behavior. In general, values have been found to impact consumer behavior (De Pelsmacker, Driesen, and Rayp 2005; Doran, 2009; Manchiraju and Sadachar 2014) and increase the likelihood of ethical consumption (Moser 2015). Doran (2009) for example provided insights about the correlation between the consumer's values and fair-trade consumption, while Manchiraju and Sadachar (2014) proved that personal values influence ethical fashion consumption. Some researchers even suggested that values serve as better indicators to segment markets than demographic factors (Doran 2009).

Attitude Behavior Gap

[contributed by Sophia Franziska Sir]

Although it is widely acknowledged that the consumer's interest in ethical issues has grown and that the intention for ethical consumption has increased, this intention often fails to convert into real purchasing action (Bray, Johns, and Kilburn 2011; Carrington, Neville, and Whitwell 2010). Already early studies such as the one conducted by Roper Starch Worldwide and Cone/Coughlin

Communications in 1993 discovered that 85% of their respondents had a more positive picture of companies that supported causes that are important to them and even 51% indicated to be willing to pay more for a product or service that is related to a good cause. Nevertheless, in the same study, only 20 percent declared to actually have purchased such a product or service within the last year (Cone and Roper 1994, as cited in Simon 1995). Another study by Futerra found that while 30% of consumers claimed to purchase ethically, only 3% actually did (Futerra 2005, as cited in Carrington, Neville, and Whitwell 2010). This misalignment between the buying intention and the actual buying behavior has been studied in many publications and is commonly referred to as "attitude-behavior gap" or "intention-behavior gap" (Bray, Johns, and Kilburn 2011; Carrigan and Attalan 2001; Carrington, Neville, and Whitwell 2014; Nguyen, Nguyen, and Hoang 2019). In the literature, two main approaches can be found that try to explain this discrepancy (Carrington, Neville, and Whitwell 2010). On the one hand, the social desirability bias has been repeatably stated as a reason for the attitude-behavior gap (Bonifacio et al. 2024; Bray, Johns, and Kilburn 2011; Carrington, Neville, and Whitwell 2014; Govind et al. 2017). Carrington, Neville, and Whitwell (2010) declared that "people respond with answers they believe to be socially acceptable, overstating the importance of ethical considerations in their buying behavior" (141). Providing answers that are considered socially desirable instead of their true opinions and behaviors can thus lead to inaccurate survey results. This implies that customers are not as ethically minded as they are assumed to be but that instead the social desirability bias inflates their ethical intentions (Carrington, Neville, and Whitwell 2010). This bias particularly plays a significant role in self-reported surveys which still are the most commonly used methods when investigating consumer attitudes (Govind et al. 2017). On the other hand, a second stream is concerned with situational forces or barriers that impede the translation of ethical buying intentions into ethical purchasing actions. In this case the assumption is that although many consumers genuinely do intend to consume more ethically, they are being

held back by various constraining factors (Carrington, Neville, and Whitwell 2010). Such factors can include the limited availability of ethical products, financial constraints, lack of information, as well as cynicism about ethical claims (Bonfiacio et al. 2024; Bray, Johns, and Kilburn 2011).

Price Sensitivity

One of the key factors causing the attitude-behavior gap has been found to be the consumer's price sensitivity. While many shoppers care about ethical issues they seem to be reluctant to pay a surcharge for ethically sourced products (Bray, Johns, and Kilburn 2011). However, evaluations of attitudes towards ethically sourced products are often carried out without taking into account their higher prices. To minimize the impact of price sensitivity on the attitude-behavior gap, the consumer's willingness to pay would have to be incorporated deliberately into the process of measuring the intent to buy ethical goods (Bonifacio et al. 2024).

Lack of Information

An additional factor contributing to the intention-behavior gap is the lack of information (Bray, Johns, and Kilburn 2011). Sproles et al. (1978) pointed out that consumers need to be fully informed in order to make efficient purchasing decisions. However, various studies demonstrated that buyers felt like they lacked the necessary information to consume more ethically. While some companies were widely known for their unethical conduct, the respondents had little awareness of what other companies were doing (Carrigan and Attalan 2001). It also emerged that the consumers were more likely to avoid products of companies that had been called out publicly for their malpractices than proactively purchasing ethical products and that the absence of a widespread communication of ethical issues would prevent them from consuming more ethically (Bray, Johns, and Kilburn 2011). Nevertheless, some researchers have revealed contradictory findings. In a study conducted by Carrigan and Attalan in 2001, most respondents said that social responsibility did not

influence their purchasing behavior, and some even stated to buy from companies although they about their unethical conduct.

Cynicism

Another survey has revealed the consumer's cynicism towards marketeer's ethical claims. Participants doubted the genuineness of ethical products and instead suspected an underlying marketing tactic enabling producers to charge more for their products and thus exploit the shopper's goodwill. Some of them furthermore indicated that this mistrust caused them to disregard these ethical products (Bray, Johns, and Kilburn 2011). This finding aligns with Chen and Chang's (2013) concept of "green trust". According to them, green trust stems from the perceived reliability of a product and the truthfulness of the information that the customer is given and positively affects their purchase intention. There also seemed to be a connection between the cynicism about ethical claims or, in other words, the absence of green trust and the earlier addressed lack of information. Not being sufficiently informed about ethical practices paired with reoccurring headlines of unethical practices caused confusion and uncertainty among consumers (Bray, Johns, and Kilburn 2011).

Limited Availability

Adding to the other factors is the limited availability of ethical products (Bray, Johns, and Kilburn 2011). The market often does not offer easily accessible products that align with the consumer’s ethical concerns and thus leads to commitment and sacrifice issues on the customer’s side (Carrington, Neville, and Whitwell 2014) This problem is also addressed by Carrigan and Attalan (2001), according to them "consumers are unwilling to undergo any extra inconvenience in order to purchase ethically" and they do not want to "shop around" to consume ethically (571). The limited availability of these products therefore has a negative influence on the translation of purchasing intention into an actual purchase (Nguyen, Nguyen, and Hoang 2019).

Perceptual Mapping

[contributed by Sophia Franziska Sir]

To test the hypotheses previously formulated and to gain insights into the perceptions of Portuguese consumers regarding vegan and cruelty-free makeup, perceptual mapping, among other methods, was employed. Perceptual mapping is a powerful marketing tool that is used to visually portray perceptions that consumers have of brands or products in the market space. Being able to understand these perceptions is of utmost importance in the competitive business environment as they reflect how consumers associate products and brands with certain attributes that ultimately influence buying behaviors. Based on the data obtained from customers, perceptual maps can be plotted that shed light on assumptions regarding competing alternatives. While objects that are closer to one another on the map are perceived as more similar by respondents, those that are further away from each other are perceived as more dissimilar (Gigauri 2019a). However, Kim et al. (2007) pointed out that brands that are located close to each other are not necessarily competitors, and that the location of a brand within the map can change over time. Using perceptual maps to visually illustrate data facilitates the identification of important information and patterns in complex data and can help companies in the strategic planning of their marketing activities. The acquired insights can, for instance, be used to make decisions regarding product design, market segmentation, product design, brand positioning, and repositioning. Furthermore, perceptual mapping identifies perceived strengths and weaknesses of the brand or the product and discovers opportunities in the market that is being observed (Gigauri 2019a).

Generally speaking, perceptual maps can be divided into two main categories: decompositional and compositional ones (Bendixen 1995). Within these categories, we can furthermore distinguish between different perceptual mapping techniques, whereas factor analysis, discriminant analysis, and multidimensional scaling are among the most frequently used ones

(Gigauri 2019a; Kohli and Leuthesser 1993). Compositional maps are sometimes also referred to as attribute-based because in this case survey participants are presented with a full list of relevant product or brand attributes, and they are then asked to rate different brands on each of the predetermined attributes (Bendixen 1995; Gigauri 2019a). Factor analysis and discriminant analysis both belong in the category of attribute-based or compositional maps. In both cases, the data collection process is the same. Initially, all attributes have to be identified that are relevant to the customer's choice decision. The participants are then asked to evaluate different brands on the previously established factors by assigning them scores using a Likert scale. In that way, an overall factor score is computed that is used to position each brand within the perceptual map (Kohli and Leuthesser 1993). In this way, both techniques pursue the objective of reducing the number of attributes to a smaller number of underlying dimensions. However, while the factor analysis is concerned with correlations across consumers and brands, the discriminant analysis only focuses on attributes that display a contrast between brands. Since discriminant analysis ignores dimensions that demonstrate a difference among customer groups but not across brands, researchers have pointed out that factor analysis yields more dimensions and thus richer solutions (Hauser and Koppelman 1979).

On the other hand, we have the technique of multidimensional scaling that is employed to create decompositional maps (Benedixen 1995; Gigauri 2019a). Here the consumer task from which the perceptual map is derived differs significantly from the previously described method. Unlike factor analysis and discriminant analysis, this approach does not require relevant attributes to be defined beforehand. Instead, participants are shown brand pairings, and they are asked to evaluate their overall similarity. Hence, multidimensional scaling is especially useful in cases where the factors that influence consumer's choices are difficult to determine (Kohli and Leuthesser 1993). However, when choosing the multidimensional scaling method, it is advisable to include as

many brands as possible in the survey as the number of stimuli determines the maximum number of dimensions that can be extracted (Hauser and Koppelman 1979; Kohli and Leuthesser 1993). Nonetheless, Kohli and Leuthesser (1993) warn that even though having many brands is desirable, "a large number of stimuli significantly increases the complexity of respondents' tasks" and "may result in judgement errors due to increase in fatigue or non-cooperation on the part of respondents" (15).

For the purpose of this research, factor analysis has been identified as the most fitting perceptual mapping technique. This choice is based on the recommendation to employ attribute-based techniques if the attribute set is relatively complete (Hauser and Koppelman 1979). In our case, the attribute set has been determined through an extensive literature review and the conducted preliminary interviews. As for the decision between discriminant analysis and factor analysis, the latter has been favored because the factor analysis is based on the correlations across both consumers and products. Therefore, by adopting this method, we can expect to obtain richer solutions instead of by adapting the discriminant analysis which only distinguishes among products (Hauser and Koppelmann 1979).

Methodology

[Group Contribution]

For this research, several preliminary in-depth interviews both with consumers and professionals from the Portuguese makeup market were conducted in order to gain insights into the industry landscape and understand the consumers' preferences and behaviors. The insights gained from these interviews were then used to develop and design the extensive research, performed by carrying out two extensive surveys. Hereby, the brand perception survey focused on gathering

insights on how Portuguese consumers perceive makeup brands which later served as the basis for the creation of the multidimensional perceptual map. The attribute preference survey, on the other hand, inquired which option respondents would choose when being presented with different product configurations. In the next step, these surveys were distributed online to reach as many potential participants as possible and obtain data regarding the perception of makeup brands and purchasing preferences of the respondents. Based on the respondents' answers, a perceptual map was derived to see how certain brands are perceived by consumers in the market. Simultaneously, the conjoint analysis was performed and revealed which product attributes are most important to the consumers and how they prioritize individual attributes when choosing between different product options.

Preliminary Interviews

Preliminary Consumer Interviews

In a first step preliminary interviews with consumers were conducted to gain upfront and general insights from a small number of Portuguese makeup consumers regarding their impressions of the Portuguese makeup market. For this purpose, a questionnaire consisting of five questions (Appendix C – Questions for Consumers) was designed that contains questions regarding brands that the participants know and purchase from, the product attributes that are important to them, and their consumption of vegan and cruelty-free makeup. The interviews were held with 11 randomly picked Portuguese contacts, most of them being friends or family members of our group. All the interviewees were from Portugal and 10 out of the 11 people spoken to were females. The interviews were conducted in person, via phone, or via text messages, whereby the duration of each interview lasted between 10 and 25 minutes. These preliminary interviews with a small selection of consumers helped in determining the product attributes and the makeup brands, both traditional

as well as vegan and cruelty-free brands, that were further considered and included in the extensive research part that followed. Moreover, these starting interviews showed the first tendencies of consumers on their potential reasonings when buying and using makeup as well as potential concerns about vegan and cruelty-free makeup.

Preliminary Specialist Interviews

Similarly to the preliminary consumer interview, a questionnaire consisting of five questions (Appendix D - Preliminary Specialist Interviews) was designed for the preliminary interviews with the market specialists to gain upfront and general insights regarding the Portuguese makeup market. Here, two specialist interviews were held. The first interview was with Mariana Carrico, a Makeup Category Manager for Portugal and Spain, from L'Oreal Paris. The second interview was with Laura Marques, a Trainer in the category of Private Labels of Health and Beauty at Wells. We selected these interviewees based on their proximity to us and their expertise in the makeup market in Portugal. The interviews were held in person and online via Teams. By interviewing the market specialists, it was possible to gain insights on the barriers, that might be hindering the vegan and cruelty-free makeup market's growth potential, the expectations of the market's evolvement in the future, and the current competitiveness of the market of vegan and cruelty-free market. It was also possible to understand how the makeup market has been developing in Portugal and how vegan has been a growth trend on makeup, but it still needs to be more developed.

Brand Perception Analysis

Perceptual Map Survey

The brand perception survey whose results functioned as a basis for the perceptual map was conducted using Google Forms. To make sure that a respondent's participation was relevant to the

investigation of the Portuguese makeup market the first question asked in the survey read "Have you bought makeup in Portugal before?". If this question was answered with No the survey was discontinued at this point. If it was answered with Yes, the actual main part began which was divided into three sections: the demographic questions section, the key attributes section, and the brand personality section.

In the demographic section participants were asked questions regarding the following factors: age, gender, income, country of origin, place of residence, level of education, profession, religion, dietary preferences, daily hours spent on social media, and pet ownership. These attributes were found through extensive literature review to potentially influence the intended and actual purchasing of vegan and cruelty-free makeup.

The key attribute section contained questions regarding the perceptions of the attributes price, quality, product range, brand recognition, and availability of the five makeup brands, chosen from the preliminary interview results. Within the perceptual map survey, each of these key attributes was provided with a definition and a corresponding five-point Likert scale. The attribute price was defined as the overall price of the product reaching from low to high (1-low; 5-high). By quality it was understood, the quality of the products, formula, texture, ingredients, and the performance on a scale from low to high (1-low; 5-high). Product range meant the variety of products, the colors or shades range with reaching from narrow to broad (1-narrow; 5-broad). Brand recognition determined the level of presence in the Portuguese makeup market, the popularity and the confidence with a scale from weak to low (1-weak; 5-strong). Lastly, availability referred to the ease with which the products can be obtained, and the number of places or platforms where they are available going from low to high (1-low; 5-high).

After the key attributes, the brand personality section then implored how authentic, vegan, and cruelty-free the individual brands are perceived to be. Those three were further chosen due to

the results of the preliminary interviews and our main research focus being on vegan and cruelty-free makeup. Similarly to the key characteristic attributes, the brand personality attributes were also defined within the survey and rated on a five-point Likert scale according to each attribute. Authenticity was defined as the brand's genuineness and truthfulness to its values and promises on a scale from unauthentic to authentic (1-unauthentic; 5-authentic). By vegan it is understood, the brand's focus on using vegan ingredients in their products with reaching from non-vegan to vegan (1-non-vegan; 5-vegan). Lastly, cruelty-free refers to the brand not testing their products on animals and being rated on a scale from animal testing to cruelty free (1-animal testing; 5-cruelty-free). These brand personality attributes were included to later understand if the respondents actually perceive the vegan and cruelty-free brands as such.

Overall, these key characteristics and brand personality attributes were selected through a mix of an extensive literature research, in compliance to our research question and in correspondence to the answers collected in the preliminary consumer interviews. In terms of the consumer interviews, especially the responses to the question "What is most important to you when it comes to makeup*?"* of were utilized. Additionally, for all attributes of the key characteristics and brand personality segment, a sixth option stating "I don't know this brand" was included for each brand under each attribute. This was implemented considering that some participants might have valuable perceptions of some of the brands but lack familiarity with others. Finally, before the completion of the survey, a last question regarding the importance of sustainability and animal welfare to the respondents was asked. This question was intentionally put at the end of the survey to prevent impacting the participants' answers.

Before its publication, the survey was tested by all group members and revised by the thesis advisor. After ensuring the functionality and clarity of the survey it was published and shared on

platforms such as Instagram, WhatsApp, and Facebook to reach as many participants as possible. The survey was accessible for a total of ten days.

Perceptual Map Procedure

After collecting the responses to our brand perception survey, we used the IBM software of SPSS to create the perception map. We chose SPSS as a tool for our analysis due to the reason that the "SPSS software offers advanced statistical analysis, a vast library of machine learning algorithms, text analysis, open-source extensibility, integration with big data and seamless deployment applications" (IBM 2023). This means that by using SPSS we were able to analyze and interpret the data we collected in a less manual, thus less mistake prone, and advanced way.

Data Preparation

Before implementing the data into SPSS, we prepared the data in Excel by calculating the average of the responses for each attribute (price, quality, range, brand recognition, availability, authenticity, cruelty-free and vegan) in regard to the five brands. To also guarantee a better and easier visualization later on, the averages were kept with three decimals. Once we prepared all the data in this way, we inserted it to SPSS.

Data Input

Looking at the data from the Microsoft Forms survey, the attribute questions had a five-point Likert scale in relation to each brand. In this way, when we ran SPSS, we were not able to assign the rating numbers of the five-point Likert scale to each brand as the numbers correlated not to the brands but to the rating of the associations, thus, the strength in perception of the individual key characteristics and brand personality attributes. More precisely, we were not able to do that as for example, the attribute price was rated for each brand on a scale from 1 (low) to 5 (high), showing that the numbers cannot be used for the brands as it is a placeholder for the rating. This means that

instead of assigning each rating number from 1 to 5 to one corresponding brand in SPSS we kept them as they were to be still relating to the ratings of each attribute.

Data Analysis

After having prepared the data in Excel and SPSS, and in order to analyze the perceptions regarding each brand in terms of the attributes, we carried out a dimension reduction using a factor analysis. We did a factor analysis because it allows us to find components that are latent, meaning that they do not really exist but point out the connection between certain association attributes and brands at a later point. So, what the factor analysis did to achieve this, was to transform the key characteristics and brand personality attributes into variables. The only element that was not transformed into a variable were the brands, as the main aim of this analysis is to understand how people who answer our survey associate each attribute with each brand.

After running the factor analysis in SPSS, the software created two new variables, called component 1 and 2. These components summarize the information we have from each attribute to each brand. With these components and the data SPSS provided us with the descriptive statistics, the correlation data and the component matrix, we maintained a perceptual map showing the attributes locations in terms of the computed components. By further, highlighting the vectors from the origin to the attributes location on the grid and implementing the data point of each brand again in correspondence to component 1 and 2 we were lastly able to take conclusions regarding the position of each brand on the perceptual map in relation to the attribute vectors in the results section. The perceptual map was finally used to test and answer our hypothesis 2 and 3 as visible in Table 1 below.

Table 1: Hypotheses Investigations through Perceptual Map Analysis

	Brand* - *KIKO Milano* - *Maybelline New York* - *Essence (Cruelty-free)* - *NYX Professional Makeup (Cruelty-free)* - *E.l.f. Cosmetics (Vegan & Cruelty-free)*
Price	H2a/H2b
Quality	H3a/H3b

*The overall perceptual map further considers the perception of these brands in terms of *Product Range, Brand Recognition, Availability,* and *Authenticity*

Attribute Preference Analysis

Conjoint Analysis Survey

The attribute preference survey was created and administered via Conjointly, an online tool for carrying out conjoint analyses that reveal consumers' preferences regarding product features as well as their price sensitivity. These analyses break products down into their different attributes whereas each attribute can assume different levels (Conjoint.ly 2017). As conjoint works with specific product illustrations this conjoint is using the makeup product, foundation, for this studies purpose. Foundation is broadly associated with the term makeup and thus is a good exemplary product for this makeup market research. In our conjoint analysis the considered attributes, corresponding with the product type foundation, and their respective levels were the following ones. These product attributes and their respective levels were chosen based on market reviews and literature reviews discovering which attributes and levels are of main importance for consumers when choosing their products.

Brand

The five makeup brands were selected based on the list of brands known by the participants of the preliminary consumer interviews. In this process, a lot of emphasis was put on ensuring a balanced distribution of traditional and vegan and cruelty-free brands. Furthermore, the five brands of Essence, KIKO Milano, NYX Professional, Maybelline New York, and e.l.f. Cosmetics were particularly chosen as they all belong to the broader, more well-known and normally priced makeup segment. Out of the selected brands e.l.f. Cosmetics and Essence are the brands that are both cruelty-free and vegan. E.l.f. Cosmetic's cruelty-free status is certified by both PETA and Leaping Bunny (PETA n.d.; "Compassionate Shopping Guide | Leaping Bunny" 2021) whereas Essence, on the other hand, is only certified by PETA (PETA n.d.). NYX Professional Makeup is the third certified cruelty-free brand (PETA n.d.), however it is not vegan. As for the remaining brands, neither Maybelline New York nor KIKO Milano are vegan. The latter, however, indicates to be cruelty-free on its website ("No to Animal Testing - KIKO MAKE up MILANO - KIKO," n.d.), but did not obtain any certificate proving the statement.

Vegan and Cruelty-free Label

The attributes of Vegan and Cruelty-free were introduced by presenting the participants with the corresponding label. A vegan label was referring to the product option being officially certified of only containing vegan ingredients. Similarly, a cruelty-free label stated that the product option has not been tested on animals. In the conjoint the participants were presented with the option of having a label or not having a label for each of the two attributes. To visually represent the officially certified label we chose one for each category. The cruelty label was represented by the Leaping Bunny certificate while V-Label was adopted for the vegan certificate. Both labels were previously identified as trustworthy and widely used labels in the literature review. These two labels that were chosen in the survey are the most well-known labels, but as previously said there

are not official labels. To use a certified label, brands need to follow some rules. To use the Leaping Bunny, they need to guarantee that during the all-production process animals are not used. To use the V-Label, they must guarantee that no animal-derived ingredients are used in the production process.

Packaging

The attribute packaging in the conjoint analysis was defined as the packaging in terms of its colors and design. In a similar way to the labels, pictures were chosen to illustrate the different packaging options (Appendix F – Figure 1). In coherence with previous research results the packaging design followed the three most commonly mentioned patterns in terms of their color, material and shape. Those three designs used in the survey for the conjoint analysis are therefore imitations of, first, the unique and pink packaging design, second, the clean and minimalistic packaging design and third, the green and sustainable packaging design.

Price

Finally, the attribute price was imitating the price of the makeup products. For this attribute, price levels were adopted that roughly comply with the actual price range of the presented brands to make the survey as accurate as possible. Thus, the three price levels determined accordingly to the actual makeup foundation market were 5€, 10€, and 20€.

Survey Structure

Just like in the first survey, we asked if the participants had bought makeup in Portugal before to ensure their participation was valuable to the research and collected their demographic data before the main part of the survey started. In the case of the conjoint survey, the main part of the survey illustrates different combinations of the predetermined attributes and levels and requests the respondent to select the preferred product constellation. In this way, it is possible to investigate which product attributes consumers value the most and how they prioritize the individual ones.

Additionally, at the very end of the survey the participants were asked again how much they care about sustainability and animal welfare in their daily lives. This was again intentionally implemented as the last part to not influence the participants in their preferences and choices during the survey before.

Conjoint Analysis Procedure

To evaluate the data and to be able to conclude from it in regard to the hypothesis, an Excel report was pulled from the survey results of conjointly. Since the conjoint analysis results within the program mainly focused on the brands being looked at separately some data preparation steps were needed to prepare the data for further analysis steps regarding some of the hypothesis. Especially, for the demographic factors it was important to look at the effects across all brands and not only alongside one specific brand in isolation.

Correlation Matrix

This led to the first step of preparing the demographic responses in order to be able to look at the correlations towards the main survey attributes. The preparation for this extensive analysis included first of all, computing categorical variables for each demographic factor and assigning corresponding values to the category levels of each demographic. Secondly, in terms of the attributes the partworth of each attributes baseline level was calculated to then derive the overall importance for each attribute by looking at the range of each attribute across all its levels. Lastly, with the generated data it was possible to create a correlation matrix via Excel showing the correlations between the demographic factors and the overall importance of each attribute but also with the preferences regarding the specific levels of each attribute. We excluded the redundant numbers of the matrix and the correlations that are irrelevant for our testing and highlighted the correlations in terms of their strengths and their positivity or negativity (>0,3 = green and <-0,3 =

red) towards the attributes. This gave first insights on possible correlations between demographics and the preferences for attributes and levels further analyzed within the results section.

Regression Analysis

To be able to conclude on the effects of the specific demographics on the preferences for certain attributes a regression analysis was performed. Again, to be able to do so the data was prepared by generating dummy variables for each demographic factor level. For each demographic relevant for this study the levels that were not presented sufficiently in our sample were excluded and a baseline was chosen for each demographic in correspondence to the most basic level or the one logically making sense to be the comparison level. Since sustainability was already based on the rating of a five-point Likert scale it was the only demographic response that did not need to be changed. For the attributes the data was already prepared as described before when setting up the data for the correlation matrix. By analyzing the data in SPSS, a linear regression for each demographic factor, including its relevant levels without the set baseline level to the model, we were able to generate statistical test results showing if certain demographic levels of the attributes within our study are affecting the selected attribute for each test of our hypothesis as visible in Table 2 below.

Table 2: Hypotheses Investigations through Conjoint Analysis

	Vegan Label*	**Cruelty-free Label***	**Packaging***
Attribute Levels	H4a	H4b	—
Gender	H6a	H6b	—
Age	H7a	H7b	H5b/H5c
Education	H8a	H8b	—
Profession	H9a	H9b	—
Income	H10a	H10b	—

Religion	H11a	H11b	—
Living Location	H12a	H12b	—
Dietary Preferences	H13a	H13b	—
Pets/Pet Variation	H14a/H15a	H14b/H15b	—
Social Media Usage	H16a	H16b	—
Sustainability and Animal Welfare Importance	H1a	H1b	H5a

*The overall conjoint analysis further considers the preference among the attributes of *Vegan Label, Cruelty-free Label, Packaging, Brand,* and *Price*

Attribute and Level Preferences

Lastly, since conjointly only provided data regarding the brands by treating them separately we further computed the relative attribute importance for each attribute and level of the conjoint part to be able to conclude from the comparison of the attributes and levels among each other. As previously described, the data was prepared for this as well in the sense that averages were computed for each individual entry in terms of each of the attribute's level. We then computed the average per attribute across the individual entries. By then considering the range in regard to the levels of each attribute, we received the relative importance by dividing the range of each attribute by the sum of ranges across the different attributes. Having the attributes importance values for the attributes in comparison to one another we were thus able to conclude further in the results which attribute is most preferred by consumers in comparison to the others.

Results

[Group Contribution]

In the following the outcomes of the interviews, surveys and analysis will be discussed. First, the consumer interviews are being summarized and the most significant findings are being emphasized. Second, the two interviews will be highlighted in terms of their learnings and the

opinions and insights provided by the specialists. Third, it will be shown what was concluded from the perceptual map in terms of the consumers perceptions towards the brands in regard to certain associations. Lastly, we will shed light on the conjoint analysis and the findings in regard to consumers preferences of different product attributes.

Preliminary Consumer Interviews

Besides getting a first overview of the consumers' preferences and purchasing behaviors, the main purpose of the preliminary consumer interviews was to identify the makeup brands and product attributes that should be included in the surveys. Therefore, the participants were asked about makeup brands they know and use. Due to the assumption that some of the respondents might not automatically include vegan and cruelty-free brands in their responses, another question was added specifically asking them if they know and use any vegan and cruelty-free brands. Thus, a long list of brand names was obtained representing the most well-known makeup brands among the interview respondents including both traditional ones and vegan and cruelty-free ones. The most frequently mentioned brands were KIKO Milano, NYX Professional Makeup, and Benefit Cosmetics which all three were named by 73% of the interviewees, followed by Dior with 64% (Appendix C – Figure 1). To keep the surveys concise only five makeup brands were selected. The initial idea to pick the five most mentioned brands, however, was quickly discarded since they included only one vegan and cruelty-free brand. Additionally, the decision was taken to exclude high-end and luxury brands like Benefit and Dior, as a comparison of them with more affordable brands did not seem reasonable for the purpose of our conjoint analysis where different price levels are being combined with the different brands. These considerations left us with the following five brands to be used in the further research: KIKO Milano, NYX Professional Makeup, Maybelline New York, Essence, and e.l.f. Cosmetics.

In terms of crucial makeup attributes, price, which was mentioned by 54% of our respondents, was identified as the most important attribute, closely being followed by quality with 45%. Notability these results correspond with the findings of the literature review. Whether a makeup product is vegan or cruelty-free, on the other hand, was considered important by only a small minority of the participants in the preliminary interviews. The attribute cruelty-free was indicated by 18% of them, while vegan ranked last being mentioned by only 9%. These results are especially surprising taking into consideration that more than a third (36%) of the respondents stated to buy and use vegan and cruelty-free makeup.

As for the factors that keep the respondents from buying vegan and cruelty-free makeup, the associated higher price has been found to be the most salient factor mentioned by 73% of participants. Quality concerns ranked second and were expressed by 54%. Vegan and cruelty-free products generally being perceived as having higher prices than traditional products is again congruent to the literature review findings. The same accounts for the quality of vegan and cruelty-free makeup being connected to lower standards, which some of the reviewed research explains by different ingredients being used which might not be as efficient as the traditional counterparts. However, since the preliminary consumer interviews only consider a very small consumer sample in order to receive a rough first guidance, it is important to also consider the perspective of specialists in the makeup industry to have the bigger picture.

Preliminary Specialist Interviews

L’Oreal Specialist Interview

The first specialist interview was with Mariana Carrico, Make-up Category Manager for Portugal and Spain at L'Oreal. L’Oreal is one of the largest and most recognizable cosmetic and

beauty companies. L'Oreal, since 1989, do not use animals do test their products as they are "for beauty with no animal testing." (L'Oreal, n.d).

During the first five minutes of the interview Mariana Carrico talked about the Portuguese makeup market in general. It was understood that due to Covid-19, the purchase of makeup in Portugal has been decreasing mainly during the pandemic and the following years. With the end of 2023, the company started recovering sales, but did not yet reach the sales level of the years before the pandemic (2018 and 2019). The main reason that L'Oreal found to explain this was that during the pandemic people stayed at home and did not have reasons to use makeup every single day or even regularly.

The next 20 minutes of the interview were filled with the five questions which were asked to gain more insights regarding vegan and cruelty-free makeup. Mariana Carrico started by explaining how the vegan and cruelty-free makeup market evolved in Portugal over the past years. It was possible to conclude that the vegan and cruelty-free makeup market in Portugal is still small. Regarding the first question concerning the key attributes and considerations influencing the consumers purchasing behavior, she explained that there are several factors impacting consumers in their decision-making process when they want to buy makeup. The factors she presented resulted from a market analysis that L'Oreal did in 2021 to show which factors are impacting consumers the most in terms of their brand choices. Looking at the weights given to each factor, she mentioned that the most impactful one was the brand's value conveyance towards consumers in terms of being trustful, honest, and caring (21.3%) due to consumers choosing brands that share their own values. Moreover, she explained that self-confidence and enjoyment (20.7%) together with product efficacy (15.3%) are also factors impacting the consumers. These factors are considering consumer's feelings evoked by the usage of makeup. In this regard, it is important that the brand and its products are transmitting positive feelings like confidence, power, and energy. Lastly, she

added that another factor is also the consumer's social and environmental engagement (3.9%), which includes their preference for vegan products for example. Mariana Carrico explicitly mentioned that this factor has grown since 2021 and is even more appealing to younger generations. Essence, for example, is a brand that is positioning itself in this regard, by attracting the younger generation and making its competitors more attentive to this factor. Overall, Mariana Carrico declares that the most important factor on the consumer's decision-making process when choosing their makeup, is the image of the brand and the product efficacy.

Regarding the second question, where we wanted to know the main reasons why consumers do not buy vegan and cruelty-free cosmetics, it was possible to understand that generally, at this point many consumers still do not prefer vegan and cruelty-free makeup despite the moral advantages. This is because, firstly, consumers care more about the quality of a product than if that product is vegan or not. This goes so far, that if a brand presents a vegan product with higher quality, consumers will choose this product for its quality, and not because it is vegan. Here, the performance of the product is crucial because if the product does not have quality and therefore does not perform like expected, consumers will not buy it. Moreover, Mariana Carrico mentioned that some years ago, L'Oreal tried to take off the beeswax of one of the eyelash masks in order to make it vegan. However, this resulted in a major decrease in sales as without the beeswax the quality of the product diminished. In the end, L'Oreal had no other choice but to implement the beeswax again for this product. With this experience, L'Oreal understood that there are animal-derived ingredients that are crucial to build a makeup product with high quality. However, despite this learning, there are competitor brands of L'Oreal that are growing because of their vegan assortment whilst not even purposely using this for their strategic positioning in the market. An example for this phenomenon, mentioned by Mariana Carrico, is the brand Essence. Essence is growing in Europe mainly due to its quality and image. The brand offers accessible and innovative

products while positioning itself as a young brand and thus attracting a lot of young consumers. Another example is the brand e.l.f Cosmetics, which is growing in the US due to its high quality and good image. What can be concluded from this, is that for consumers, the quality of the products and the values of the brand are the key factors impacting their decisions to buy makeup before they care about the product or overall brand being vegan and cruelty-free.

Regarding the third question, to understand how market specialists are expecting the vegan and cruelty-free market to grow in the future, Mariana Carrico explained that the vegan makeup market is expected to continue growing, but she also mentioned that vegan will not become the main reason for consumer's purchasing. To underline this she explained, that last year in Spain, L'Oreal launched a green product line for Maybelline New York which was vegan and cruelty-free. However, this launch did not work out because of several reasons. Firstly, because the quality of the products was not sufficient. Secondly, because consumers did not like the image of the product line with all products being presented in an unappealing blue shade. Thirdly, because consumers generally do not associate the brand of Maybelline New York with being a vegan and cruelty free brand. This is due to the fact, that it is not how the brand has positioned itself throughout the last years. As a conclusion from this, Mariana Carrico explained that the vegan makeup market will grow more when brands start to communicate them and their products being vegan as a side benefit rather than promoting it as the main factor of quality. Concerning the fourth question to get a clearer picture of the typical consumer of vegan and cruelty-free products, Mariana Carrico stated that in her personal and professional point of view she sees vegan and cruelty-free products as a better fit for younger consumers as those are more worried about environmental issues and concerns.

Finally, looking at the competition within the vegan and cruelty-free makeup market, Mariana Carrico declared that in her point of view, brands like Essence, e.l,f Cosmetics, and also

Kosas are common brands that have intentionally been positioning themselves as vegan and cruelty-free brands in the market.

Concluding the above insight from Mariana Carrico, the market specialist from L'Oreal, it can be said that the interview was very helpful to better understand how the vegan and cruelty-free makeup market of Portugal has developed and is expected to further grow. The interview also gave interesting insights on how L'Oreal, as one of the leading players of the market is positioning itself in terms of being vegan and cruelty-free.

Wells Specialist Interview

The second specialist interview was held with Laura Marques, a Trainer in the Category of Private Labels of Health and Beauty at Wells. Wells is a retail brand in Portugal in the health, well-being and beauty segments that is part of the Sonae Group. Conducted in a more informal setting, this interview diverged slightly from the structured question format used in the previous interview by instead centering more on the cruelty-free market and cosmetic legislation in Europe.

According to Laura Marques, the legislation in Europe for cosmetics is much stricter than in other countries outside Europe. According to European Union regulation 1223 published in 2009, safety testing of cosmetic products on animals is prohibited, which includes the final product but also its various ingredients. Despite this prohibition, some cosmetics brands still engage in animal testing as it is still possible that products tested on animals in other countries, such as China, could be sold in the EU. According to PETA (n.d.), this happens if animal testing data from other countries is not used to verify the safety of cosmetics in the EU.

Furthermore, Laura Marques discussed the challenges associated with cruelty-free labeling for cosmetics brands. Companies cannot claim to be cruelty-free on their packaging without certification from official organizations like PETA or The Leaping Bunny. However, obtaining such certification often requires fees, which may contradict the goal of affordability for some

brands, especially those offering budget-friendly products. Due to those associated costs not all cruelty-free brands opt for such certification. Nevertheless, consumer perceptions of cruelty-free brands heavily rely on the presence of official certification logos on product packaging. Thus, this creates a discrepancy between consumer expectations and brand practices in communicating cruelty-free status. Adding to this issue, Laura Marques noted that within Portugal and among Wells consumers, the market for vegan and cruelty-free products remains a niche, primarily attracting individuals deeply committed to ethical consumerism.

These market specialist interview insights from Laura Marques suggest a need for greater clarity and transparency in cruelty-free labeling practices within the cosmetics industry. Brands could explore alternative avenues, such as supplier certifications, to communicate their commitment to cruelty-free practices without incurring additional costs. Educating consumers about the nuances of cruelty-free labeling and the importance of supporting ethical brands could help expand the market beyond its current niche status.

Consumer Perceptions

Building upon what these two specialists are pointing out and with the vegan and cruelty-free makeup market still being a niche market in Portugal, it is thus important to have a closer look at how consumers perceive vegan and cruelty-free makeup brands in the market compared to traditional makeup brands. Therefore, the following part examines the conducted perceptual survey, which analyzes consumer's brand perceptions in correlation to certain key characteristics and brand personality attributes. Starting with an overview of the sample answering the consumer perception survey, conclusions were drawn from the statistical picture of the perceptual map that followed the data evaluation of the consumer perception survey results.

Sample Characteristics

Overall, 166 people answered the survey investigating the perceptions of different makeup brands. Out of these, 19 respondents were already screened out in the first question which asked them if they had already bought makeup in Portugal before. This question was deliberately chosen to ensure that the respondents' answers are valuable to investigating the Portuguese makeup market. Initially, a second question asking if the participants knew all five brands (KIKO Milano, NYX Professional Makeup, Maybelline New York, Essence, and e.l.f. Cosmetics) was asked to make sure that the respondents do have perceptions about those brands that they can share. However, after some friends and family members filled in the survey, we were informed that some of them knew most of the brands but did not know one specific brand and therefore could not participate in the survey. To be able to obtain as many responses as possible, the survey was thus adjusted by deleting the former question asking if respondents knew all five brands, and instead the option, *I don't know this brand* was added to the response options for each attribute and brand. In this way, we were able to attain answers that otherwise would have been screened out in the second question, and additional information about how well-known each brand is was collected. Before changing the survey, however, 9 respondents were screened out in this way. Conclusively, this led to a final number of 138 valid responses which were used for the further analysis of the perceptions of brands and the creation of the perceptual map.

Looking at the demographics our respondents (Appendix E – Tables 1-13), in terms of gender distribution, the sample showed a significant majority of females (97.8%), suggesting a female-dominated makeup consumer base in Portugal. This assumption aligns with data gathered in the United States 67% of the responding female consumers reported to use decorative cosmetics, while the share for male responding consumers was 0% (Statista 2019). When looking at age, we can see that most respondents (58%) fell within the 19-24 age group, indicating an excess of

answers from people of this age group and a lack of responses from the remaining age groups. An even stronger overrepresentation occurs in terms of educational level where 52.9% indicated to have or pursue a master's degree and 33.3% stated to possess or pursue a bachelor's degree. Taking into consideration that according to OECD (2017), 6% of adults in Portugal have attained a bachelor's degree and 18% have attained a master's degree, the survey results indicate that the sample is skewed towards people with a high level of education. In terms of profession, the classes Business and Other Services, Finance or Insurance, and Other/None of the above were chosen by most participants. Concerning the participants' income the distribution varied widely with a notable percentage reporting no income. Another demographic that was observed is religion. Here Catholics made up 63.0% and the remaining share was composed of Atheists, Agnostics, Protestants, Muslims, and Others. This distribution deviates slightly from the overall distribution of population by religion in Portugal according to which 80.2% of the population identifies as Catholic (Statista 2024e). Another distinction that was undertaken was to divide to sample into the categories of urban and land in terms of place of residence. Hereby, 83.3% stated to live in an urban area. Given that the actual share of the urban population in Portugal accounts for 67% ("World Bank Open Data." n.d.), this group seems to be slightly overrepresented in the sample. The sample furthermore is predominately composed of individuals following an omnivorous diet which is adopted by 76.1% of the respondents and a large percentage (60.1%) indicated to own pets. Hereby dogs and cats were the most frequently stated types of pets. While 35.5% reported to own dogs, 8.7% stated to own cats. These results are very similar to the data obtained from Statista which says that dogs and cats are the most common pets in Portugal (Statista 2023a) and that 39% of households own at least one dog (Statista 2023b). As for social media usage, a large majority indicated to spend between 1 and 3 hours a day on social media, with the option 2-3 hours being the most frequently chosen one accounting for 39,9%. This aligns with the average amount of time

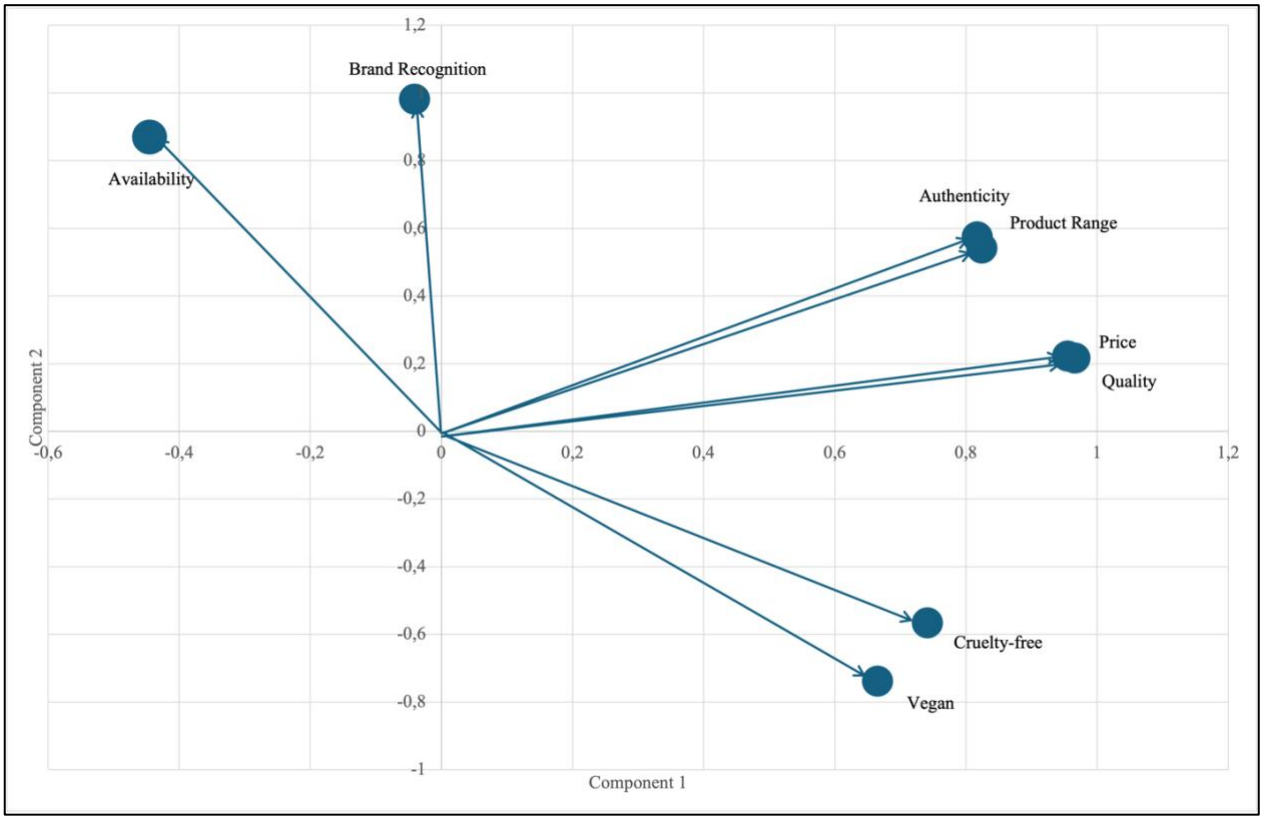
the Portuguese population spends on social media, amounting to two hours and 33 minutes a day (Statista 2024d). Lastly, some insights about how important sustainability and animal welfare are to the respondents were gathered. For this purpose, a Likert scale reaching from 1 (not important) to 5 (very important) was adopted and the response average of the sample was 3.99.

Perceptual Map Evaluation

The perceptual map was constructed by analyzing the data obtained from the brand perception survey with the help of the software platform SPSS and employing the perceptual mapping technique factor analysis. As explained by Kohli and Leuthesser (1993), factor analysis is "a data reduction technique in which the objective is to represent the original pool of attributes in terms of a smaller number of underlying dimensions or factors" (p.11). In our case, the principal component analysis was adopted as the extraction method to reduce the number of dimensions to the principal components that retain most of the original information. In this way, two components were extracted that account for a cumulative variance of 96.1% of the data, from which 54.8% are explained by the first component, and the remaining 41.3% are explained by the second component (Appendix E – Table 14). Since only a small percentage of the total variance is not explained by the chosen dimensions the consideration of a third dimension is unreasonable.

As no rotation of the components was performed, the component score covariance between these two components equals zero (Appendix E – Table 15), meaning that they are not correlated to one another. In this map, the various attributes can furthermore be plotted in the form of vectors emerging from the origin as can be seen in Figure 1 below.

Figure 1: Component Plot with Vectors



Their proximity to the axes was examined in the next step, whereby the attribute vectors closer to the axes play a significant role in nominating the components 1 and 2. Noticeably, the vector of the attribute Brand Recognition is located in the immediate proximity of component 2. Since it is the only vector closely related to this axis, component 2 can therefore be interpreted as Brand Recognition. For component 1, on the other hand, a link to both attributes Price and Quality can be observed. Since these two attributes are closely related to the concept of value component 1 can be interpreted as such. However, by analyzing the attribute vectors in detail further insights can be gained.

Directions of Attribute Vectors

Regarding the associations between attributes, vectors pointing in a similar direction indicate a positive correlation between the vector's attributes. As visible in the perceptual map, the

vectors of the attributes Price and Quality nearly seem to be overlapping in the scatter plot and therefore a strong positive correlation of 0.995 can be found between the perceptions of those two attributes. Furthermore, a similar strong positive correlation of 0.991 can be found between the perceptions of the attributes of Authenticity and Product Range. Despite each of these two being perceived as very similar to one another it is also visible that both pairs also are pointed out in the upper right corner of the perceptual map, meaning that both have a positive correlation nature to component 1 and 2. More precisely, this is also visible in terms of their correlations amongst each other. Price has a strong positive correlation with Product Range (0.906) and also with Authenticity (0.911). Simultaneously, Quality also has a strong positive correlation with Product Range (0.883) and Authenticity (0.901). Another attribute pair showing a strong positive correlation can be found in the bottom right quadrant, thus bound to a positive component 1 value and a negative component 2 value. With a correlation of 0.95 Vegan and Cruelty-free are perceived as dependent attributes by the consumers.

In contrast, attributes pointing in opposite directions are negatively correlated to each other. The most salient example for opposing vector directions is the attribute pair of Availability and Vegan with a correlation of -0.92 that nearly forms a straight line in the perceptual map. This suggests that the attributes of Availability and Vegan are perceived as mutually exclusive by the consumers. The same tendency can be observed for the pairing of Availability and Cruelty-free (-0.75), and Brand Recognition and Vegan (-0.73) although the negative correlations are not as strongly pronounced here as in the first case. This shows again that these pairs are perceived to be segregating each other.

Moreover, attributes that are perpendicular to one another are uncorrelated which applies to the attributes of Product Range and Availability which display an almost nonexistent correlation

of 0.084. This means that consumers perceive them as independent from one another. The full correlation matrix of all attributes can be found in the Appendix (Appendix E – Table 17).

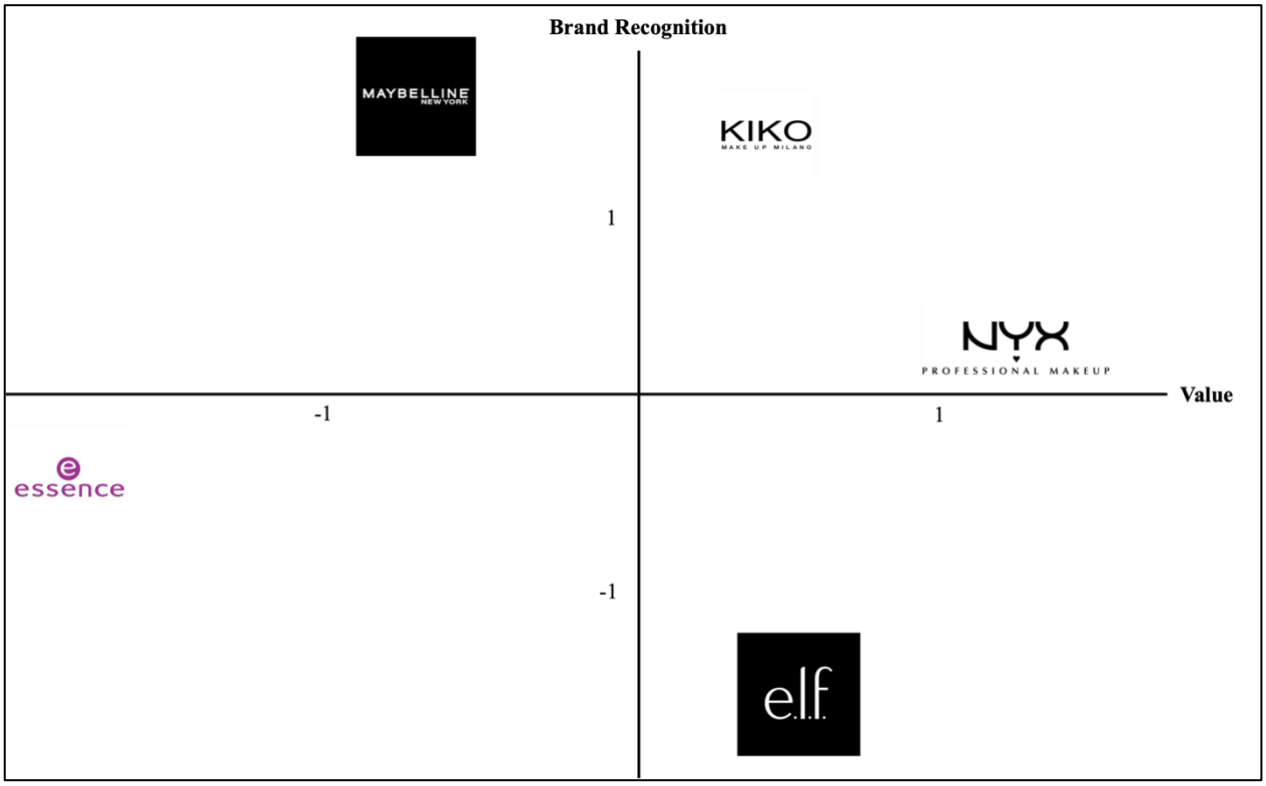
Length of Attribute Vectors

Another important element when analyzing the vectors is their length. The longer an attribute's vector, the more importance the respective attribute has in differentiating brands. Out of the eight attributes, Brand Recognition is the attribute with the shortest vector which implies that it has the least importance for differentiating between the brands. A possible explanation for this could be the fact that the selection of the five brands was made based on a list of brands that were well-known brands among the participants of the preliminary consumer interview. This approach might have already excluded brands with lower brand recognition and thus led to less importance of the factor in distinguishing between the chosen brands. On the other hand, the longest attribute vectors are the ones of Price and Quality, meaning that these are of utmost importance to consumers in order to differentiate between brands. This outcome regarding Price and Quality being the most important factors for consumers to differentiate between brands, corresponds to the findings of previous research results represented in the literature review.

Proximity between Brands

The Figure 2 below illustrates the perceptual map that was lastly obtained for this data analysis and depicts the positions of the five studied brands relative to the first component representing the x-axis, which we established to be value and the second component representing the y-axis, which we established to be brand recognition.

Figure 2: Brand Perception Map

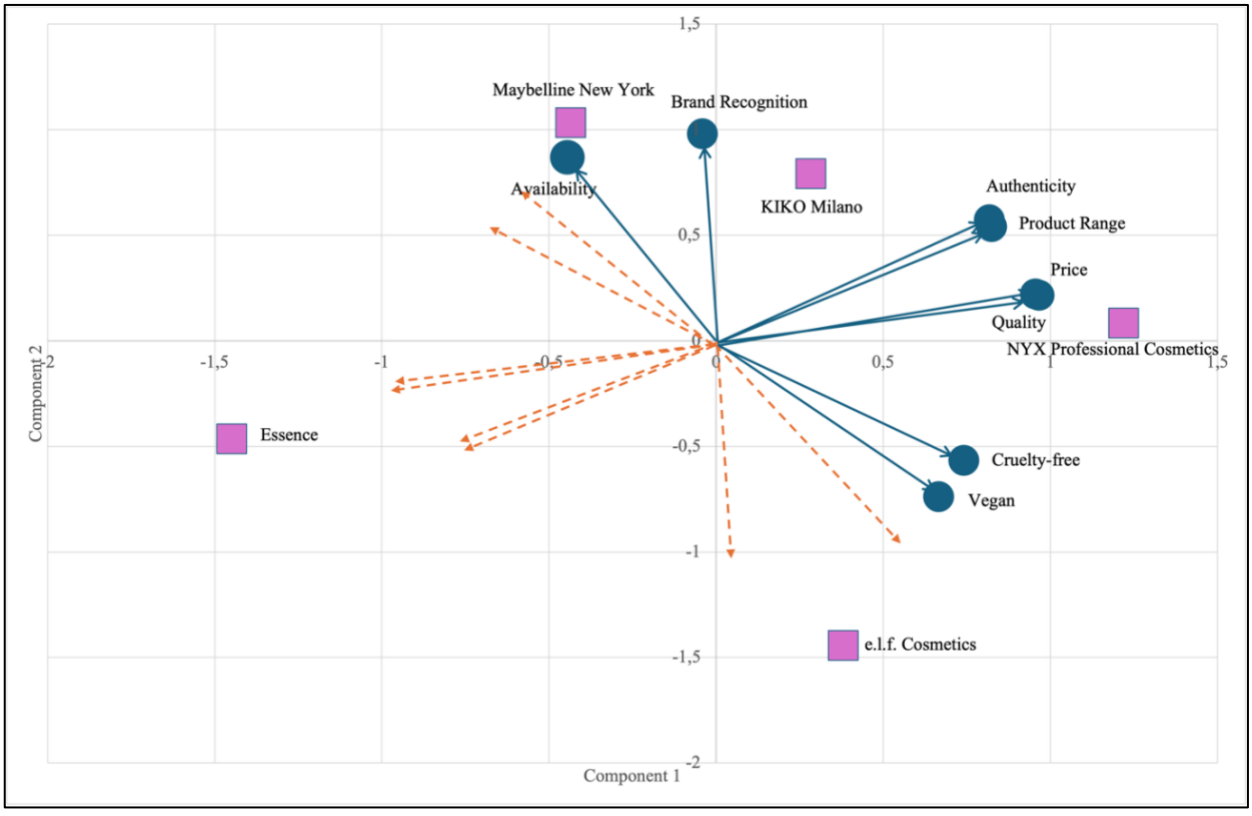


An important aspect when analyzing the map is the proximity between the individual brands on the map. According to Gigauri (2019a), "objects closer together on the map are perceived as more similar, while objects further apart are perceived as more dissimilar" (p.19). Brands that are located close to each other in the perceptual map therefore tend to be in a more direct competition as they are perceived similarly by the consumers. Observing the perceptual map, it is noticeable that the five brands are spread across the map instead of being located next to each other. Subsequently, it can be concluded that the brands do not share similar dimensions profiles and that instead, they possess unique profiles.

In terms of the two components, which we considered to be value and brand recognition it is visible that Essence is perceived to be capturing the low value market with low brand recognition, whereas NYX Professional Makeup and KIKO Milano are perceived to capture the high value market by having a positive perceived brand recognition. Similarly, e.l.f. Cosmetics is perceived

with a higher value but lower brand recognition whereas Maybelline New York on the contrary is perceived the opposite with high brand recognition and lower value. Therefore, only KIKO Milano and NYX Professional Makeup seem to be close enough to be perceived as competing. However, KIKO Milano has a stronger brand recognition and NYX Profession Makeup has a stronger value perception. To draw more specific conclusions about how each brand's profile is perceived by the consumers in terms of all the brand associations included in this research, the brands' position in relation to all the attributes vectors has to be analyzed further by considering the component plot in Figure 3 below.

Figure 3: Component Plot including Negative Vectors



Brand Perception in Relation to Attribute Vectors

Generally, the closer a brand is to an attribute vector the more the brand is differentiated by this attribute. However, besides the mere closeness to an attribute vector, the distance to the origin

plays a crucial role. The farther away from the origin alongside an attribute vector a brand is located, the more associated the brand is with the given attribute. Brands residing close to the center of the map are therefore not strongly differentiated and indicate a generic quality profile. Since all the brands of this study are situated far away from the origin it can be concluded that they are however strongly differentiated.

Regarding the location of the brands in relation to the attribute vectors, it can be seen that KIKO Milano and NYX Professional Makeup are the only two brands in the same part of the perceptual map diagram than the attributes of Price, Quality, Product Range and Authenticity. Especially NYX Professional Makeup is perceived with a high connection to each, Price and Quality. Moreover, both NYX Professional Makeup and KIKO Milano show moderate connections to the perception of Authenticity and Product Range. Concluding from this, it can be said that the brand, NYX Professional Makeup, is strongly perceived as a brand that has on one side high prices but on the other side also high-quality products. In terms of the Authenticity and Product Range perceptions it can be further concluded that both brands, NYX Professional Makeup and KIKO Milano, are perceived as moderately authentic and offering a moderately broad product range.

E.l.f. Cosmetics is the only brand located in the bottom right quadrant together with the vectors of the attributes Vegan and Cruelty-free. Thus, this brand is perceived as vegan and cruelty-free by the consumers, a perception that complies with reality. Among the observed brands e.l.f. Cosmetics is one out of two that is both vegan and cruelty-free. When discussing e.l.f. Cosmetic's position in the perceptual space, the relation to the attribute Availability is also important to mention. If the Availability vector were extended into the opposite quadrant, therefore into the bottom right quadrant, it would pass by close to the point where e.l.f Cosmetics is positioned. Consequently, e.l.f. Cosmetics is perceived to be difficult to obtain. Applying the same negative

extension to the attribute vector of Brand Recognition, it becomes clear that e.l.f. Cosmetics moreover is perceived to have a weak brand recognition.

Maybelline New York, on the other hand, ranks high in terms of the attributes of Availability and Brand Recognition, whereas the attribute Availability differentiates the brand to a greater extent than Brand Recognition. This is due to Maybelline New York's closer proximity to the Availability vector than to the Brand Recognition vector. Furthermore, consumers perceive the brand not to be Vegan and Cruelty-free as these vectors run in the opposite direction. In brief, the perceptual map suggests that consumers perceive the brands, Maybelline New York and e.l.f. Cosmetics, to possess strongly contrasting, almost mutually exclusive attributes and brand profiles.

Out of the five brands, Essence occupies the most peculiar space in the perceptual map, being negatively associated with all the attributes that were analyzed in the survey. Consumers seem to have the strongest pronounced perception regarding the brand's Price and Quality. When extending the vectors of these attributes into the negative space they nearly intersect at the point in which Essence is situated. Additionally, the brand is located at a great distance from the center of the map signifying that Essence is strongly associated with these attributes. Hence, it can be concluded that consumers perceive Essence to be a very cheap brand that offers products of low quality. The same applies to the attributes of Authenticity and Product Range. As Essence lies in the opposite direction of where the attribute vectors of Authenticity and Product Range are pointing, the brand is perceived to perform poorly in these categories as well.

By examining the brands' positions in relation to the attribute vectors we can further deduce whether hypotheses 2a, 2b, 3a, and 3b are supported or not. To facilitate the analysis the examination of hypotheses 2a and 3a were combined. Hypothesis 2a predicts that vegan brands correlate with higher prices, while hypothesis 3a suggests they are linked with superior quality. In our case, the attribute vectors for Price and Quality exhibit a significant overlap, allowing a joint

evaluation of these hypotheses. The same applies to hypotheses 2b and 3b which hypothesize the association of cruelty-free brands with high prices and high quality respectively.

Regarding vegan brands, our findings indicate no significant association with higher prices or superior quality. This conclusion stems from the examination of e.l.f. Cosmetics and Essence, which are the only entirely vegan brands in our sample. Neither brand demonstrates a positive relationship with the Price and Quality vectors on the perceptual map. While e.l.f. Cosmetics shows no noteworthy connection to the consumers' perceptions regarding its price and quality, Essence is positioned diametrically opposite to the direction indicated by the Price and Quality vectors, implying an association with lower prices and inferior quality. Consequently, hypotheses 2a and 3a are not supported by our findings.

When assessing hypotheses 2b and 3b which state that cruelty-free brands are associated with high prices and superior quality, similar results are obtained. Since e.l.f. Cosmetics and Essence are also cruelty-free the above-described remains the same for these two brands. However, in this case, we furthermore must take into consideration NYX Professional Makeup as this brand is also cruelty-free. For this brand, the perceptual map shows a very strong positive relation between the brand and the attributes of Price and Quality. Nevertheless, this does not apply to the other two cruelty-free brands as previously explained. In summary, among the cruelty-free brands, only one demonstrates a link with high prices and superior quality, while the others either lack such associations entirely or are even negatively associated with the attributes. Hence, insufficient evidence has been found to support hypotheses 2b and 3b, therefore they are not supported by our findings.

Consumer Preferences

Complementing the perceptual map results regarding the perceptions of certain brands in correspondence to key characteristics and brand personality attributes, the conjoint analysis was conducted to find out which factors consumers prefer and pay most attention to when choosing their makeup brands. This is essential to be able to conclude how brands can better position themselves in the market by also following the general goal of being socially and morally more sustainable. Starting again, with an overview of the sample answering the consumer preference survey, conclusions were drawn towards which product attributes are most important for consumers when choosing makeup and the demographic factors impacting those decisions.

Sample Characteristics

Overall, 987 people entered the survey for the conjoint analysis. From those, the majority with 87.6% (865 participants) just opened the survey link but did not complete the survey (Appendix F – Figure 2). From the 865 participants that opened the survey link but did not complete the survey, 792 participants (91.6%) did not even click further from the survey introduction to reach the first question. Another 42 participants (4.9%) of those that just opened the survey link but did not complete the survey reached the conjoint part but did not finish the survey. The remaining 31 participants (3.5%) of the just opened the survey link but did not complete survey finished each among different demographic questions (Appendix F – Table 3).

Moreover, another 1.9% (19 participants) were purposely screened out with the question of having bought makeup in Portugal before and answering with “No”. Additionally, 3.4% (34 participants) were considered as incomplete survey responses as the respondents did not look through all alternatives of the preference part. This means that the last question they looked at was the conjoint part of the survey, but they did not answer it. Conclusively, this led to a final

participation and survey completion rate of only 7% (69 participants), which results we were able to use for the continuing analysis.

Looking at the demographics of our 69 participants included in the survey results (Appendix F – Figures 4-16) we can see that 98.6% of the participants were female and only 1.4% were male. In regard to age, it can be seen that the majority of the participants with 60.9% was between 19-24 years old. This was followed by the second largest age group in the sample, the 25-34 years old making up 20.3%. The income of the participants varied strongly with the most present however being that 39.1% of the participants stated to have no income at all. Further, 75.4% of the participants were originally from Portugal whereas the other 24.6% stated to be from different countries. Moreover, 82.6% of the participants are living in urban areas whereas 17.4% live in land areas. The educational level of the participants varied slightly with 62.3% stating to have or currently pursue their master's degree, 29% to have or currently pursue their bachelor's degree and lastly 8.7% having high school as their highest education level. A significant number of participants with 40.6% works in the areas of Business/Finance/Insurance whereas another significant amount with 30.4% stated None of the above/Other. The other participants work in the mainly in areas like Health/Social Care with 14.5%, and in Public Sector/Education with 7.2%. The dietary preferences, with 81.2%, were predominantly presented by the Omnivorous option. The remaining participants where either Vegetarian with 8,7%, Pescetarian with 7.2%, or Vegan with 1.4%. The social media usage varied among the participants but with 44.9% stating to use social media 2-3 hours, and 33.3% using social media 1-2 hours. Further, among the participants there were only a few religions present from the options presented in the survey. 53.6% stated to be Catholic, 20.3% were Atheists, 13% Agnostic, and 8.7% Protestant. The majority of the participants owns pets with 59.4% whereas 40.6% have no pets. From those most participants having pets 82.9% own dogs, followed by cats with 41.5% and birds with 12.2%. Lastly, the importance of sustainability and animal welfare in

the participants daily life varied strongly again. On the implemented scale of 1 to 5, with 1 being not important and 5 being very important, 4.3% of the participants answered with a 1 (not important), 14.5% with a 2, 20.3% with a 3, 33.3% with a 4, and 27.5% with a 5 (very important).

Conjoint Evaluation

Before diving deeper into the demographics and their correlations and effects some general conclusions are drawn from conjointly directly regarding the preferences for the brands included in the study and in regard to the attribute preferences amongst one another. Following this general overview of results, we then had a closer look at the correlations among the demographics with the attributes included in this conjoint. Afterwards, by considered the results of extensive regression analysis that were further computed for each effect prospected through the hypothesis we were lastly assessing the effects of the demographic factors for each attribute and aiming to reach significant and profound conclusions for our hypotheses.

Importance of Attributes

Comparing all attributes in terms of their relative importance (Appendix F – Table 17), it can be concluded that Price is the attributes most important to consumers (29.45%). This means that consumers decide preferably based on price which combination best fits them. The second most important attribute for consumers is Cruelty-free (26.94%). This is an interesting finding for our research as this suggests a high relevance of cruelty-free labels on products. Following this, it can be concluded that furthermore, Brand (17.34%) is the third most important, Vegan (16.6%) the fourth most important and Packaging (9.67%) the least important attribute.

Preferences of Levels

Having a closer look at the preferences of each attributes' levels (Appendix F – Tables 1-4), we can immediately see which levels are strongly preferred over the other levels for each attribute. In this regard looking at the strongest attribute of Price it is shown that consumers strongly

prefer the lowest price option (5€; partworth = 4.558) over the medium (10€; partworth = -0.601) or high (20€; partworth = -3.957) price option. This finding is logically understandably as also underlined in the literature review, consumers generally prefer lower prices. Following this structure, the same accounts for the attribute Cruelty-free, where consumers strongly prefer (partworth= 3.894) the cruelty-free label option over the no cruelty-free label option (partworth = -3.894). Simultaneously, the same effect can be seen within the attribute Vegan label. Consumers, again, strongly prefer (partworth = 2.4) the vegan label option over the no vegan label option (partworth = -2.4). Moreover, in terms of the attribute Packaging there is a general preference for the green and sustainable packaging option (partworth= 1.716) in comparison to the neutral (partworth = -1.08) and pink one (partworth = -0.636). However, between these two, consumers slightly preferred the pink option.

Preference of Brands

Through an analysis of the brand preference chart obtained from Conjointly (Appendix F - Figure 18), valuable insights about brand are preferred among respondents can be obtained. Each brand's preference is illustrated by a volume resembling a violine which's shape sheds light on the variability of the brand's preference. The median preference, on the other hand, is marked in the form of a diamond for each brand. To determine which brand is preferred the most, the median preference of the studied brands needs to be compared, which in our case yields the highest score of 12.9 for Maybelline New York. Therefore, it can be concluded that this brand is the most preferred one out of the sample. However, despite its high median preference score, Maybelline New York exhibits a relatively broad distribution which suggests some level of variability in the preference among the survey participants. Following closely behind is KIKO Milano with a median preference of 9.4. Examining KIKO Milano’s preference distribution it is noticeable that it is narrower, indicating that the preference towards this brand is more consistent than the previous. In

third place, we find NYX Professional Makeup, which achieves a median preference of 5. Although this brand reaches the highest absolute preference score, its relatively broad distribution results in a lower median preference compared to Maybelline New York, and KIKO Milano. The fourth most preferred brand is e.l.f. Cosmetics which displays a negative median value of -3.9, indicating a generally unfavored position among the consumers. However, e.l.f. Cosmetics still outperforms Essence, which is the least preferred brand with a median preference of -13.4.

In summary, the analysis of the graph shows that Maybelline New York is the most favored brand among the respondents while Essence emerges as the least preferred. Furthermore, the variability in preference is interpretable for each brand, which is broader, for example, for e.l.f. Cosmetics than for KIKO Milano.

In the context of the thesis's research topic, it is interesting to mention that the two vegan and cruelty-free brands e.l.f. Cosmetics and Essence were the least preferred ones, while Maybelline New York, the only brand out of the sample that is neither vegan nor cruelty-free was the brand with the highest median preference.

Demographic Factors

Shifting from the attributes to the demographic factors we first considered the correlations of the demographic factors towards all of the attributes to test for any upfront correlations. After the general overview of correlations, we looked at the results of the individual regression analysis for each individual demographic factor. Those individual regression analysis examined specifically each of the demographic factors and their effect that we expected to find due to the literature review findings and in terms of our hypothesis.

Primary Correlation Matrix. Considering the correlation matrix (Appendix F - Figure 28) it can be seen that there was no strong or medium correlation to be found among any of the demographic factors with the attributes and their levels. This is evident by no correlation value

even reaching above 0.5 or below -0.5. The strongest correlations found among our demographics with the attributes were only slightly above 0.3 and below -0.3.

Taking this into account, it can be seen that there is a minimal positive correlation present between owning a pet and the overall importance of the attribute vegan label (0.321). More specifically, owning pets has a minimal positive correlation with preferring vegan labels (0.322) and a minimal negative correlation with preferring no vegan labels (-0.322). The same minimal positive correlation can be seen in terms of owning pets and the overall importance of the attribute cruelty-free label (0.349). Again, owning a pet in this regard has a minimal positive correlation with preferring cruelty-free label (0.346) and a minimal negative correlation preferring no cruelty-free label (-0.346). Interestingly, it can be also seen that there is a minimal positive correlation of owning pets with the overall importance of the attribute price (0.318). More precisely, owning a pet has a minimal positive correlation with preferring the lowest price option (0.320) and a minimal negative correlation with preferring the medium price option (-0.343), however the correlation with the highest price option is slightly above -0.3 (-0.299) and thus not being highlighted in the matrix. In regard to pet type variations a minimal positive correlation can be further found with overall importance of the cruelty-free label attribute (0.338). Here again, there is a minimal positive correlation with preferring the cruelty-free label (0.339) and a minimal negative correlation with preferring the no label option (-0.339). In terms of the correlation between pet variation and vegan labels the correlations are slightly below 0.3 (0.291) and very slightly above -0.3 (-0.291) but lead towards the same direction and findings as already drawn from the correlation with the vegan labels. This suggests the right direction in terms of our H14a/b and H15a/b that owning pets and also owning different types of pets is having a positive effect in terms of a preference for vegan and cruelty-free labels. However, these correlations are not significant enough to be able to conclude from them.

Another correlation that is highlighted in the matrix is the minimal negative correlation of the dietary preference with the attribute overall brand importance (-0.332) and more specifically with its level and thus the preference of the brand NYX Professional Makeup (-0.329).

Lastly, a minimal positive correlation can be further found between the importance of sustainability and animal welfare and the preference for the cruelty-free label option (0.310) and therefore also a minimal negative correlation for the preference for no cruelty-free label (-0.310). Same as for the pets, when looking at the correlations between the importance of sustainability and animal welfare with preferring vegan labels (0.259), the correlations correspond but are not strong enough to be highlighted in the matrix. This again shows that with H1a and H1b we are leading towards the right directions however again the correlations are not strong enough to be conclusive.

Gender. Due to the uneven distribution of genders within our sample, we face significant limitations in studying the influence of gender on purchasing behavior toward vegan and cruelty-free makeup. Specifically, our sample comprises only 1.4% of males (Appendix F – Figure 4), which is substantially disproportionate. This uneven distribution in the sample composition prevents us from conducting a reliable and generalizable analysis regarding how gender may affect consumer choices for vegan and cruelty-free products. As a result, any findings or conclusions drawn from such an analysis would lack statistical validity and could be misleading. Therefore, we have decided not to include gender as a variable in our current study of consumer behavior toward these products.

Age. Before starting the regression analysis, we had to exclude certain age groups from our study due to their insufficient representation in the sample (Appendix F – Figure 5). Specifically, individuals aged under 18, and those between 35-44, were excluded because each of these groups comprised less than 5% of our total sample. This step was necessary to ensure the reliability and validity of our analysis outcomes.

The first regression analysis (Appendix F – Table 5) performed in terms of age allowed us to conclude that among the age groups considered, only the age group of 25-34 significantly affects the importance attributed to vegan labeling. This determination is based on comparing the alpha level of 0.05 with their respective p-values (0.007), since alpha is higher than the p-value, it indicates the variable is statistically significant. In contrast, the age groups "19-24" and "45-54" do not show statistically significant effects, as their p-values (0.112 and 0.605) respectively are higher than the alpha level, indicating that their influence on vegan labeling importance is not statistically significant, suggesting that their attitudes towards vegan labeling are not markedly different from those aged 55-65. The age group 25-34 shows a statistically significant positive effect, rating the importance of having a vegan label 2.239 points higher than the baseline (age 55-65). This is the only age group with a significant effect, suggesting they place more importance on vegan labeling compared to the oldest age group (55-65). R-squared value indicates that approximately 13.3% of the variability in the importance people place on having a vegan label can be explained by the differences in age groups within this model. This is relatively low, suggesting that age alone does not strongly predict the importance placed on vegan labeling and that we should consider other factors beyond age that could influence consumer preferences for vegan products. In conclusion, the regression analysis demonstrates that the age group 25-34 places significantly more importance on having a vegan label compared to the older baseline group of 55-65. Therefore, we cannot accept or reject Hypothesis 7a, because our Hypotheses expected that Generation Z (individuals aged 14-34) preferred vegan makeup, but with our test, we concluded that even though that is accepted for individuals aged 25-34, is not accepted for individuals 19-24.

The second regression analysis (Appendix F – Table 6) performed in terms of age allows us to conclude that among the age groups considered, only the "age 25-34" group significantly affects the importance attributed to cruelty-free labeling. This determination is based on comparing

the alpha level of 0.05 with their respective p-values (0.008), since alpha is higher than the p-value, it indicates the variable is statistically significant. In contrast, the age groups "19-24" and "45-54" do not show statistically significant effects, as their p-values (0.067 and 0.361, respectively) are higher than the alpha level, indicating that their influence on cruelty-free labeling importance is not statistically significant, suggesting that their attitudes towards cruelty-free labeling are not markedly different from those aged 55-65. The age group 25-34 shows a statistically significant positive effect, rating the importance of having a vegan label 3.447 points higher than the baseline (age 55-65). This is the only age group with a significant effect, suggesting they place more importance on vegan labeling compared to the oldest age group (55-65). The R-squared value indicates that approximately 11.4% of the variability in the importance people place on having a vegan label can be explained by the differences in age groups within this model. This is relatively low, suggesting that age alone does not strongly predict the importance placed on vegan labeling and that we should consider other factors beyond age that could influence consumer preferences for cruelty-free makeup. In conclusion, the regression analysis demonstrates that the age group 25-34 places significantly more importance on having a cruelty-free label compared to the older baseline group of 55-65. Therefore, we cannot accept or reject Hypothesis 7b, because our Hypotheses expected that Generation Z (individuals aged 14-34) preferred cruelty-free makeup, but with our test, we concluded that even though that is accepted for individuals aged 25-34, is not accepted for individuals 19-24.

Education. In the first regression analysis (Appendix F – Table 7) regarding education, conducted to assess the impact of education levels on the importance placed on having a vegan label, we find that none of the education level variables bachelor's and master's degrees are statistically significant. The p-values for bachelor's and master's degrees are 0.161 and 0.616, which are higher than alpha =0.05, indicating that these groups do not significantly differ from the

high school baseline in terms of their valuation of vegan labels. In conclusion, the regression analysis suggests that education level whether bachelor's or master's degree does not have a statistically significant impact on the importance placed on having a vegan label when compared to having a high school education (lower level of education). Therefore, the level of education (higher or lower) doesn't impact the importance placed on having a vegan label. Consequently, we reject Hypothesis 8a, of individuals with a higher level of education preferring vegan makeup.

In the second regression analysis (Appendix F – Table 8) regarding education, conducted to assess the impact of education levels on the importance placed on having a cruelty-free label, we find that none of the education level variables bachelor's and master's degrees are statistically significant. The p-values for bachelor's and master's degrees are 0.474 and 0.941, which are higher than alpha =0.05, indicating that these groups do not significantly differ from the high school baseline in terms of their valuation of cruelty-free labels. In conclusion, the regression analysis suggests that education level whether bachelor's or master's degree—does not have a statistically significant impact on the importance placed on having a cruelty-free label when compared to having a high school education (lower level of education). Therefore, the level of education (higher or lower) doesn't impact the importance placed on having a cruelty-free label. Consequently, we reject Hypothesis 8b, of individuals with higher levels of education preferring cruelty-free makeup.

Profession. Before starting the regression analysis in terms of profession, we had to exclude certain professional groups from our study due to their insufficient representation in the sample (Appendix F – Figure 10). Especially, people who work in "Hospitality, Catering, or Leisure Services" were only 2.9% of all respondents, and those working in "Transport, Retail, or Wholesale" were just 4.3%. These groups were excluded from our sample because they comprised less than 5% of our total sample. This step was necessary to ensure the reliability and validity of our analysis outcomes.

The first regression model (Appendix F – Table 9) investigates how various professional areas influence the importance respondents place on having a vegan label. With this analysis, we conclude that the professional sectors Public Sector or Education, Health or Social Care, and Business and Other Services, Finance or Insurance are not statistically significant, since their p-values (0.242, 0.637, and 0.596 respectively) are higher than alpha (0.05). In conclusion, the regression analysis suggests that the professional area does not have a significant impact on the importance placed on vegan labeling. Consequently, we reject Hypothesis 9a, of individuals working in the health or social care professions preferring vegan makeup.

The second regression model (Appendix F – Table 10) investigates how various professional areas influence the importance respondents place on having a cruelty-free label. With this analysis, we conclude that the professional sectors Public Sector or Education, Health or Social Care, and Business and Other Services, Finance or Insurance are not statistically significant, since their p-values (0.359, 0.891, and 0.420 respectively) are higher than alpha (0.05). In conclusion, the regression analysis suggests that the professional area does not have a significant effect on the importance placed on cruelty-free labeling. Consequently, we reject Hypothesis 9b, of individuals working in the health or social care professions preferring cruelty-free makeup.

Income. In the first regression analysis regarding income, individuals with an income above 3000 were excluded due to their limited representation, comprising less than 5% of the sample (Appendix F – Figure 6). Among the income groups considered, only those earning between 721-1000 and 1501-2000 showed a significant effect on the importance attributed to vegan labeling (Appendix F – Table 11). Their respective p-values of 0.004 and 0.033 indicated statistical significance compared to the alpha level of 0.05. Individuals within these income brackets demonstrated a statistically significant positive effect on the importance of having a vegan label, rating it 2.137 points higher and -1.369 points lower than the baseline (no income), respectively.

However, other income groups, including < 720, 1001-1500, and 2001-3000, did not show statistically significant effects on vegan labeling importance, with p-values exceeding the alpha level. The R-squared value indicated that approximately 24.2% of the variability in the importance placed on having a vegan label could be explained by income differences within this model. However, this relatively low value suggested that income alone did not strongly predict the importance of vegan labeling, indicating the need to consider other influencing factors. In summary, the regression analysis demonstrated that individuals earning between 721-1000 placed significantly more importance on having a vegan label, being more likely to choose that label compared those individuals with no income and income 1501-2000 who give less importance compared to the baseline, being less likely to choose a vegan label. Consequently, we reject the Hypothesis 10a, that individuals with higher income are expected to prefer vegan makeup.

The second regression analysis regarding income indicates that among the income groups considered, only those earning between 721-1000 exhibit a significant effect on the importance attributed to cruelty-free labeling, with a p-value of < 0.001, indicating statistical significance (Appendix F – Table 12). Individuals within the income bracket of 721-1000 show a statistically significant positive effect on the importance of having a cruelty-free label, rating it 3.990 points higher than the baseline (no income). However, other income groups, including > 720, 1001-1500, 1501-2000, and 2001-3000, do not show statistically significant effects on cruelty-free labeling importance, as their respective p-values (0.904, 0.857, 0.213, and 0.479) are higher than the alpha level. The R-squared value indicates that approximately 23.6% of the variability in the importance placed on having a cruelty-free label can be explained by income differences within this model. In summary, the regression analysis demonstrates that individuals earning between 721-1000 place significantly more importance on having a cruelty-free label compared to the baseline.

Consequently, we reject the Hypothesis 10b, that individuals with higher income are expected to prefer cruelty-free makeup.

Religion. For the regression analysis in terms of religion, the "other" religion group, comprising 2.9% (Appendix F – Figure 13) of the total sample, was excluded as its representation fell below 5%. However, the Muslim group, despite being below 5%, was included in the analysis due to its relevance.

The first regression analysis concerning religion, revealed that among the religion groups considered, only atheists exhibit a significant effect on the importance attributed to vegan labeling, with a p-value of 0.014 (Appendix F – Table 13), indicating statistical significance. Atheists demonstrate a statistically significant positive effect, rating the importance of having a vegan label 1.296 points higher than the baseline (Catholic religion). However, other religion groups, including Protestants, Muslims, and Agnostics, do not show statistically significant effects on vegan labeling importance, as their respective p-values (0.210, 0.955, and 0.641) exceed the alpha level. The R-squared value indicates that approximately 10.3% of the variability in the importance placed on having a vegan label can be explained by differences in religion within this model. In summary, the regression analysis indicates that atheists prioritize having a vegan label significantly more than Catholics. Consequently, we reject the Hypothesis 11a, that individuals who identify with the Muslim religion are expected to prefer vegan makeup.

The second regression analysis concerning religion, indicates that among the religion groups considered, only atheists show a significant effect on the importance attributed to cruelty-free labeling (Appendix F – Table 14), with a p-value of 0.013, indicating statistical significance. Atheists exhibit a statistically significant positive effect, rating the importance of having a cruelty-free label 2.044 points higher than the baseline. However, other religious groups, including Protestants, Muslims, and Agnostics, do not show statistically significant effects on cruelty-free

labeling importance, as their respective p-values (0.267, 0.767, and 0.117) exceed the alpha level. The R-squared value indicates that approximately 11.6% of the variability in the importance placed on having a cruelty-free label can be explained by differences in religion within this model. In summary, the regression analysis demonstrates that atheists shows significantly more importance in having a cruelty-free label compared to Catholics. Consequently, we reject the Hypothesis 11b, that individuals with identifying with the Muslim religion are expected to prefer cruelty-free makeup.

Living Location. In our examination of how different living locations affect the importance respondents place on having a vegan label, the first regression analysis in terms of living location found that urban areas did not exhibit statistical significance (Appendix F – Table 15). The p-value associated with urban areas was 0.418, higher than the alpha level. Therefore, the regression analysis indicates that living location does not significantly affect the importance respondents place on vegan labeling. Specifically, residing in urban areas, as compared to the baseline of land areas, does not influence the prioritization of vegan labels. In conclusion, we reject the Hypothesis 12a, that individuals who live in urban areas are expected to prefer vegan makeup.

Similarly, in our second investigation in terms of living location, concerning how different living locations influence the importance respondents place on having a cruelty-free label, the regression analysis concluded that urban areas did not show statistical significance (Appendix F – Table 16). The p-value associated with urban areas was 0.265, exceeding the alpha level. Thus, the regression analysis indicates that living location does not significantly affect the importance respondents place on cruelty-free labeling. Specifically, residing in urban areas, as compared to the baseline of land areas, does not influence the prioritization of cruelty-free labels. In conclusion, we reject the Hypothesis 12b, that individuals who live in urban areas are expected to prefer cruelty-free makeup.

Dietary Preferences. In the conjoint survey, various dietary preference groups were included, encompassing omnivorous, pescatarian, vegetarian, vegan, and an "other" category. Upon scrutinizing the responses, it became apparent that both the "vegan" and "other" groups comprised a relatively small proportion, each representing less than 5% of the sample (Appendix F – Figure 11). Consequently, the decision was made to exclude the "other" group, while retaining the "vegan" category due to its pivotal relevance to the study at hand.

The outcomes yielded by the first regression analysis in terms of dietary preferences, investigating the relationship between dietary preferences and the presence of a vegan label unveiled noteworthy findings (Appendix F – Table 17). All selected dietary preferences demonstrated a statistically significant effect on the perceived importance of a vegan label, as evidenced by their respective p-values (0.005, 0.007, and 0.017), each falling below the alpha threshold of 0.05. Upon closer examination of the coefficients associated with each dietary preference, distinct conclusions can be drawn. Firstly, the coefficient for the "vegan" category (B = 3.750) emerged as significantly positive, indicating that individuals adhering to a vegan diet exhibit a heightened inclination towards selecting products featuring a vegan label. However, it's pertinent to acknowledge the relatively lower representation of this group within the sample, suggesting a potential overvaluation of this attribute. Secondly, the coefficient for the "pescatarian" category (B = 2.043) also proved statistically significant and positive. This implies that individuals identifying as pescatarians display an increased propensity to opt for products with a vegan label. Lastly, the coefficient for the "vegetarian" category (B = 1.810) similarly presented a positive and significant association, indicating a receptiveness among vegetarians towards selecting products bearing a vegan label. The R-squared value indicates that approximately 23.6% of the variability in the importance placed on having a vegan label could be explained by dietary preferences within

this model. However, this value suggests that dietary preferences alone do not strongly predict the importance of vegan labeling, indicating the need to consider other influencing factors.

In summary, all coefficients pertaining to dietary preferences exhibited positive and statistically significant effects, signaling that these groups are more inclined than omnivores to prioritize the presence of a vegan label. This comprehensive analysis underscores the substantial influence of dietary preferences on the perceived importance of a vegan label, shedding light on the nuanced dynamics of consumer behavior in relation to vegan products. Therefore, we are able to accept Hypothesis 13a, which states that vegans and vegetarians are more likely to buy vegan makeup.

The outcomes derived from the second regression analysis in regard to dietary preferences, examining the relationship between dietary preferences and the presence of a cruelty-free label unveiled noteworthy insights (Appendix F – Table 18). It was revealed that all selected dietary preferences, with the exception of "vegan" (p-value: 0.145), exerted a statistically significant effect on the perceived importance of a cruelty-free label. This determination was based on the observed p-values (0.007 and 0.011), both of which fell below the predetermined alpha level of 0.05. Delving into the interpretation of each coefficient, distinct conclusions emerge. Firstly, the coefficient for the "pescatarian" category (B = 3.16) emerged as statistically significant and positive. This indicates that individuals identifying as pescatarians exhibit a heightened propensity to opt for products bearing a cruelty-free label. Similarly, the coefficient for the "vegetarian" category (B = 2.746) also displayed a positive and significant association. This suggests a receptiveness among vegetarians towards selecting products featuring a cruelty-free label. The R-squared value indicates that approximately 19% of the variability in the importance placed on having a vegan label could be explained by dietary preferences within this model. However, this value suggests that dietary

preferences alone do not strongly predict the importance of vegan labeling, indicating the need to consider other influencing factors.

In summary, the coefficients for both vegetarian and pescatarian dietary preferences were found to be positive and statistically significant. This implies that individuals belonging to these groups have a greater propensity than omnivores to prioritize the presence of a cruelty-free label. This comprehensive analysis underscores the substantial influence of dietary preferences on the perceived importance of a cruelty-free label, thereby illuminating the intricate dynamics of consumer behavior in relation to ethical product attributes. In conclusion, we cannot accept or reject Hypothesis 13b, because our Hypotheses expected that vegans and vegetarians preferred cruelty-free makeup, but with our test, we concluded that even though that is accepted for vegetarians, is not accepted for vegans.

Pet Ownership. As for the demographic factor of pets both, the group having pets, and the group not having pets were sufficiently represented in the sample and hence no level had to be excluded for the regression analysis.

Examining the results of the first regression analysis in terms of pet ownership, they revealed that owning pets significantly impacts the importance of the presence of a vegan label as the p-value of 0.007 is below the alpha level of 0.05 (Appendix F – Table 19). Respondents owning pets demonstrated a significant on the importance of having a vegan label, rating its importance 1.115 points higher than the baseline which was the group of respondents not owning animals. The R-squared value indicates that approximately 10.4% of the variability in the importance people place on having a vegan label can be explained by their owning a pet within this model. This is relatively low, suggesting that pet ownership by itself does not strongly predict the importance placed on vegan labeling, suggesting that we should consider other influencing factors beyond pet ownership.

Additionally, a second regression analysis was performed to investigate to impact that having a single kind of pet or multiple kinds of pets has on the importance of vegan labeling compared to not owning any pets at all. Hereby, both groups, Single Type and Multiple Type were found to show a significant effect on the importance (Appendix F – Table 20), as their respective p-values of 0.015 and 0.042 indicated statistical significance compared to the alpha level of 0.05. Both observed groups demonstrate a statistically significant positive effect, rating the importance of having a vegan label 1.088 points and 1.178 points higher than the baseline (No Pets). The R-squared value indicated that approximately 10.4% of the variability in the importance placed on having a vegan label could be explained by owning one or multiple types of animals within this model. In summary, the regression analysis indicates that pet owners, both those who own a single type of pet and those who own multiple ones, prioritize having a vegan label significantly more than respondents not owning any pets which means that the hypotheses 14a and 15b can be accepted.

In the same way, a third regression analysis was performed in terms of pets to conclude the effect pet ownership has on the importance of cruelty-free labeling. Here the results demonstrated that owning a pet significantly impacts the importance attributed to cruelty-free labeling (Appendix F – Table 20). This conclusion can be drawn by comparing the p-value of 0.004 to the predetermined alpha level of 0.05. Since alpha is higher than the observed p-value, it can be established that the variable of pet ownership is statistically significant. In comparison to the baseline (respondents with no pets), pet owners demonstrate a statistically significant positive effect, rating the importance of having a cruelty-free label 1.864 points higher. The R-squared value indicates that 12.0% of the variability of this importance can be explained by owning a pet. However, as this percentage is relatively low it indicates that owning pets alone is not a strong

predictor for the importance of cruelty-free labeling and that further impacting factors need to be taken into consideration.

Just like for the vegan labels, another fourth regression analysis was carried out to further investigate to impact that having a single kind of pet or multiple kinds of pets has on the importance of cruelty-free. Again, both groups, Single Type and Multiple Type revealed to have a significant effect on the importance of cruelty-free labeling (Appendix F – Table 20), as their respective p-values of 0.014 and 0.012 remained below the alpha level of 0.05. Individuals having one or multiple types of pets demonstrated a statistically significant positive effect on the importance of having a vegan label, rating it 1.700 and 2.261 points higher than the baseline (Not Pets), respectively. The R-squared value indicated that approximately 12.5% of the variability in the importance placed on having a vegan label could be explained by owning one or multiple types of animals within this model. In conclusion, the regression analysis demonstrated that individuals owning pets, both those who own a single type of pet and those who own multiple ones, placed significantly more importance on having a cruelty-free label compared to those with no pets. According to these results the hypotheses 14b and 15b are supported and it thus can be said that owning a pet and owning multiple pet types of pets is having a positive effect on the consumer's preference for cruelty-free makeup products.

Social Media Usage. In our investigation into social media's effect on vegan labeling, we excluded the group with social media usage per hour (>5 hours) due to its representation being less than 5% of our total sample (Appendix F – Figure 12).

Upon the first analysis regarding social media usage and vegan labels, social media usage per day of 1-2 hours, 2-3 hours, and 4-5 hours did not exhibit statistical significance, with respective p-values of 0.778, 0.853, and 0.929 (Appendix F – Table 21), surpassing the alpha level of 0.05. Consequently, the regression analysis suggests that social media usage does not

significantly impact the importance placed on vegan labeling. In conclusion, we reject Hypothesis 16a, that individuals who spend on social media more time are expected to prefer vegan makeup.

Upon the second examination regarding cruelty-free labels and social media usage per day of 1-2 hours, 2-3 hours, and 4-5 hours, the results did not show statistical significance, with respective p-values of 0.981, 0.728, and 0.837 (Appendix F – Table 22), exceeding the alpha level of 0.05. Therefore, the regression analysis suggests that social media usage does not significantly influence the importance placed on cruelty-free labeling. In conclusion, we reject Hypothesis 16b, that individuals who spend on social media more time are expected to prefer cruelty-free makeup.

Importance of Sustainability and Animal Welfare. The results of the first regression analysis between the vegan label and the importance of sustainability and animal welfare were significant, as it was possible to conclude that sustainability and animal welfare (the way people care about these issues) has a statistically significant effect on the importance of the presence of a vegan label (Appendix F – Table 23). This is justified by the fact that our p-value of 0.031 is lower than our alpha (0.05). Looking at the coefficients obtained from the regression analysis, we can conclude that the coefficient for the importance of sustainability and animal welfare (B=0.382) is positive. This positive coefficient means that respondents who care more about sustainability and animal welfare rate the importance of a vegan label significantly higher. This means that the more people care about sustainability and animal welfare, the more important a vegan label is for a product. Furthermore, the r-squared ($R^2 = 0.067$) shows that approximately 6.7% of the variance in the importance of a vegan label is explained by the presence of sustainability and animal welfare in the lives of the people included in the model. This percentage is relatively low, suggesting that sustainability and animal welfare alone do not strongly predict the importance of having a vegan label and that other factors should be considered as they may also influence consumer preferences for vegan products. In conclusion, the results suggest that sustainability and animal welfare do have

a significant impact on the perceived importance of products having a vegan label. Consequently, we accept Hypothesis 1a, of individuals with a general focus on environmental topics like sustainability and animal welfare in their daily lives, prefer vegan makeup products.

The second regression analysis conducted on the relationship between the presence of a cruelty-free label and the importance attributed to sustainability and animal welfare revealed statistically significant findings (Appendix F – Table 24). These results confirm that individuals' concern for sustainability and animal welfare significantly influences the perceived importance of a cruelty-free label. The statistical significance of this relationship is underscored by a p-value of 0.01, which falls below the conventional alpha threshold of 0.05 Examining the coefficients provided by the regression analysis, it is evident that the coefficient associated with the importance of sustainability and animal welfare (B = 0.711) is positive. This positive coefficient indicates that individuals who prioritize sustainability and animal welfare rate the importance of having a cruelty-free label significantly higher. In essence, a greater emphasis on sustainability and animal welfare correlates with a stronger positive impact of a cruelty-free label on a product. Furthermore, the coefficient of determination ($R^2 = 0.096$) suggests that approximately 9.6% of the variance in the perceived importance of a cruelty-free label can be explained by the consideration of sustainability and animal welfare in people's lives, as included in the model. Although this percentage is relatively modest, it highlights the influence of sustainability and animal welfare on consumer perceptions of cruelty-free products. Nonetheless, it also implies that other factors not captured in the model may contribute to consumer preferences for cruelty-free products. In conclusion, the analysis underscores the significant effect of sustainability and animal welfare considerations on the perceived importance of products bearing a cruelty-free label. This emphasizes the importance of integrating sustainability and animal welfare concerns into marketing strategies for vegan products. In conclusion, we accept Hypothesis 1b, of individuals with a general focus on environmental

topics like sustainability and animal welfare in their daily lives, prefer cruelty-free makeup products.

Packaging. Regarding the packaging, multiple regression analyses were conducted to examine if participants with specific demographic factors prefer certain packaging types as has been hypothesized previously. In the first regression analysis, it was studied if consumers who are concerned about the topics of sustainability and animal welfare prefer the green and sustainable packaging. As the p-values for this analysis of 0.113 (Appendix F – Table 25) exceeds the alpha level of 0.05 it can be concluded that no significant correlation between the importance of sustainability and animal welfare to a consumer and their preference for the green and sustainable packaging prevails. Thus, the hypothesis 5a must be dismissed.

Two further regression analyses were run concerning the packaging in relation to age. One to investigate if the age of the participants impacts the preference for the pink and unique packaging and another to test if the participants' age affects the preference for the clean and minimalistic packaging. For both packaging designs the p-values of all observed age groups were considerably above the alpha-level of 0.05 (Appendix F – Table 26 and Table 27), meaning no age group demonstrated a significantly higher preference for any packaging. Consequently, hypotheses 5b and 5c are to be rejected as no significant evidence has been found to support them.

Discussion

[Group Contribution]

Theoretical Implications and Contributions

When looking at all the results that have been found within the study conducted, it can be seen that first of all, for our five brands included in this study, we found that the perceptions often do not

match with the brands' actual values. This is strongly seen in terms of vegan and cruelty-free brands not being perceived as such.

In regard to the product attributes, it was found that price is the most important and thus impactful for consumers when comparing it to brand, vegan label, cruelty-free label, and lastly packaging design. More specifically, the lowest price option (5€) was strongly preferred by consumers. This contributes to the general research in terms of consumers' consumption preferences when being exposed to product attributes. What has been interesting to find is that from the five product attributes included within our study, cruelty-free label was the second most preferred which underlines how the trend of more ethical products is emerging and becoming the norm.

In terms of the demographics, we can see that the younger age group of 25-34 years old was positively connected to the vegan and cruelty-free label presence, meaning that this younger age group prefers having vegan and also cruelty-free labels over other product attributes. This is also congruent and further contributes to the literature review findings showing that the trend towards more ethical products is strongly happening among the younger generations. When looking at income it was found that the income groups earning 721-1000 Euros per month and earning 1501-2000 Euros per month, of all the other income groups, are the only ones connected to preferring the vegan and cruelty-free labels over other product attributes. In this regard, we can therefore assume that those are the income levels where consumers are able to potentially overcome perceived and potential price premiums for these more ethical products. Moreover, since these salary groups are rather in the lower section of the scale a possible connection might be drawn between the lower income groups belonging to the younger group of our sample. Regarding religion, only atheists exhibit a significant effect on the importance attributed to vegan and cruelty-free labels, placing significantly more importance on having those labels than other religions.

Additionally, the study offers new insights into the direction of owning pets and the effect on the preference for vegan and cruelty-free products. As this research found, owning a pet, and especially owning different pets is connected to preferring vegan and cruelty-free labels. This adds to the general picture given by other researchers regarding the overall preference against animal cruelty and for vegan products by those who have established that bond with their pets. Moreover, this study contributed to the research in terms of dietary preferences and the effect of those on makeup consumption. As found, vegans, vegetarians, and pescatarians place greater importance on the vegan label when evaluating makeup products in comparison to omnivores. Conversely, when analyzing the significance of the cruelty-free label, statistical significance is observed exclusively among pescatarians and vegetarians. This implies that individuals following these dietary patterns assign greater importance to cruelty-free labeling in makeup products when contrasted with omnivorous counterparts. This can help to understand that in general following a vegan, vegetarian, or pescetarian diet can lead to adapting those preferences further in terms of a general lifestyle applying to other areas as proven here in terms of makeup. Overall, contributing to the same direction of the belief that an overall emphasis on ethical consumption can and does spread among different areas of consumption, it was further found that consumers emphasizing sustainability and animal welfare in their daily lives further contributes to them preferring also vegan and cruelty-free products.

Limitations and Future Directions

Conjoint Analysis

To study the factors that influence and impact consumer behavior towards vegan and cruelty-free makeup, a conjoint analysis was performed. Even though this method offers a strong understanding of consumer preferences and decision-making processes, it has some limits of its

own. These limits not only influence the understanding of outcomes but also indicate areas where future research can improve or give more information on initial results. The following sections describe the key limits we met in our study, emphasizing difficulties related to conjoint analysis, sample selection, and how they affect the generalization of outcomes.

Challenges in Sample Acquisition

One of the challenges we faced during the conjoint analysis was determining an optimal sample size. While the software conjointly recommends a sample of approximately 350 participants to ensure statistical validity and robustness, we set a more realistic target of 150 participants due to practical constraints such as limited resources and time. This decision was influenced by a broader lack of consensus in the academic and professional communities regarding what constitutes a "sufficient" sample size for conjoint studies, which varies based on study design and objectives.

During the process of gathering our sample, we had some complications. A major limitation that we encountered in this study was the difficulty in recruiting participants and achieving a satisfactory completion rate for the conjoint survey. Despite efforts to engage a broad respondent base, we only managed to secure 69 valid respondents, far short of our revised target. Additionally, the completion rate for the survey was notably low at just 7.6%, meaning that a lot of the people who clicked the link to how our survey, quit before they were finished. Another limitation we faced when collecting the data, was the fact that some respondents completed the survey too hastily, neglecting to carefully consider all the options presented in the conjoint analysis. Consequently, these responses were excluded from our final data analysis to preserve the integrity of our findings, resulting in the loss of more answers for our survey.

Participants' feedback indicated that their unfamiliarity with the conjoint survey format was a major contributor to these difficulties. Particularly, older participants expressed confusion over

the survey's structure, indicating a gap in how intuitive the survey design was for individuals unaccustomed to such research methodologies. Moreover, the lengthiness of the questionnaire could have also played a role in diminishing participants' engagement and attentiveness, leading to premature survey termination or careless responses.

Another obstacle we faced during the phase of collecting data was the language barrier due to the questionnaire being administered in English, despite being conducted in Portugal. The issue mainly impacted the older generations, who expressed interest in participating but were hindered by their limited proficiency in English. The decision to conduct the survey in English limited the accessibility of the survey to a broader demographic, making it hard for people who are not very skilled in this language to fully comprehend and take part in the survey.

These issues collectively represent significant limitations in gathering a suitable sample for our study. The recruitment challenges, the language barrier, the low completion rate, and the quick, often inattentive responses not only hindered our ability to collect a robust dataset but also impacted the overall reliability and generalizability of our findings. The survey's unfamiliar format, particularly for certain demographics, and its demanding length further compounded these sampling limitations, reflecting critical areas for improvement in future research design.

Limitations in Demographic Representation

A significant limitation of our demographic sampling was the severe gender imbalance within our survey respondents. With only one male participant compared to a predominantly female cohort, our study lacks the necessary gender diversity to analyze and draw conclusions about how gender might influence consumer decisions regarding vegan and cruelty-free makeup.

Another limitation of our study was the significant underrepresentation of specific age groups within our sample. Particularly, individuals under 18 years old constituted only 1.4% of our respondents, and those aged 35-44 made up merely 2.9%. This underrepresentation hindered our

ability to derive robust conclusions from these age groups. Due to their minimal presence in the sample (less than 5%), extracting reliable insights or trends specific to these groups was unfeasible. Consequently, we excluded these age groups from our analysis to maintain the integrity and accuracy of our findings. In our sample individuals aged 19-35 represent 81.2% of the sample, so our sample mainly represents younger generations, a reason for this could have been that even though we tried to send the survey to different age groups, the majority of the people we are surrounded by, and that were willing to answer our survey, were people closer to our age group.

A different constraint in our study was the notable underrepresentation of certain professional groups within our sample. Especially, people who work in "Hospitality, catering or Leisure Services" were only 2.9% of all respondents, and those working in "Transport, Retail or Wholesale" were just 4.3%. This low representation made it difficult to draw strong conclusions from these professional groups. Because they formed a small part of the sample (less than 5%), it was not possible to extract dependable insights or trends unique to these groups. So, we left out these occupation groups in order to keep the integrity and precision of our study.

A significant limitation in our study was also the underrepresentation of certain dietary preference groups within our sample. Notably, Vegans and respondents identifying with the "other" dietary preference each constituted only 1.4% of our respondents. This low representation significantly constrained our ability to draw reliable conclusions from these groups. Given their scant presence, accounting for less than 5% of the total sample, we made the decision to exclude the "other" category from our analysis to ensure more robust and reliable findings. However, we retained the Vegan group in our analysis despite their similarly small sample size. This decision was driven by the critical relevance of the Vegan group to our research objectives. Nevertheless, we proceed with caution in interpreting the findings from this group, acknowledging the limitations imposed by their underrepresentation.

Another constraint in our study was the underrepresentation of the ">5 hours" group in the demographic category of "Social Media usage per day," constituting only 4.3% of our sample. This limited representation presented difficulties in drawing robust conclusions from this subgroup. With their small share in the sample (less than 5%), extracting dependable insights or identifying distinct trends became impractical. Therefore, we chose to omit this group to uphold the integrity and precision of our study.

Our study also encountered a notable limitation due to the underrepresentation of certain religious groups in our sample. Specifically, Muslims and respondents identifying with the "other" religion, which accounted for only 1.4% and 2.9% of our sample, respectively. We opted to exclude the "other" category from our analysis, since it represented less than 5% of our sample, to ensure the robustness and reliability of our findings. However, we decided to retain the Muslim group in our analysis due to its critical relevance to our research objectives, despite its similarly small sample size. Nevertheless, we approach the interpretation of the findings from this group with caution, acknowledging the limitations imposed by their underrepresentation.

Another limitation of our study was the underrepresentation of the ">3000" income group, comprising only 4.3% of our sample. This scarcity made it challenging to derive strong conclusions from this subgroup. With their minor presence in the sample (less than 5%), extracting reliable insights or discerning distinct trends became impractical. Consequently, we decided to exclude this group to maintain the integrity and accuracy of our study.

Attitude Behavior Gap

A notable limitation of this study stems from the inherent nature of the conjoint analysis, which relies on respondents' stated preferences rather than their actual purchasing behavior. While participants may indicate a preference for vegan and cruelty-free products within the structured environment of a survey, this does not necessarily guarantee that they will make the same choices

in real-world settings. This discrepancy, often referred to as the "attitude-behavior gap," raises questions about the reliability of conjoint analysis in predicting actual consumer behavior. Relying on evaluations from participants about hypothetical product situations might result in a substantial divergence from their actual actions. Consequently, the findings based on these stated preferences must be interpreted with caution, acknowledging that they might not accurately mirror the purchase decisions made in a naturalistic context. This restriction emphasizes the requirement for extra research techniques like observational studies or market trials to confirm the outcomes deduced from conjoint studies and connect theoretical preference with the actual application.

Limitations in Generalizing Findings Across the Makeup Market

Conjoint analysis is a powerful tool for understanding consumer preferences related to specific product attributes. In this case, we applied it to foundations as a representative example within the vegan and cruelty-free makeup category. However, this approach introduces a limitation when attempting to generalize these findings across a diverse product market. Although foundations give us a useful understanding, they might not represent the preferences for other makeup items such as mascaras, lipsticks, or eyeshadows, which could differ significantly in consumer perception and purchasing criteria. Consequently, although our findings offer a detailed view of the attributes valued in vegan and cruelty-free foundations, they may not accurately reflect the broader preferences that apply to the entire range of vegan and cruelty-free makeup products. As a result of this limitation, it is advised to use these outcomes carefully when generalizing for all products in the makeup market, pointing out the importance of more studies that cover different kinds of product types to completely comprehend consumer preferences across this industry area.

Limitations in Representing the Packaging Attribute

In our conjoint analysis, the attribute of packaging presented unique challenges that could have impacted our study's findings. Packaging, as an attribute, encompasses a wide range of

features, which created some complications when defining what was considered by packaging. Also due to some constraints inherent in the conjoint design, not all aspects of packaging could be comprehensively represented. In our analysis, we defined packaging by its color, shape, and to some extent materials used, but there were so many more characteristics presented in a package that weren't taken into consideration, like the text elements in the package, the font, the fact that the labels weren't shown in the package, among others. This incomplete representation of packaging may have influenced how respondents perceived the attribute, potentially altering their responses, in turn impacting the perceived importance of packaging for consumers.

Perceptual Map

Our perceptual map analysis contained 138 valid participants. This sample size is relatively small for obtaining a comprehensive view of consumer perceptions of the five makeup brands. In future studies increasing the sample size would increase the robustness of the results.

The attributes included in our perceptual map analysis were chosen based on our preliminary customer interviews and literature review. Consequently, there's a possibility that we have missed crucial attributes that could have an impact on how people perceive our brands. This limitation implies that not all key characteristics of customer perceptions of the brands under study may have been adequately captured by our analysis.

Practical Implications

Based on the results of our study several practical implications for brands aiming to improve their positioning in the vegan and cruelty makeup market can be derived. Firstly, it is recommended that brands communicate the high quality of their products through targeted advertising and promotional campaigns. By doing so, brands can actively diminish the hindering association of vegan and cruelty-free makeup with high prices as people might be willing to pay a surplus for the

correlated higher quality. Moreover, our findings highlight the importance of effectively communicating the brands' vegan and cruelty-free status. As this study shows, many brands still lack the associative connection to being vegan or cruelty-free, thus meaning that they cannot fully leverage these prosperities. Deliberately promoting them will therefore yield positive effects on the brand perception.

In terms of the demographics where we found the age group of 25–34 years old to prefer the labels over other product attributes it can be further highlighted that in order to especially address and gain consumers from this age group, labeling the products and having a clearer brand image of being vegan and cruelty-free can be a helpful action. Furthermore, especially in terms of collaborating with influencers and advocates who are passionate about vegan and cruelty-free products, can boost credibility and expand reach within this key demographic. Additionally, product development should prioritize creating and promoting vegan and cruelty-free options to attract and retain this demographic, ensuring that the products meet the specific needs and values of this age group, to boost sales.

In regard to income, is recommended that brands focus on targeting individuals with a lower income such as 721-1000 Euros per month in their marketing campaigns as they demonstrate a higher importance towards vegan and cruelty-free labels. Additionally, it is recommended that brands implement pricing strategies such as discounts and promotions to make vegan and cruelty-free makeup products more affordable to those consumers.

In terms of religion, the only possibility to address other religions is to educate consumers across all religious groups about the benefits of vegan and cruelty-free products to increase awareness and appreciation for ethical consumer choices among diverse religious communities.

Lastly, with the implication this has for pet owners, it can be recommended to establish a stronger connection between the animal and the product when advertising. Using imagery of

animals in advertising for example can evoke empathy and resonate with pet owners and thus attract this target group to vegan and cruelty-free products.

To conclude the implication of each of these findings it can be overall pointed out that there is a strong importance of having clearer and more visible labels. Thus, it is recommended that brands put more emphasis on the labeling of their products and the overall brand. This further accounts for including the labels in promotion measures and the general marketing of the brand, making the brand stick out with being vegan and cruelty-free.

Conclusion

[Group Contribution]

This research aimed to investigate the impacting factors on the consumer intention to purchase vegan and cruelty-free makeup. In order to answer this question, we employed the research method conjoint analysis to examine which product attributes consumers value most in their decision-making when offered different product options and whether or not these differ for distinct demographic groups. We further determined which associations go along with vegan and cruelty-free brands compared to traditional brands with the help of perceptual mapping. For this purpose, five brands, namely Essence, Maybelline New York, e.l.f. Cosmetics, NYX Professional Makeup, and KIKO Milano were selected through consumer and specialist interviews and incorporated in our study that explored to which extent they are associated with previously determined attributes. Finding that the actual vegan and cruelty-free brands were not perceived as such led us to conclude that these brands should have a higher transparency and promotion of this brand value. By further investigating which product attribute is most important to consumers we found that the consumers' main focus lies on the price, meaning that they prefer the lowest price possible over any other attribute. However, with cruelty-free labels being the second-most

important attribute, we still see a reflection of the demand for more ethical products. With younger generations being more prone to buying ethical makeup products, brands should specifically target this segment. Additionally, further demographic groups that have been found to put significant importance on makeup being vegan and cruelty-free within our sample should be also addressed to guarantee the best possible sales results. However, due to restrictions within the sample such as participant limitations and the time frame of this study, further research needs to be conducted to enhance insights in the field and to generate more robust and significant results.

Appendix A: Conceptual Framework of the Theory of Planned Behavior

Figure 1: Model of the Theory of Planned Behavior

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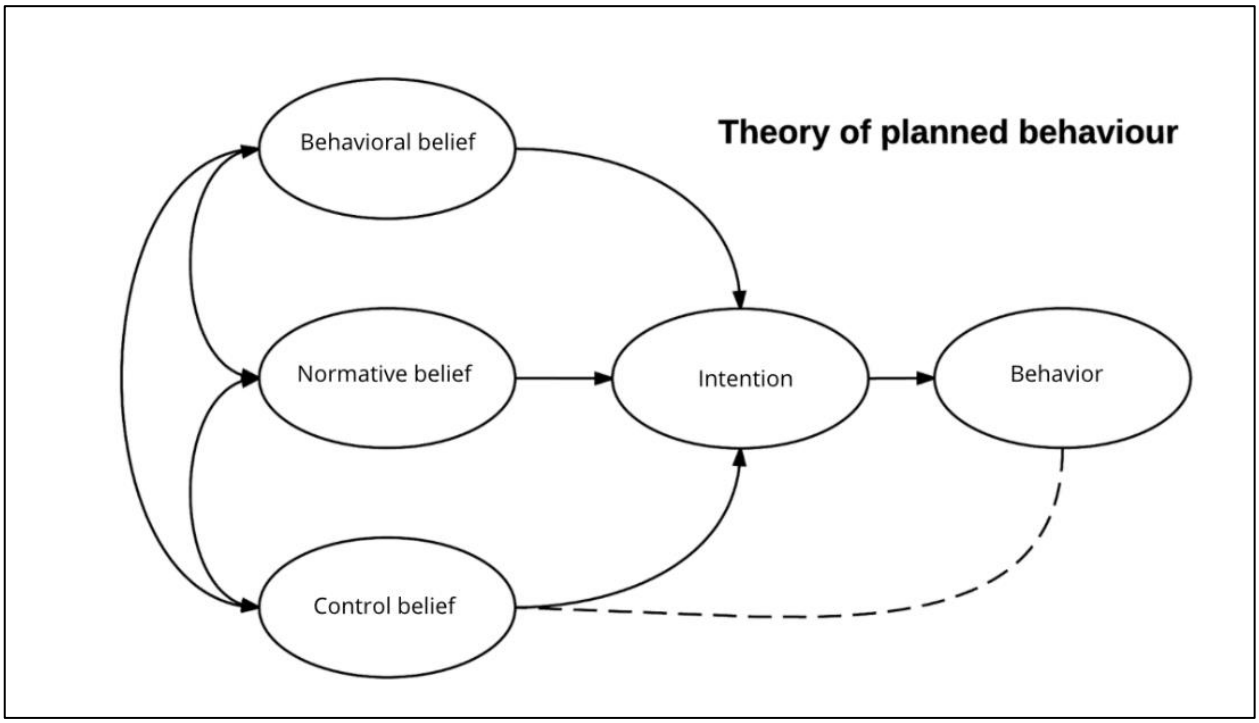


Appendix B: Labels

Figure 1: Cruelty-free Labels

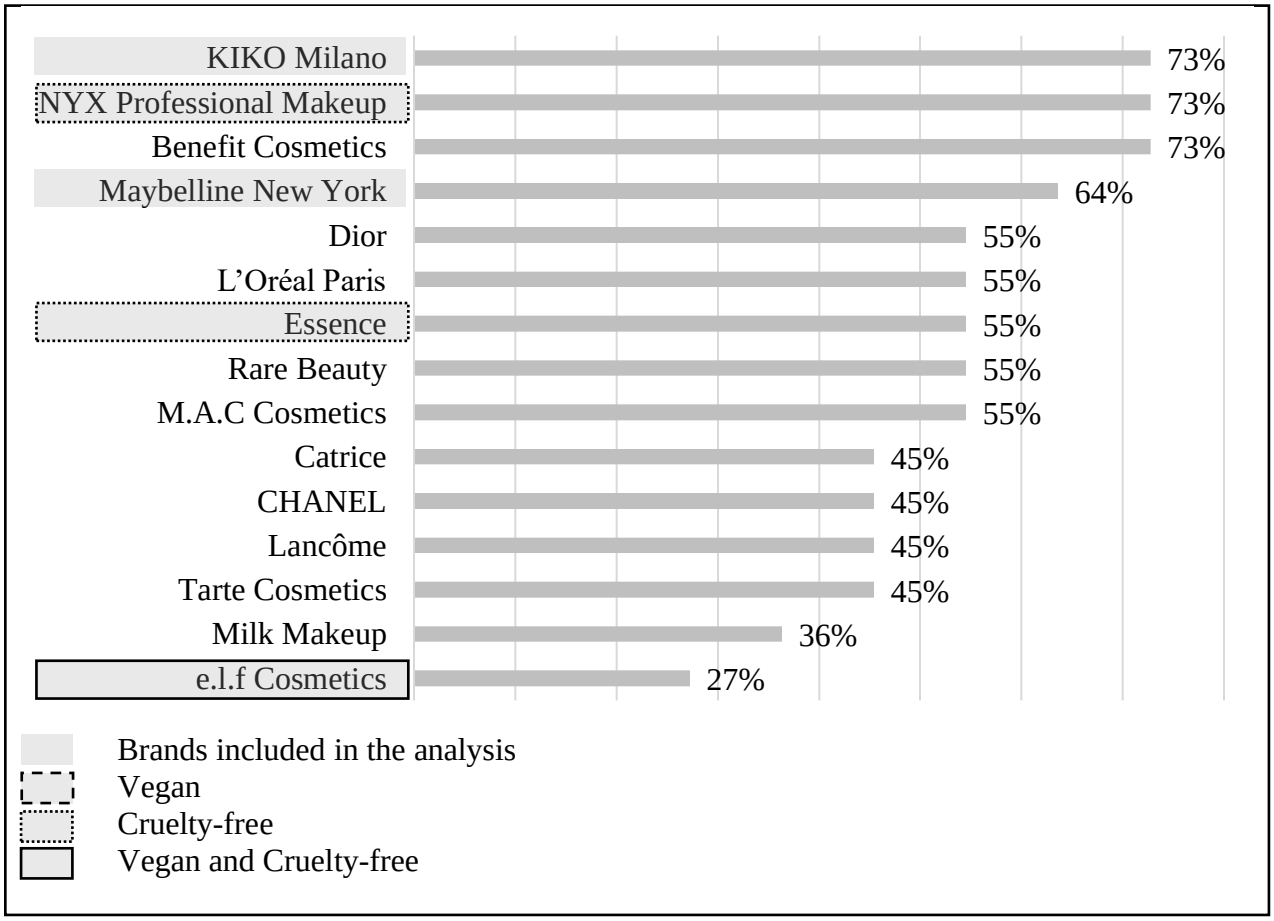
Figure 2: Vegan Labels

Appendix C: Preliminary Consumer Interviews

Questions for Consumers

1. Which makeup brands do you know? From those, which ones do you use?
2. What about vegan and cruelty free brands, do you know any? Do you use them?
3. Why do you buy vegan and cruelty free makeup?
4. What is most important to you when it comes to makeup?
5. What possible factors could keep you from buying vegan and cruelty free makeup?

Figure 1: Top 15 Brands mentioned (in %) by Portuguese Makeup Consumers



Appendix D: Preliminary Specialist Interviews

Questions for Specialists

1. In your opinion, what are the key attributes and considerations that influence consumers purchasing behaviours?
2. According to you, what are the main reasons why consumers don't buy vegan and cruelty-free cosmetics?
3. How do you anticipate the vegan and cruelty-free makeup market to evolve?
4. How would you define the typical consumer of vegan and cruelty-free products?
5. What is your assessment of the current competitive landscape within the vegan and cruelty-free market?

Appendix E: Perceptual Map

Table 1-13: Descriptive Statistics Demographic Factors

Table 1: Gender

Gender	N	%
Female	135	97.8%
Male	2	1.4%
Other	1	0.7%

Table 2: Age

Age	N	%
<18	4	2.9%
19-24	80	58.0%
25-34	29	21.0%
35-44	6	4.3%
45-54	8	5.8%
55-65	9	6.5%
>65	2	1.4%

Table 3: Income

Income	N	%
None	45	32.6%
<720	19	13.8%
721 - 1000	15	10.9%
1001 - 1500	30	21.7%
1501 - 2000	9	6.5%
2001 - 3000	10	7.2%
>3000	10	7.2%

Table 4: Country of Origin

Country of Origin	N	%
Portugal	114	82.6%
Other	24	17.4%

Table 5: Living Location

Living Location	N	%
Urban	115	83.3%
Land	23	16.7%

Table 6: Education

Education	N	%
High School	17	12.3%
Bachelor	46	33.3%
Master	73	52.9%
PhD	2	1.4%

Table 7: Profession

Profession/Area of Expertise	N	%
Business and Other Services, Finance or Insurance	51	37.0%
Health or Social Care	26	18.8%
Public Sector or Education	7	5.1%
Hospitality, Catering or Leisure Services	4	2.9%
Manufacturing, Construction or Agriculture	3	2.2%
Transport, Retail or Wholesale	1	0.7%
None of the above / Other	47	33.3%

Table 8: Religion

Religion	N	%
Agnostic	16	11.6%
Atheist	22	15.9%
Catholic	87	63.0%
Muslim	1	0.7%
Protestant	3	2.2%
Other	9	6.5%

Table 9: Dietary Preferences

Dietary Preferences	N	%
Omnivorous	105	76.1%
Vegetarian	14	10.1%
Vegan	2	1.4%
Pescatarian	11	8.0%
Other	6	4.3%

Table 10: Social Media Usage

Social Media Usage	N	%
< 1 hour	18	13.0%
1-2 hours	45	32.6%
2-3 hours	55	39.9%
4-5 hours	14	10.1%
> 5 hours	6	4.3%

Table 11: Pet Ownership

Pets	N	%
Yes	83	60.1%
No	55	39.9%

Table 12: Pet Types

Pets Type	N	%
Cats	12	8.7%
Dogs	49	35.5%
Reptiles	1	0.7%
Dogs, Cats	8	5.8%
Dogs, Birds	2	1.4%
Dogs, Fishes	1	0.7%
Dogs, Rabbits	2	1.4%
Dogs, Farm animals	1	0.7%
Dogs, Birds, Reptiles	1	0.7%
Dogs, Cats, Fishes	1	0.7%
Dogs, Cats, Farm animals	3	2.2%
Dogs, Cats, Birds, Farm animals	2	1.4%
Dogs, Cats, Birds, Reptiles	1	0.7%
Other	1	0.7%

Table 13: Makeup Frequency

Makeup Frequency	N	%
Daily	63	45.7%
Occasionally	52	37.7%
Rarely	23	16.7%

Table 14: Total Variance Explained

	Total	% of Variance	Cumulative %
Component 1	4.382	54.776	54.776
Component 2	3.306	41.321	96.097

Extraction Method: Principal Component Analysis.

Table 15: Component Score Covariance Matrix

Component	1	2
1	1.000	.000
2	.000	1.000

Extraction Method: Principal Component Analysis.

Table 16: Component Score Coefficient Matrix

	Component 1	Component 2
Price	.220	.066
Quality	.218	.067
Product Range	.188	.164
Brand Recognition	-.009	.297
Availability	-.102	.263
Authenticity	.187	.174
Vegan	.152	-.223
Cruelty-free	.169	-.171

Extraction Method: Principal Component Analysis with Component Scores.

Table 17: Correlation Matrix

	Price	Quality	Product Range	Brand Recognition	Availability	Authenticity	Vegan	Cruelty-free
Price	1.000	.995	.906	.148	-.260	.911	.468	.548
Quality	.995	1.000	.883	.153	-.238	.901	.454	.543
Product Range	.906	.883	1.000	.499	.084	.991	.149	.291
Brand Recognition	.148	.153	.499	1.000	.904	.534	-.731	-.521
Availability	-.260	-.238	.084	.904	1.000	.134	-.920	-.752
Authenticity	.911	.901	.991	.534	.134	1.000	.122	.282
Vegan	.468	.454	.149	-.731	-.920	.122	1.000	.950
Cruelty-free	.548	.543	.291	-.521	-.752	.282	.950	1.000

This matrix is not positive definite.

Table 18: Component Matrix

	Component 1	Component 2
Price	.966	.217
Quality	.955	.223
Product Range	.824	.542
Authenticity	.817	.575
Cruelty-free	.741	-.566
Brand Recognition	-.041	.982
Availability	-.445	.869
Vegan	.665	-.738

Extraction Method: Principal Component Analysis with 2 components extracted.

Appendix F: Conjoint Analysis

Figure 1: Packaging Design Options

Figure 2: Consumer Preference Survey Participation

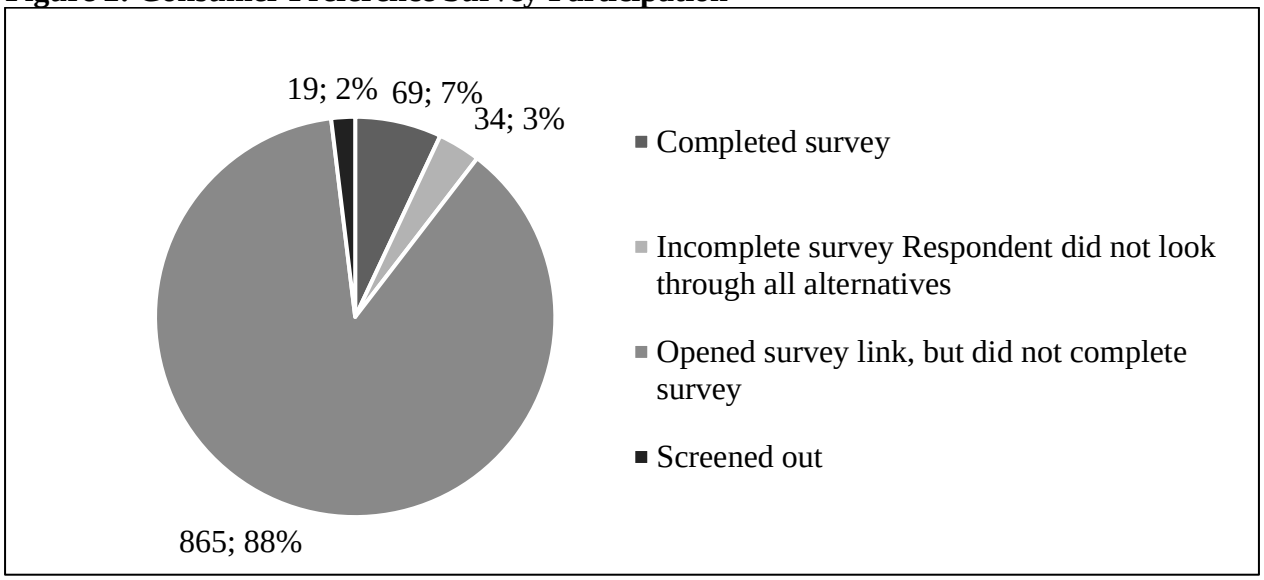


Figure 3: Drop-Off During the Survey

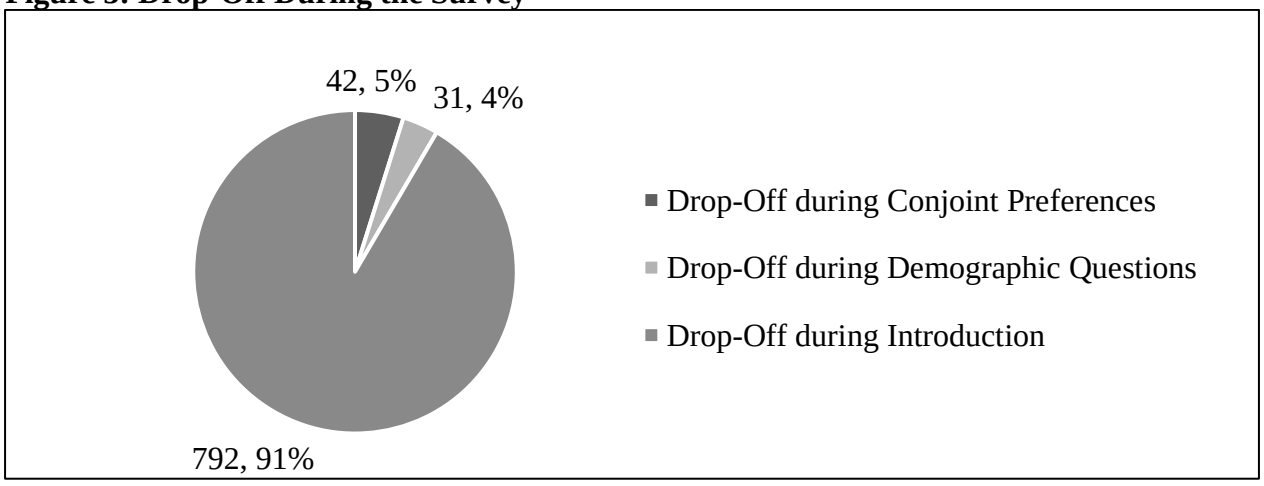


Figure 4-16: Distribution of Demographic Variables in the Sample

Figure 4: Gender

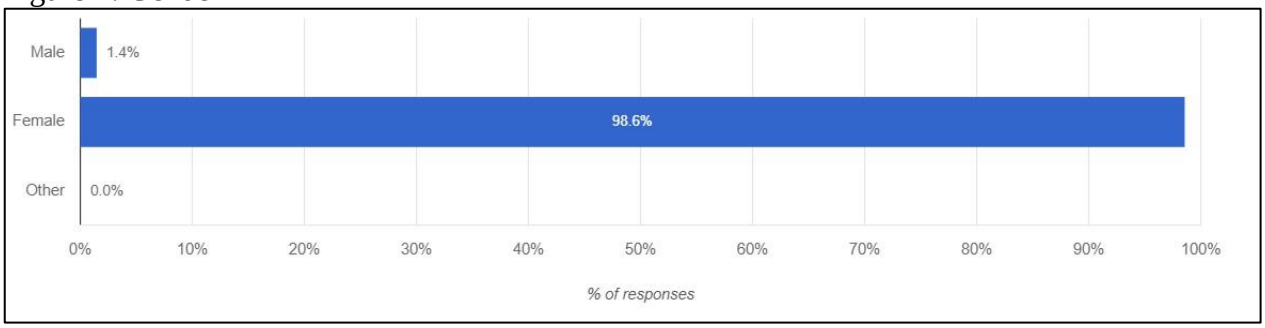


Figure 5: Age

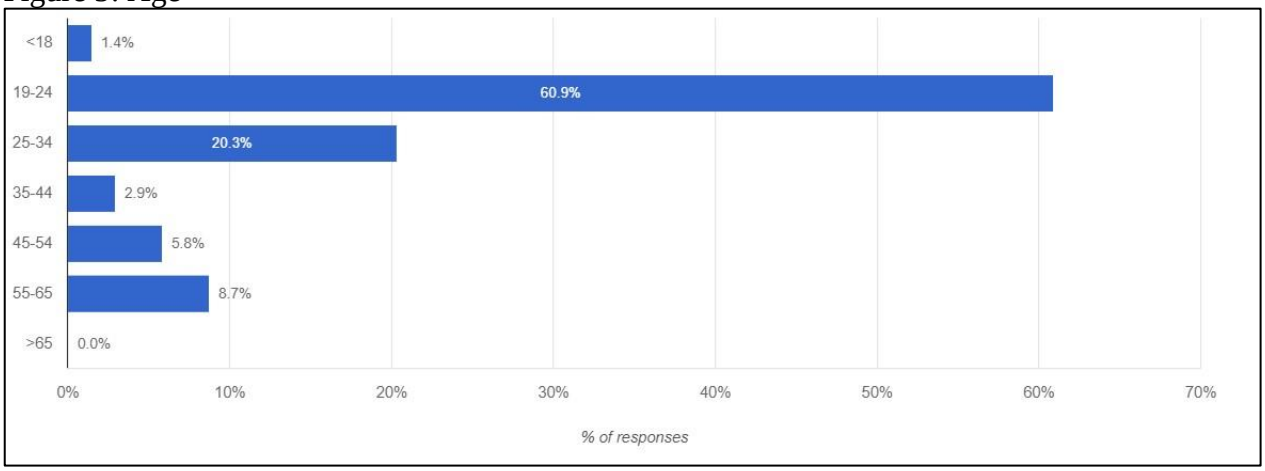


Figure 6: Income

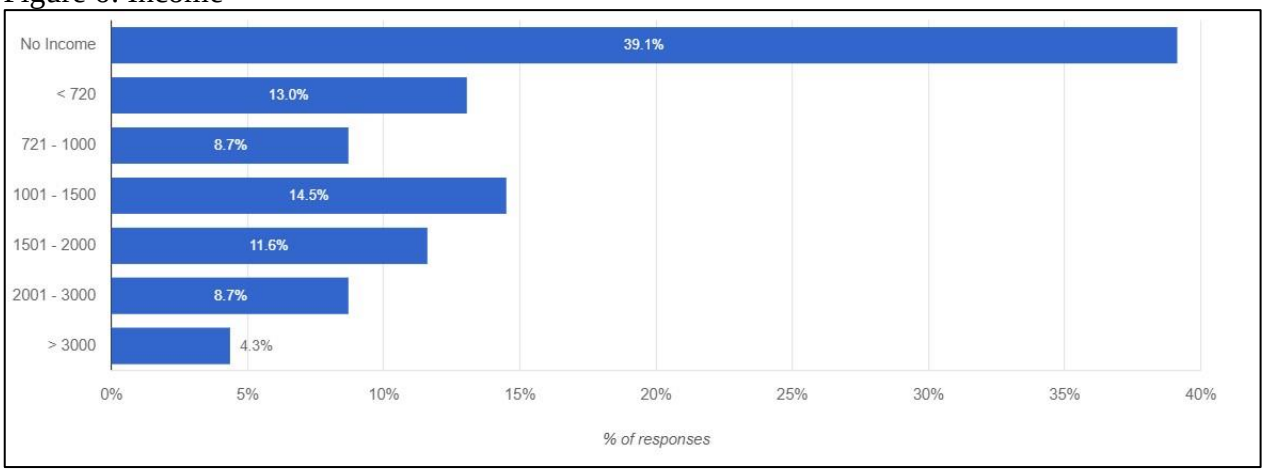


Figure 7: Country of Origin

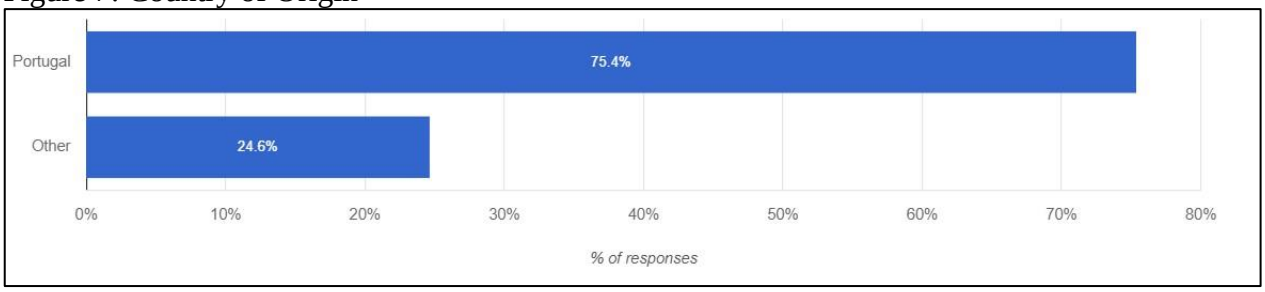


Figure 8: Living Location

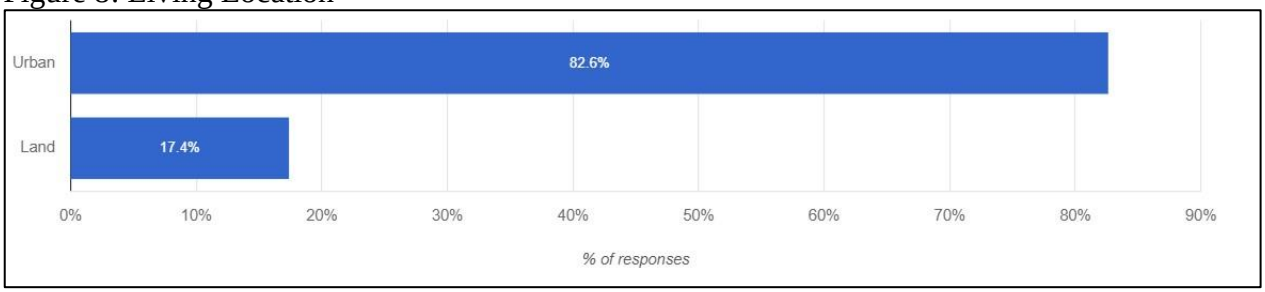


Figure 9: Education

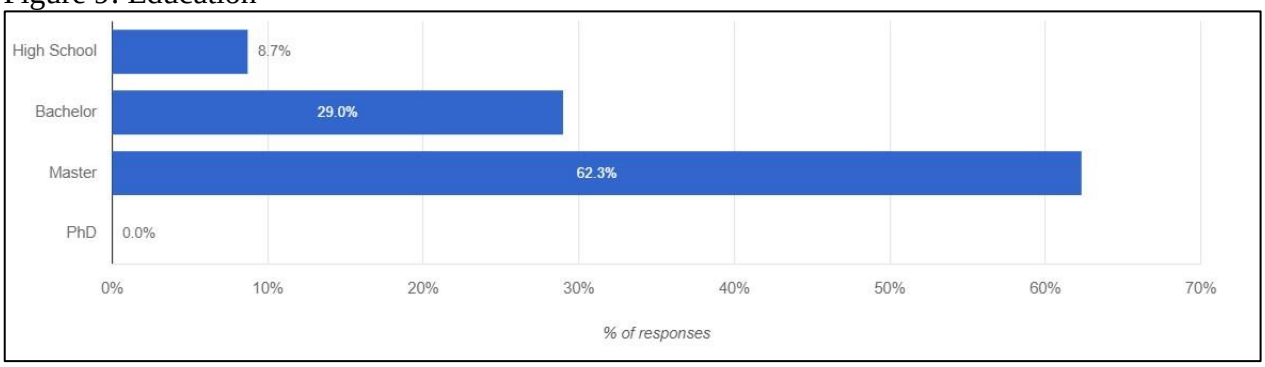


Figure 10: Profession

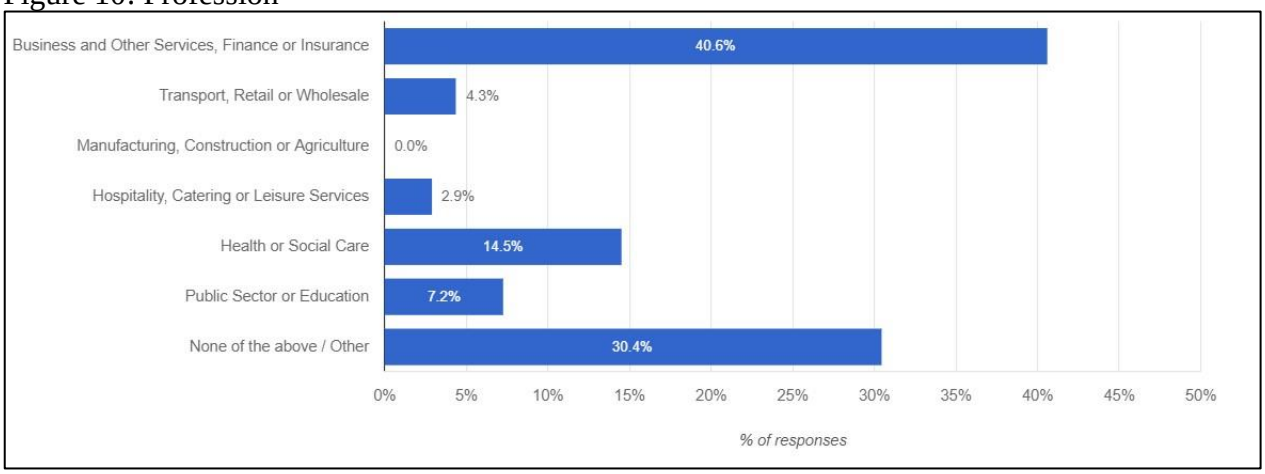


Figure 11: Dietary Preferences

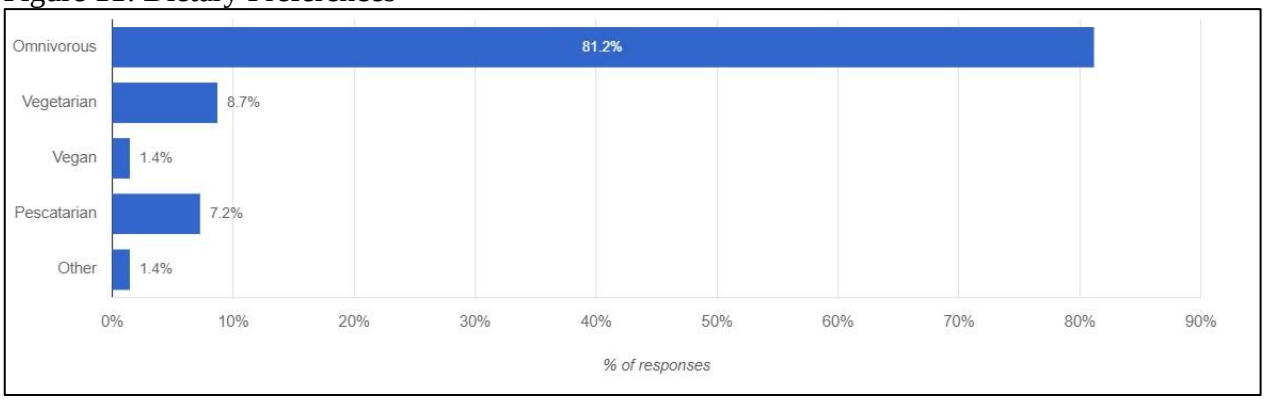


Figure 12: Social Media Usage per day

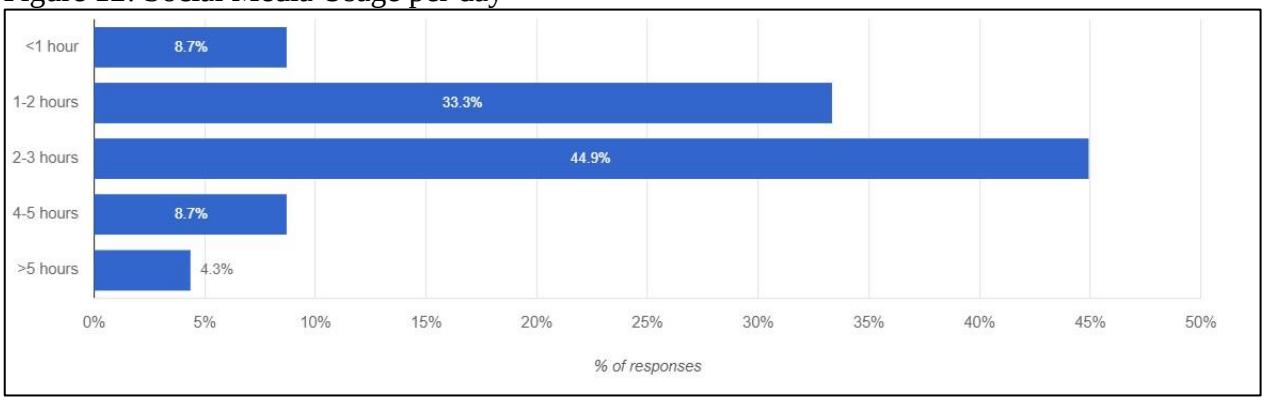


Figure 13: Religion

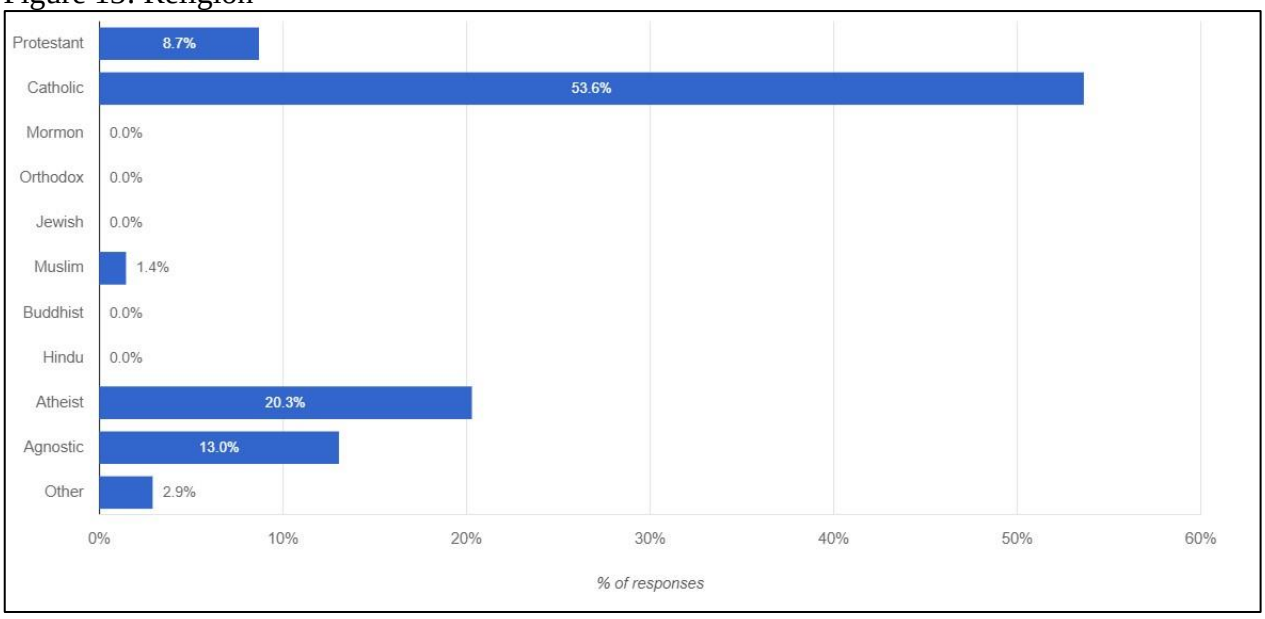


Figure 14: Pet Ownership

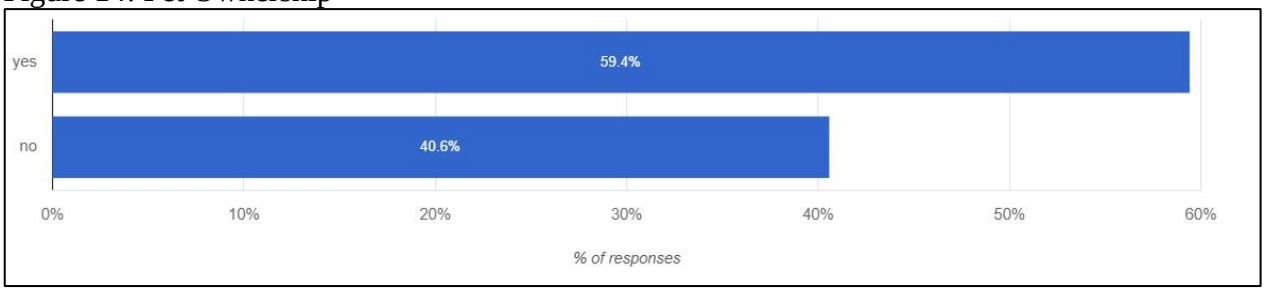


Figure 15: Types of Pets

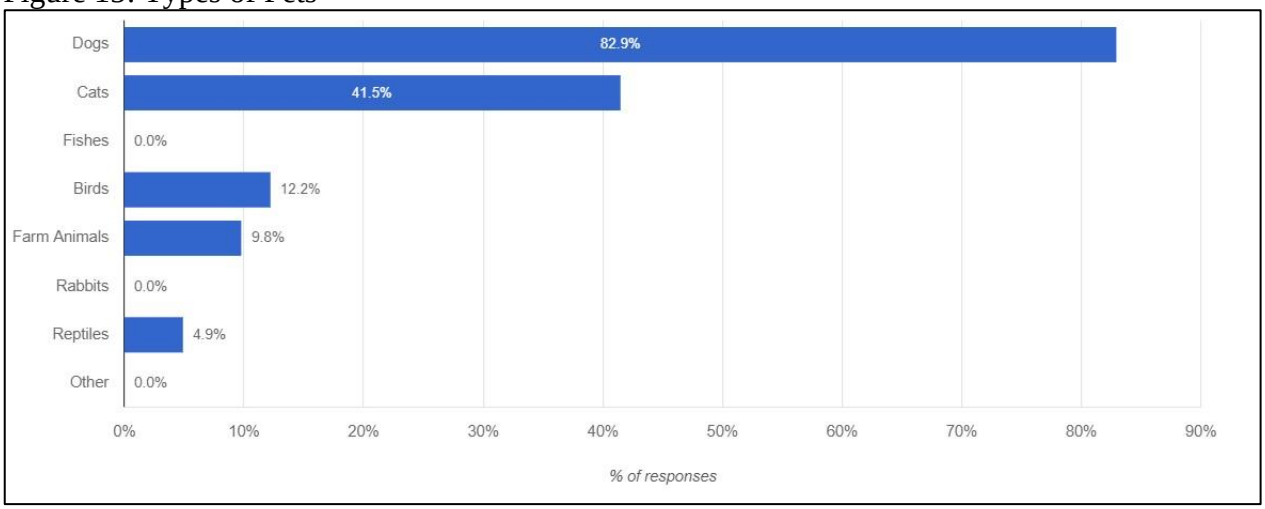


Figure 16: Importance of Sustainability and Animal Welfare

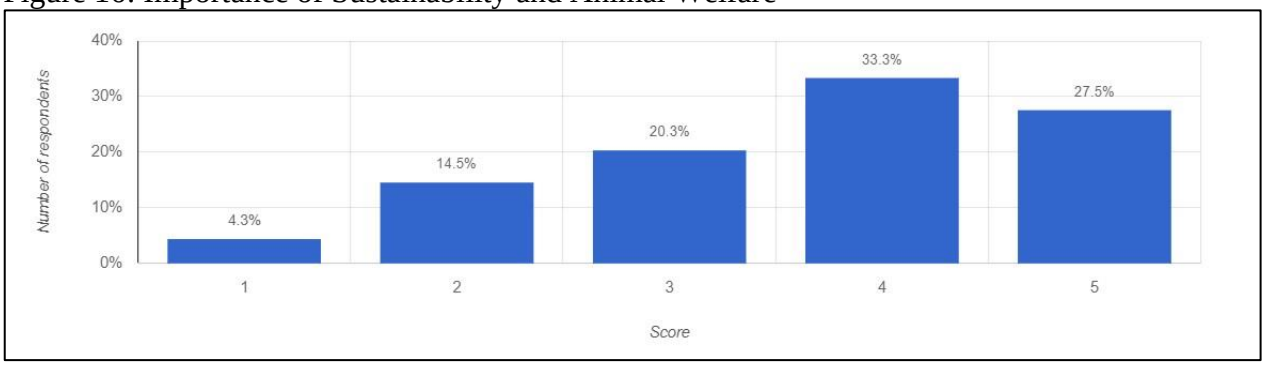


Figure 17: Importance of Attributes

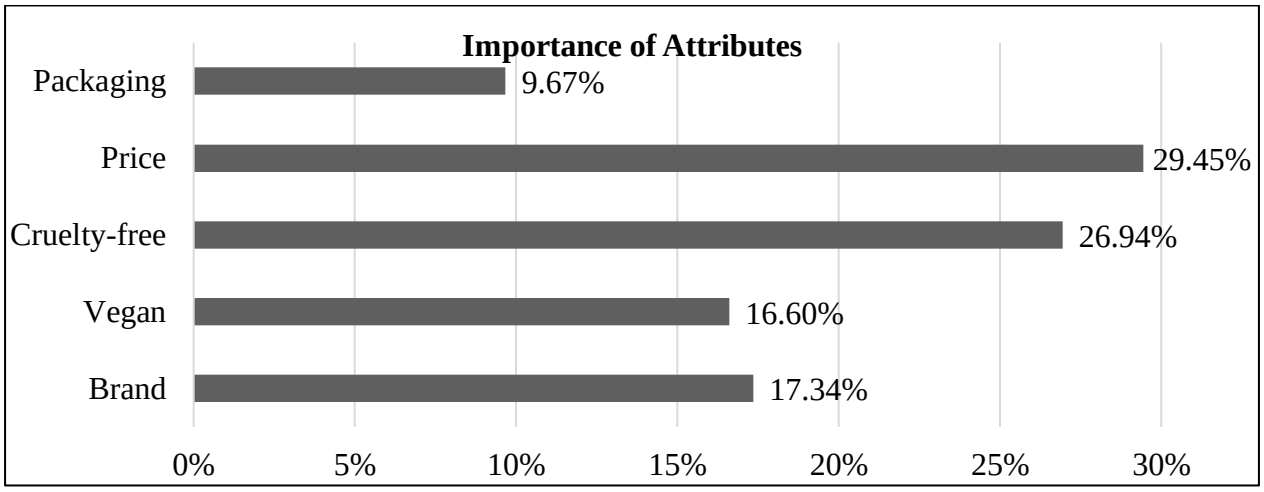


Table 1-4: Attribute Level Preference

Table 1: Vegan Label Level Preferences

Vegan Label	
Vegan Label	2,400
No Vegan Label	-2,400

Table 2: Cruelty-free label Preferences

Cruelty-free Label	
Cruelty-free Label	3,894
No Cruelty-free Label	-3,894

Table 3: Price Level Preferences

Price	
Price Low (5€)	4,558
Price Medium (10€)	-0,601
Price High (20€)	-3,957

Table 4: Packaging Level Preferences

Packaging	
Packaging Green	1,716
Packaging Neutral	-1,080
Packaging Pink	-0,636

Figure 18: Brand Preference

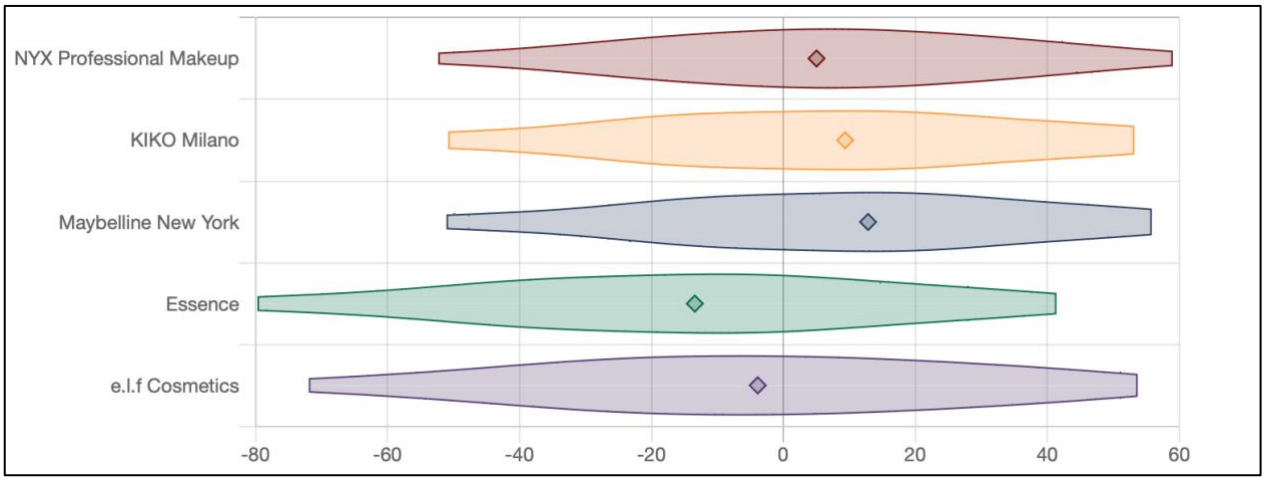


Table 5-27: Regression Analysis Results

Table 5: Age & Vegan Label – Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.364[a]	.133	.091	1.637636776774469

a. Predictors: (Constant), Age 45-54, Age 25-34, Age 19-24

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.130	.669		1.691	.096
	Age 19-24	1.152	.715	.325	1.611	.112
	Age 25-34	2.239	.799	.537	2.802	.007
	Age 45-54	.549	1.057	.077	.520	.605

a. Dependent Variable: Vegan Label - Yes

Table 6: Age & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.338[a]	.114	.071	2.572704059607815

a. Predictors: (Constant), Age 45-54, Age 25-34, Age 19-24

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.643	1.050		1.564	.123
	Age 19-24	2.092	1.123	.380	1.863	.067
	Age 25-34	3.447	1.255	.532	2.746	.008
	Age 45-54	1.529	1.661	.138	.921	.361

a. Dependent Variable: Cruelty-free Label - Yes

Table 7: Education & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.220[a]	.048	.019	1.693165946520385

a. Predictors: (Constant), Education - Master, Education - Bachelor

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.845	.691		2.669	.010
	Education - Bachelor	1.116	.788	.298	1.417	.161
	Education - Master	.372	.738	.106	.504	.616

a. Dependent Variable: Vegan Label - Yes

Table 8: Education & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.167[a]	.028	-.002	2.666238407615324

a. Predictors: (Constant), Education - Master, Education - Bachelor

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.689	1.088		3.389	.001
	Education - Bachelor	.894	1.241	.153	.721	.474
	Education - Master	-.087	1.162	-.016	-.075	.941

a. Dependent Variable: Cruelty-free Label - Yes

Table 9: Profession & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.209[a]	.044	-.005	1.722403325977888

a. Predictors: (Constant), Profession/Area - Business and Other Services, Finance or Insurance, Profession/Area - Public Sector or Education, Profession/Area - Health or Social Care

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.433	.376		6.472	<.001
	Profession/Area - Public Sector or Education	-1.012	.857	-.161	-1.181	.242
	Profession/Area - Health or Social Care	-.314	.662	-.067	-.474	.637
	Profession/Area - Business and Other Services, Finance or Insurance	.267	.501	.077	.533	.596

a. Dependent Variable: Vegan Label - Yes

Table 10: Profession & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.197[a]	.039	-.010	2.676552660383767

a. Predictors: (Constant), Profession/Area - Business and Other Services, Finance or Insurance, Profession/Area - Public Sector or Education, Profession/Area - Health or Social Care

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.725	.584		6.378	<.001
	Profession/Area - Public Sector or Education	-1.231	1.332	-.126	-.924	.359
	Profession/Area - Health or Social Care	-.142	1.028	-.020	-.138	.891
	Profession/Area - Business and Other Services, Finance or Insurance	.633	.779	.118	.812	.420

a. Dependent Variable: Cruelty-free Label - Yes

Table 11: Income & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.492[a]	.242	.179	1.560813291786628

a. Predictors: (Constant), Income 2001-3000, Income 721-1000, Income 1501-2000, Income < 720, Income 1001-1500

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.478	.300		8.248	<.001
	Income < 720	-.091	.601	-.018	-.151	.881
	Income 721-1000	2.137	.704	.359	3.033	.004
	Income 1001-1500	-.185	.578	-.039	-.320	.750
	Income 1501-2000	-1.369	.628	-.261	-2.179	.033
	Income 2001-3000	-.854	.704	-.144	-1.212	.230

a. Dependent Variable: Vegan Label - Yes

Table 12: Income & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.486[a]	.236	.173	2.442029272300418

a. Predictors: (Constant), Income 2001-3000, Income 721-1000, Income 1501-2000, Income < 720, Income 1001-1500

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.760	.470		8.001	<.001
	Income < 720	.114	.940	.015	.121	.904
	Income 721-1000	3.990	1.102	.431	3.620	<.001
	Income 1001-1500	-.164	.904	-.022	-.182	.857
	Income 1501-2000	-1.237	.983	-.152	-1.258	.213
	Income 2001-3000	-.786	1.102	-.085	-.713	.479

a. Dependent Variable: Cruelty-free Label - Yes

Table 13: Religion & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.321[a]	.103	.045	1.637137069451222

a. Predictors: (Constant), Religion - Atheist, Religion - Muslim, Religion - Protestant, Religion- Agnostic

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.934	.269		7.185	<.001
	Religion - Protestant	.913	.721	.157	1.268	.210
	Religion - Muslim	-.094	1.659	-.007	-.057	.955
	Religion- Agnostic	.285	.608	.059	.469	.641
	Religion - Atheist	1.296	.514	.317	2.523	.014

a. Dependent Variable: Vegan Label - Yes

Table 14: Religion & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.341[a]	.116	.059	2.555432294017898

a. Predictors: (Constant), Religion - Atheist, Religion - Muslim, Religion - Protestant, Religion- Agnostic

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.062	.420		7.288	<.001
	Religion - Protestant	1.259	1.125	.137	1.119	.267
	Religion - Muslim	-.772	2.590	-.036	-.298	.767
	Religion- Agnostic	1.508	.950	.197	1.588	.117
	Religion - Atheist	2.044	.802	.318	2.549	.013

a. Dependent Variable: Cruelty-free Label - Yes

Table 15: Living Location & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.099[a]	.010	-.005	1.714084513125966

a. Predictors: (Constant), Resedential Area - Urban

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.767	.495		5.591	<.001
	Resedential Area - Urban	-.444	.544	-.099	-.815	.418

a. Dependent Variable: Vegan Label - Yes

Table 16: Living Location & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.136[a]	.018	.004	2.658917112670183

a. Predictors: (Constant), Resedential Area - Urban

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.678	.768		6.094	<.001
	Resedential Area - Urban	-.948	.845	-.136	-1.123	.265

a. Dependent Variable: Cruelty-free Label - Yes

Table 17: Dietary Preferences & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.486[a]	.236	.200	1.5178980881 11630

a. Predictors: (Constant), Dietary Preferences - Vegan, Dietary Preferences - Pescatarian, Dietary Preferences - Vegetarian

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.070	.203		10.206	<.001
	Dietary Preferences - Pescatarian	2.043	.708	.316	2.883	.005
	Dietary Preferences - Vegetarian	1.810	.652	.305	2.776	.007
	Dietary Preferences - Vegan	3.750	1.531	.268	2.449	.017

a. Dependent Variable: Vegan Label - Yes

Table 18: Dietary Preferences & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436[a]	.190	.152	2.4372378482 89806

a. Predictors: (Constant), Dietary Preferences - Vegan, Dietary Preferences - Pescatarian, Dietary Preferences - Vegetarian

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.419	.326		10.498	<.001
	Dietary Preferences - Pescatarian	3.160	1.138	.314	2.778	.007
	Dietary Preferences - Vegetarian	2.746	1.047	.296	2.623	.011
	Dietary Preferences - Vegan	3.623	2.459	.166	1.474	.145

a. Dependent Variable: Cruelty-free Label - Yes

Table 19: Pet Ownership & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.322[a]	.104	.091	1.6305563493 90996

a. Predictors: (Constant), Pets - Yes

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.738	.308		5.639	<.001
	Pets - Yes	1.115	.400	.322	2.788	.007

a. Dependent Variable: Vegan Label - Yes

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.323[a]	.104	.077	1.6425496780 45878

a. Predictors: (Constant), Pet - Multiple Type , Pet - Single Type

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.738	.310		5.598	<.001
	Pet - Single Type	1.088	.435	.317	2.501	.015
	Pet - Multiple Type	1.178	.567	.263	2.078	.042

a. Dependent Variable: Vegan Label - Yes

Table 20: Pet Ownership & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.346[a]	.120	.107	2.5179265622 04075

a. Predictors: (Constant), Pets - Yes

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.786	.476		5.856	<.001
	Pets - Yes	1.864	.617	.346	3.020	.004

a. Dependent Variable: Cruelty-free Label - Yes

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354[a]	.125	.099	2.5289311923 09806

a. Predictors: (Constant), Pet - Multiple Type , Pet - Single Type

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.786	.478		5.830	<.001
	Pet - Single Type	1.700	.670	.317	2.537	.014
	Pet - Multiple Type	2.261	.873	.324	2.591	.012

a. Dependent Variable: Cruelty-free Label - Yes

Table 21: Social Media & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.057[a]	.003	-.045	1.7580635521 28768

a. Predictors: (Constant), Social Media Usage per Day 4-5 hours, Social Media Usage per Day 1-2 hours, Social Media Usage per Day 2-3 hours

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.598	.718		3.619	<.001
	Social Media Usage per Day 1-2 hours	-.228	.806	-.064	-.283	.778
	Social Media Usage per Day 2-3 hours	-.146	.784	-.043	-.186	.853
	Social Media Usage per Day 4-5 hours	.091	1.015	.015	.089	.929

a. Dependent Variable: Vegan Label - Yes

Table 22: Social Media & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.082[a]	.007	-.041	2.7563665880 85879

a. Predictors: (Constant), Social Media Usage per Day 4-5 hours, Social Media Usage per Day 1-2 hours, Social Media Usage per Day 2-3 hours

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.741	1.125		3.325	.001
	Social Media Usage per Day 1-2 hours	-.031	1.264	-.005	-.024	.981
	Social Media Usage per Day 2-3 hours	.430	1.229	.080	.350	.728
	Social Media Usage per Day 4-5 hours	.329	1.591	.035	.207	.837

a. Dependent Variable: Cruelty-free Label - Yes

Table 23: Importance of Sustainability and Animal Welfare & Vegan Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.259[a]	.067	.053	1.6636863927 94346

a. Predictors: (Constant), Importance of sustainability and animal welfare

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.006	.666		1.511	.136
	Importance of sustainability and animal welfare	.382	.174	.259	2.197	.031

a. Dependent Variable: Vegan Label - Yes

Table 24: Importance of Sustainability and Animal Welfare & Cruelty-free Label - Model Summary and Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.310[a]	.096	.082	2.551867856760252

a. Predictors: (Constant), Importance of sustainability and animal welfare

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.299	1.021		1.272	.208
	Importance of sustainability and animal welfare	.711	.267	.310	2.666	.010

a. Dependent Variable: Cruelty-free Label - Yes

Table 25: Packaging (Green/Sustainable) & Importance of Sustainability and Animal Welfare - Model Summary and Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.193[a]	.037	.023	1.919578538967538

a. Predictors: (Constant), Importance of sustainability and animal welfare

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.539	.768		.701	.486
	Importance of sustainability and animal welfare	.322	.201	.193	1.608	.113

a. Dependent Variable: Packaging - Green

Table 26: Packaging (Neutral/Minimalistic) & Age - Model Summary and Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.152[a]	.023	-.022	.8657727363110 18

a. Predictors: (Constant), Age 45-54, Age 25-34, Age 19-24

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1.369	.289		-4.744	<.001
	Age 19-24	.302	.318	.173	.948	.347
	Age 25-34	.455	.370	.215	1.229	.223
	Age 45-54	.238	.520	.066	.458	.648

a. Dependent Variable: Packaging Neutral

Table 27: Packaging (Pink/Unique) & Age - Model Summary and Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.031[a]	.001	-.045	1.369000751026702

a. Predictors: (Constant), Age 45-54, Age 25-34, Age 19-24

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.721	.456		-1.580	.119
	Age 19-24	.105	.503	.039	.209	.835
	Age 25-34	.103	.585	.031	.176	.861
	Age 45-54	-.005	.823	-.001	-.006	.996

a. Dependent Variable: Packaging Pink

Table 28: Correlation Matrix

	Gender	Age	Income	Country of Origin	Residential Area	Education	Profession	Dietary Preferences	Social Media Usage	Religion	Pets	Pets Variation	Makeup Usage	Importance of Sustainability and Animal Welfare
Overall Vegan Label Importance	-0,095	-0,164	-0,187	-0,262	-0,152	-0,092	-0,069	0,292	-0,137	0,040	0,321	0,280	0,098	0,212
Vegan Label - None	0,094	0,194	0,161	0,267	0,099	0,060	0,127	-0,290	0,094	-0,088	-0,322	-0,291	-0,039	-0,259
Vegan Label - Yes	-0,094	-0,194	-0,161	-0,267	-0,099	-0,060	-0,127	0,290	-0,094	0,088	0,322	0,291	0,039	0,259
Overall Cruelty-free Label Importance	-0,105	-0,183	-0,102	-0,240	-0,160	-0,115	-0,061	0,268	-0,053	-0,052	0,349	0,338	0,052	0,283
Cruelty-free Label - None	0,103	0,193	0,094	0,246	0,136	0,095	0,088	-0,268	0,034	0,025	-0,346	-0,339	-0,024	-0,310
Cruelty-free Label - Yes	-0,103	-0,193	-0,094	-0,246	-0,136	-0,095	-0,088	0,268	-0,034	-0,025	0,346	0,339	0,024	0,310
Overall Brand Importance	-0,202	0,180	-0,097	0,107	0,101	0,098	-0,044	-0,332	-0,035	-0,229	0,071	0,036	-0,096	-0,056
KIKO Milano	0,021	-0,161	0,002	0,144	-0,128	0,110	0,245	0,126	-0,038	0,116	-0,081	-0,147	-0,156	-0,094
Maybelline New York	0,021	-0,155	-0,089	-0,212	-0,127	-0,042	-0,237	0,209	0,128	0,151	0,186	0,153	0,129	0,128
Essence	-0,083	-0,039	0,042	-0,073	-0,144	-0,135	0,179	0,185	-0,123	0,203	-0,036	-0,009	0,106	0,062
e.l.f Cosmetics	0,215	-0,009	0,046	-0,027	0,108	-0,014	-0,104	0,152	0,242	0,004	-0,081	0,002	0,172	-0,036
NYX Professional	-0,152	0,155	-0,012	0,083	0,078	0,036	0,018	-0,329	-0,182	-0,192	0,027	-0,007	-0,166	-0,014
Overall Price Importance	-0,257	-0,115	-0,233	-0,094	-0,217	0,014	-0,081	0,010	-0,155	0,002	0,318	0,258	-0,016	0,061
Price Low (5€)	-0,245	-0,174	-0,225	-0,093	-0,152	0,031	-0,096	0,025	-0,131	-0,007	0,320	0,248	-0,014	0,134
Price Medium (10€)	0,288	0,210	0,239	0,031	0,190	-0,116	0,075	-0,005	0,081	0,063	-0,343	-0,220	-0,033	-0,140
Price High (20€)	0,220	0,154	0,211	0,113	0,132	0,003	0,101	-0,032	0,145	-0,015	-0,299	-0,249	0,032	-0,127
Overall Packaging Importance	-0,015	0,025	0,071	-0,181	-0,015	-0,253	0,243	0,192	-0,047	0,155	-0,130	0,028	-0,057	0,142
Packaging - Green	-0,045	0,007	0,116	-0,170	-0,070	-0,253	0,109	0,185	-0,073	0,226	0,024	0,117	-0,097	0,193
Packaging - Neutral	-0,018	-0,001	-0,119	0,165	0,122	0,258	-0,137	-0,218	-0,070	-0,184	-0,028	-0,148	-0,019	-0,174
Packaging - Pink	0,077	-0,010	-0,092	0,141	0,024	0,201	-0,070	-0,129	0,151	-0,210	-0,018	-0,074	0,153	-0,168

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