CATÓLICA LISBON
BUSINESS & ECONOMICS

Purchase intention of cruelty-free cosmetics

The effects of brand type and cruelty-free labels

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Dissertation submitted in partial fulfilment of requirements for the MSc in Management with Specialization in Strategic Marketing, at the Universidade Católica Portuguesa, June 2021.

ABSTRACT

Title: Purchase intention of cruelty-free cosmetics: The effects of brand type and cruelty-free labels

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In the last years, ethical consumption has received growing attention, with more consumers demanding product alternatives that have less detrimental effects on the environment, people, and animal welfare. This trend has led to the introduction of cruelty-free cosmetics - products that have not been tested on animals.

This study examines consumers' intention to purchase cruelty-free cosmetics and evaluates the influence of brand type and cruelty-free labels using the example of shampoo. For this purpose, an online questionnaire was conducted. The study follows a 2x3 cross-sectional design and exposes participants to one of six different stimuli, differing in brand type and cruelty-free label type. Furthermore, the study builds on the theory of planned behaviour, therefore, participants' attitude towards cruelty-free cosmetics was also measured.

The results show a significant preference for national brand shampoo over private label shampoo. Moreover, shampoo, denoted with a cruelty-free label, exerts higher purchase intention than the non-labelled counterparts. However, label type (certified vs. uncertified) does not yield significant differences. Furthermore, the study did not find any mediating effect of attitude on purchase intention.

The findings indicate a high intention to purchase cruelty-free cosmetics, especially for national brand products. Consequently, companies should add cruelty-free cosmetics to their product portfolio. However, in the current state, consumers lack sufficient knowledge about cruelty-free cosmetics. Therefore, companies need to educate their consumers and team up with third parties to receive official accreditation.

Keywords: cruelty-free cosmetics, brand type, cruelty-free label, purchase intention, attitude, theory of planned behaviour, ethical consumption

SUMÁRIO

Título: Intenção de compra de cosméticos sem crueldade: Os efeitos do tipo de marca e dos rótulos sem crueldade

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Ultimamente, o consumo ético tem recebido uma atenção crescente, com mais consumidores a exigirem alternativas de produtos que tenham menos efeitos prejudiciais para o ambiente. Esta tendência levou à introdução de cosméticos sem crueldade - produtos que não foram testados em animais.

Este estudo examina a intenção de compra de cosméticos sem crueldade e avalia a influência do tipo de marca e rótulos sem crueldade. Para este efeito, foi realizado um questionário online sobre champôs. O estudo baseia-se na Teoria do comportamento planeado e segue um desenho transversal 2x3. Os participantes foram expostos a um de seis estímulos diferentes, variando o tipo de marca e de rótulo.

Os resultados mostram uma preferência significativa pelo cahmpô de marca nacional em detrimento da marca privada. Além disso, o champô que é denotado com um rótulo sem crueldade exerce uma intenção de compra mais elevada do que os não rotulados. Contudo, o tipo de rótulo (certificado vs. não-certificado) não produz diferenças significativas. Adicionalmente, o estudo não encontrou qualquer efeito mediador da atitude sobre a intenção de compra.

Consequentemente, as empresas devem introduzir ou impulsionar cosméticos sem crueldade. Como os consumidores não têm conhecimento suficientes sobre cosméticos sem crueldade, as empresas precisam de educar os consumidores em parceria com terceiros para receberem acreditação oficial.

Palavras-chave: cosméticos sem crueldade, tipo de marca, rótulo sem crueldade, intenção de compra, atitude, teoria de comportamento planeado, consumo ético

ACKNOWLEDGEMENTS

This dissertation marks the end of my studies at Católica Lisbon and the beginning of a new chapter in my life. There are many people who accompanied me throughout the last two years who deserve special notion.

First and foremost, I would like to express my sincere gratitude to my parents. You have always provided me with the best opportunities and have supported me in all my decisions. I would also like to thank my brother and my sister, who always believed in me and who have shown unconditional support throughout the last years. I am beyond grateful, to have you as my family.

In addition, I would like to express my gratitude to my thesis supervisor, Paulo Romeiro, for supporting me throughout the process of my dissertation. Thank you for your guidance and words of encouragement.

Moreover, my appreciation expands to everyone who has taken part in my focus group or who has answered my survey. Your contribution was essential for my dissertation and you have brought me one step closer to the completion of my Master's degree.

Lastly, I would like to express my deep gratitude to my friends. Thank you for inspiring me and keeping me motivated throughout my studies. My special appreciation goes to my friends in Lisbon who have made the last two years so incredible.

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GLOSSARY

CCFL	Certified cruelty-free label
CFL	Cruelty-free labels
DV	Dependent variable
IV	Independent variable
NB	National brand
PI	Purchase intention
PL	Private label
UCFL	Uncertified cruelty-free label

CHAPTER 1: INTRODUCTION

1.1. Background and problem statement

There is empirical evidence that an increasing share of consumers is attracted by the values of ethical consumerism. This is partly due to the growing media coverage of environmental and social issues, informing consumers about injustices and thus, increasing transparency (Carrington et al., 2010). Today's ethically-minded consumers are concerned with environmental and social problems, animal welfare as well as health-related implications (Carrigan et al., 2004). Having the latter in mind, companies are constantly producing and promoting sustainable and ethical products, mostly to serve consumers' demand, but also to improve their reputation and image (Luchs et al., 2010).

Consumers can express their feelings towards environmental and social responsibility either through the purchase of goods with ethical attributes or through boycott of the perceived unethical alternatives (De Pelsmacker et al., 2005). Ethical consumer behaviour is a topic of particular interest to many researchers and, thus, has already been studied for many years (e.g., Carrigan & Attalla, 2001; De Pelsmacker et al., 2005; Wiederhold & Martinez, 2018). However, previous research has mainly focused on factors influencing consumption of fair trade products and sustainable packaging alternatives.

During the last years, cruelty-free products have gained increasing public interest. The term "cruelty-free" refers to products and ingredients which have not been tested on animals throughout the development process. Although the European Union has prohibited sales of cosmetics that have been tested on animals since March 2013, many companies still secretly engage in animal testing without disclosing this information to the consumers. Products are labelled as cruelty-free, when in fact, they are not. There are two primary reasons for these false declarations. Firstly, the term "cruelty-free" creates a halo effect, and secondly, products marked as cruelty-free trigger consumers' moral heuristics, both leading to greater product sales (Sheehan & Lee, 2014).

With the purpose of helping consumers to make more informed purchase decisions, independent third parties can issue cruelty-free certifications which mark all products that have not been tested on animals with a designated label. These certified labels function as shopping aids and help consumers to make purchase decisions aligned to their personal and moral beliefs

(Annunziata et al., 2011). However, consumers might only have limited knowledge about certified labels and consequently, might not be able to distinguish between third-party labels and uncertified labels issued by the manufacturer.

1.2. Problem Statement

The purpose of this study is to understand influences on consumers' intention to buy cruelty-free cosmetics. Therefore, the effects of brand type and cruelty-free labels on purchase intention will be examined. Furthermore, the study aims to understand the mediating effect of attitude towards cruelty-free products. The problem statement can be summarized as:

Purchase intention of cruelty-free cosmetics. Understanding the effects of brand type and cruelty-free labels.

The problem statement can be subdivided into the following research questions:

RQ1: Does purchase intention of cruelty-free cosmetics differ between private labels and national brands?

RQ2: Do cruelty-free labels impact consumers' intention to buy cruelty-free cosmetics?

RQ3: Is there a difference in the effect of certified cruelty-free labels vs. uncertified cruelty-free labels on purchase intention?

1.3. Relevance

Products supporting social, environmental, or ethical principles have received growing concern throughout the last years (Luchs et al., 2010). Consumers increasingly care about the environmental impact of their purchases and under which circumstances the products have been developed and produced (Zander & Hamm, 2012). The market for cruelty-free cosmetics is expected to grow 6% until 2024 (Market Research Future), resulting in many opportunities for companies operating in the cosmetics industry.

Consumers are more informed than ever about production processes, environmental footprints, and other product information, including the effects of product testing on animal welfare. The latter has led to the production and promotion of new product alternatives, combining essential product attributes with sustainable and ethical features (Luchs et al., 2010). However, academic

research about cruelty-free consumerism is very limited. This study is attempting to generate new insights and consequently, to partly cover the broad research field of cruelty-free consumption. This research aims to identify factors influencing consumers' purchase intention of cruelty-free cosmetics. The newly generated insights will enhance companies' understanding of their consumers and will help them derive implications for their marketing strategies to address these factors efficiently. Although much research has been conducted on private labels and national brands, the influence of brand type on cruelty-free consumption has not been covered yet. Uncovering the effects of brand type on purchase intention, will contribute to a more complete understanding in the research field of ethical consumption and will help private label and national brand manufacturers to derive implications for future actions.

Besides the effect of brand type, this study will shed light on the influence of cruelty-free labels on purchase intention since literature covering the latter is scarce. Besides the influence of cruelty-free labels, the effects of different types of labels, namely, certified and uncertified labels, will be examined. Having a holistic understanding of the influence of different label types on purchase intention will enable companies to react accordingly, e.g., through collaboration with third parties to gain official certifications.

1.4. Research methods

In the first step, existing literature was analysed. Relevant journals were scanned for articles relevant to the different components of this study (theory of planned behaviour, brand type, cruelty-free labels). After reviewing the existing literature, gaps for future research were identified, and the research questions were developed. The results from previous literature have also formed the foundation for the collection of primary data.

To answer the research questions, primary data was gathered solely for the purpose of this study. Primary data was collected through qualitative and quantitative methods. First, a focus group was conducted to understand participants' familiarity with cruelty-free labels and to develop a new uncertified cruelty-free label. Additionally, national brands which are frequently bought were determined, serving as the foundation for the quantitative methods. A pre-survey was distributed to identify the national brand and product category for the main survey. Also, a certified as well as an uncertified cruelty-free label were chosen with the help of the pre-survey.

The main survey was mostly issued to university students and served to understand consumers' attitude towards cruelty-free products, their preference for brand type as well as their reaction

to different kinds of cruelty-free labels. A questionnaire was chosen as a research method as it offers many advantages in terms of speed, cost, and quality of response over traditional methods (Malhotra et al., 2017).

To examine the influence of brand type and label type on purchase intention of cruelty-free cosmetics, an online experiment was conducted. Within the experiment, participants were exposed to different stimuli (2x3 design). They have either been presented a cosmetic product without a cruelty-free label, with an uncertified cruelty-free label, or with a certified cruelty-free label, both for a private label and a national brand. An online experiment was chosen since it allows the researcher to observe consumers' reactions resulting from small changes in label and brand type.

1.5. Dissertation outline

In the following chapter, a literature review will be presented, providing the reader with relevant definitions of variables influencing purchase intention of cruelty-free cosmetics. Also, the theory of planned behaviour will be outlined, which serves as the foundation for this study. Moreover, based on the findings of previous research, the hypotheses of this study will be defined, followed by the conceptual framework which will present and summarize the relevant variables and their interconnection with each other. The third chapter will present and explain the methodology used to answer the hypotheses. Special emphasis will be put on the questionnaire design and the development of the stimuli which were used to obtain the data. Chapter four analyses the results from the questionnaire and tests the validity of the derived hypotheses. Finally, chapter five concludes the study and proposes implications as well as limitations and suggestions for future research.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The following chapter aims to summarize previous research related to this study. Key papers will be reviewed and discussed. The purpose of this chapter is to enhance the reader's understanding of the research topic by providing relevant definitions and explanations. First, the term 'intention' will be defined, followed by definitions of 'private label', 'national brand', and 'cruelty-free labels. Thereafter, the theory of planned behaviour will be outlined, with special regards to the relationship between attitude and intention. After careful analysis of the findings from previous literature, hypotheses are formulated. To conclude the chapter, the underlying conceptual framework of the study will be presented, summarizing the relationships between the different variables.

2.1 Purchase Intention

Much research in the Marketing and Management literature has focused on consumers' purchase intention and factors influencing the latter. According to Morrison (1979), intention is understood as the probability of purchasing a specific product or brand. O'Brien describes intention as "the extent of commitment to a future action, self-prediction of anticipated behaviour, or more simply, plans" (O'Brien, 1971, p.283). Ajzen (2002) adds that intention is an immediate antecedent of behaviour. Intentions include personal motivational factors influencing behaviour and can be seen as indications of how much effort individuals are willing to put into the performance of certain behaviour. The stronger the intention, the more likely is the performance of the behaviour (Ajzen, 1991).

2.2 Brand type

Private labels have significantly increased in value and unit sales during the last years, resulting in constantly growing market shares (Fornari et al., 2016). Private labels experience growth across many different product categories, which makes them a considerable competitor of their national counterparts (Amrouche & Yan, 2012). The relationship between private labels and national brands can be described as a dependency but also as fierce competition and struggle for channel control. Private labels and national brands are in need of each other but simultaneously are competing against each other, both trying to maximize their profit and share of the channel (Garretson et al., 2002). There are two main drivers for competition: price competition and non-price competition. Price competition refers to the baseline price of private

labels and national brands. A rise in the baseline price results in less competitivity for the brand introducing the higher baseline price and higher competitivity for the brand having the lower baseline price and vice versa. Non-price competition can be divided into a supply-side competition (e.g., shelf share, quality improvement) and demand-side competition (e.g., store loyalty, image) (Fornari et al., 2016). In the following, differences between private label and national brands will be discussed.

2.2.1 Private Label

Private labels, also called "store brands", are products that are branded by distributors (Amrouche & Yan, 2012; Choi & Coughlan, 2006). In today's world of an uncertain economic environment, private labels do attract many price-sensitive consumers (Amrouche & Yan, 2012). According to Garretson et al. (2002), consumers who are seeking to save money have two options. They can choose a national brand that is offering any kind of promotion, or they can choose private labels as an alternative. The latter are usually priced below the nationally branded good.

Offering private labels holds numerous advantages for retailers. According to previous research, there are several strategic reasons for the establishment of private labels. Firstly, store margins and profits can be increased since private labels usually carry higher per-unit margins than national brands (Cotterill et al., 2000; Garretson et al., 2002). The underlying reason for that is the lower market power of private label suppliers. The latter operates in a market with no differentiation. Thus, they offer their products at a price close to their marginal costs. Moreover, manufacturers of national brands have higher advertising costs, which result in higher wholesale prices and, thus, lower margins for the retailer (Ailawadi & Harlam, 2004). Another advantage of private labels is the fact that retailers can differentiate themselves from their competitors by offering a private label exclusively available at the retailer (Amrouche & Zaccour, 2007). Moreover, consumers' loyalty towards the retailer will be enhanced in the long-term (Ailawadi et al., 2008; Fornari et al., 2016) and, additionally, private labels increase product diversity and variety within a product category (Amrouche & Zaccour, 2007; Raju et al., 1995). Another important factor influencing retailers' decision to employ private labels is increased bargaining power over national brands. Offering private labels helps retailers to improve their position and, consequently, helps them to get better trade terms from national brands (Ailawadi & Harlam, 2004; Wu & Wang, 2005).

How to position a private label in comparison to a national brand remains an important managerial question. According to Choi and Coughlan (2006), private label products can either be differentiated in terms of quality or features. Quality differentiation refers to the perceived differences in quality. Usually, private label products are perceived as of lower quality than their national brand counterparts. However, private label retailers are able to adjust and eventually match the technology and quality perception as of the national brand. Another opportunity to differentiate a product is through feature differentiation. The latter refers to "the degree to which products have different forms, sizes, or packaging" (Choi & Coughlan, 2006, p.80). In contrast to quality, consumers do not perceive more features as better, instead, variety might be valued. Many private labels are similar to national brands, minimizing feature differentiation. However, there might still be differences in quality perception, leading to the conclusion that the two dimensions, "quality" and "feature," are independent of each other (Choi & Coughlan, 2006).

Besides the many positive effects for retailers offering private labels, there are also some negative effects to consider. As mentioned earlier, consumers often perceive the quality of private labels as inferior to the alternatives of national brands (Choi & Coughlan, 2006). Since consumers usually use extrinsic cues to evaluate product quality, private labels are at a disadvantage. They are less known and thus, lack a clear identification with a well-known and trusted manufacturer (Dick et al., 1996). Moreover, Fornari et al. (2016) argue that private labels do not necessarily increase overall turnover for the retailer. An increase in private label sales usually stems from brand switching. Consumers who have previously bought the alternative from a national brand switch from the latter to the private label. Consequently, private label sales increases while sales of national brands decreases, resulting in a "zero-sum effect" on sales of the whole category.

2.2.2 National Brand

Previous research has recognized that consumer preferences for national brands are strong (Ailawadi, 2001). National brands help consumers to reduce the risk associated with a purchase since branding is perceived as a guarantee for quality and security. Well-known brands also increase trust among consumers, which is the foundation for a long-term relationship with the consumer (Elliott, 2007). Very often, nationally branded goods are also perceived as more socially acceptable (Baltas, 1997). Ailawadi concludes that "national brands enjoy a level of

equity and image, over and above quality, that is not offset by the lower price of store brands." (Ailawadi, 2001, p.310).

Although private labels increase retailers' bargaining power over manufacturers, national brands remain a powerful competition. They exert their power mainly through customer loyalty. Loyal consumers have a high willingness-to-pay for their favourite brand and will search for the brand in every shop. If a retailer does not carry the specific brand, loyal consumers will shop elsewhere. As a consequence, the retailer loses consumers to its competitors, which are carrying the brand. Thus, retailers are compelled to carry the brand as well, making them more open for negotiations (Garretson et al., 2002).

However, since market shares for private labels rise, manufacturers of national brands need to react to the competition in order to maintain product sales. Many manufacturers increase their promotional spending in order to stop the migration of value-conscious consumers to private labels (Garretson et al., 2002). These value-conscious consumers usually perceive the low price as a signal for the inferior quality of the private label. Consequently, national brands on price promotion are seen as more favourable since they suggest consumers a way to save money without having to sacrifice quality (Garretson et al., 2002). Besides price promotions, manufacturers can choose to engage in co-packing. The latter gives them the chance to decrease unit production costs as well as to improve collaboration with retailers (Tarziján, 2004). According to Fornari et al. (2016), manufacturers need to decide between two defensive strategies. The first is based on cost leadership, which requires the manufacturers to decrease their baseline price in order to reduce the price gap. The second proposed strategy is based on differentiation. Manufacturers should build and communicate value features that distinguish the brand from the competition.

As mentioned earlier, there is a generally accepted consumer preference for national brands since they reduce consumers' perceived risk associated with a purchase and enhance trust (Ailawadi, 2001; Elliott, 2007). Although many consumers are price-sensitive, it is assumed that trust plays an important role when purchasing cruelty-free products. Based on this assumption, the following hypothesis is derived:

H_1: Purchase intention will be higher for national brand products than for private labels.

2.3 Ethical labels

Although ethical consumption has been around for many decades, the phenomenon has gained considerable attention throughout the last years (Crane & Matten, 2004). Crane and Matten (2004) define ethical consumption as a conscious and deliberate choice to make purchases based on personal and moral beliefs. Consumers engaging in ethical consumption choose their products based on environmental or ethical considerations. The term "ethical" includes matters as conscience (fair trade and animal welfare), social aspects (labour standards), and lastly, health concerns (Cowe & Williams, 2001; Sheehan & Lee, 2014). Ethical consumption enables consumers to express their feelings of responsibility towards society and to support companies or products which support social responsibility. Concerns can either be expressed through the purchase of products with ethical qualities or through the boycott of products with perceived unethical product attributes (De Pelsmacker et al., 2005).

Most ethical and sustainable products are sold in regular retail channels among the less ethical alternatives (Padel & Foster, 2005). In order to guide consumers in their purchasing decisions and to help them identify ethical or sustainable products, labels are used (Ölander & Thøgersen, 2014). Ethical labels help to reduce information asymmetry between the seller and consumer and help the latter to make purchase decisions that are aligned to its own needs. The main function of labels is the provision of information to allow the consumer to identify products that match the individual preferences.

Ethical product attributes are difficult to recognize and hard to be controlled by the consumer. Thus, labels help to draw consumers' attention towards ethical products and to raise standards of ethical values. Furthermore, labelling can be seen as a direct shopping aid since it enhances the quantity and nature of the information that is available to consumers in their decision-making process (Annunziata et al., 2011). De Pelsmacker et al. (2005) argue that labels should provide clear and concise information and should be easy to understand in order to reduce search time for ethical products and, consequently, lower information costs. Other research supports the idea of decreased information costs and argues that certified ethical labelling attenuates misleading marketing claims, increases efficient information transfer, and therefore fosters sustainable consumer behaviour (Hussain, 2000).

In their study about the relative importance of characteristics of ethically labelled coffee, De Pelsmacker et al. (2005) highlight the diversity among ethical labels. They claim that different

claims and ethical labels result in different levels of attraction on consumers and different levels of credibility. There are different types of ethical labels available in the market. Most ethical labels are one-sided positive, meaning that ethical alternatives are tagged with a label, whereas the non-ethical products are not denoted with a label (Van Dam & De Jonge, 2015). Labels can also be framed differently. They can either be framed positively (e.g., "dolphin-friendly tuna"), negatively (e.g., "genetic modification-free"), or they can be framed in a neutral way, emphasizing special production systems (e.g., "organic" or "free-range pork"). Positive as well as negative frames can be interpreted as warnings against competitors' products (Schröder & McEachern, 2004).

According to Horne (2009), ethical labels can be categorized into two clusters – mandatory and voluntary labelling. Voluntary labels are clustered into three main categories through the International Standards Organization (ISO), namely Type I, Type II, and Type III. Type I labels include certifications issued by a third party which allows producers to make use of a logo associated with certified products. Type II labels, on the other hand, are labels that are based on self-declarations of manufacturers, importers, distributors, or retailers. Lastly, Type III provides the customer with more extensive quantitative data concerning the product life cycle instead of a logo.

2.3.1 Cruelty-free labels

The term "cruelty-free" informs the consumer that a product was not tested on animals. By labelling products as cruelty-free, companies communicate their avoidance of animal testing throughout their development processes and, consequently, represent an animal rights perspective that claims that animals should not be owned or used for any development purposes (Sheehan & Lee, 2014).

According to Sheehan and Lee (2014), sales of newly animal-tested cosmetics and ingredients is prohibited in the European Union since 2013. Nonetheless, companies can still engage in animal testing if they conduct the tests outside the EU. Alternatively, they can hire outside firms which will test ingredients and products on animals for them. Consequently, companies use the term "cruelty-free" (Type II label) even though they still actively participate in animal testing. The latter is due to missing regulations which define when the term may be officially used. As long as there are no broader policies in place, companies can use the term falsely, resulting in misperceptions and misleading of consumers. Also, companies that use the term "cruelty-free"

on their products today may have profited from animal testing in the past (e.g., The Body Shop, Burt's Bees).

The term "cruelty-free" is often used in marketing materials since it serves as a moral heuristic. The latter enables consumers to make decisions that are not only beneficial for the individuum but for the larger society as well. Moral heuristics connect product attributes with individuals' values, thus, representing a powerful tool for companies. The term "cruelty-free" creates a halo effect, which enhances brand perception in the mind of the consumer, helping them to make faster purchase decisions (Sheehan & Lee, 2014). While moral heuristics can be helpful, they might also lead to misinterpretation and mistaken judgement by suggesting a positive characteristic to the consumer, which the product does not have (Sunstein, 2005). In fact, many products labelled as "cruelty-free" are not officially certified as cruelty-free (Sheehan & Lee, 2014).

With the goal of helping consumers to make cruelty-free purchases, a handful of institutions have rolled out labels that indicate which products were not tested on animals (Type I labels). One organization is the "Leaping Bunny Program," which grants labels to cruelty-free care and household products (Cheng, 2019). Established in 1996, the Leaping Bunny Program grants cruelty-free certification to companies that ended animal testing at all stages along the product development process. Moreover, to be certified, companies must annually renew their commitment to not conduct animal testing on any of the final products, ingredients, or formulations. Also, they must allow third-party audits (Leaping Bunny). Another renowned organization certifying cruelty-free cosmetics is PETA with its "Beauty Without Bunnies Program" (Cheng, 2019). The program was established in 1987 and acknowledges companies "that refuse to conduct, commission, pay for, or allow tests on animals for any of their ingredients, formulations, or products anywhere in the world" (PETA). Choose Cruelty-Free represents the last organization granting certifications. The organization only certifies brands which sell in retail markets that do not require animal testing (e.g., China), additionally, "all products and ingredients must be free of animal testing by the applying brand, owning company, contract manufactures, ingredient suppliers and anyone acting on their behalf for a period of five years" (Choose Cruelty-Free). All three organizations provide consumers with lists containing all brands which were granted certification of the respective organizations. The logos can also be found on packages of cruelty-free products.

Consumers are exposed to a vast amount of fast-moving-consumer-goods brands every day and thus, need to process much information, which might lead to information overload and poor decision making (Malhotra, 1982). In order to tackle the issue of too much information and choice, labels can act as shopping aids and enhance the nature of information (Annunziata et al., 2011). Many consumers are aware of the fact that cosmetics were tested on animals and want to boycott those products and purchase cruelty-free alternatives instead. However, identifying cruelty-free products is an obstacle for many people since not all product attributes are visible to the consumer (Annunziata et al., 2011). Cruelty-free labels can serve as shopping aid helping consumers to identify cruelty-free alternatives. Based on the previous discussion, the following hypotheses were derived:

H_2: Cruelty-free labels positively influence purchase intention.

H_3: Certified cruelty-free labels have a stronger positive effect on purchase intention than uncertified cruelty-free labels.

2.4 Theory of Planned Behaviour

Much research has been conducted, trying to explain antecedents of human behaviour. The theory of planned behaviour deals with the nature of behaviour-specific factors. The theory is based on the theory of reasoned action, which was first introduced by Ajzen and Fishbein in 1975. The theory of planned behaviour was developed to overcome the limitations of the theory of reasoned action. In the original model, behaviour over which people have incomplete control was not addressed (Ajzen, 1991).

The theory of planned behaviour postulates that human behaviour is influenced by three types of beliefs. Firstly, behavioural beliefs, which represent beliefs about the likely consequences of a behaviour. The latter produces either a favourable or unfavourable attitude towards the behaviour. The second influence on human behaviour is normative beliefs which represent normative expectations of other people and result in perceived social pressure or subjective norm. Lastly, control beliefs play an important role when predicting human behaviour. Control beliefs are beliefs about present factors that either enhance or hinder performance. They affect perceived behavioural performance (Ajzen, 2002).

2.4.1 Intention

The central factor in the theory of planned behaviour is represented by an individual's intention to perform a certain behaviour. As mentioned before, intention is an immediate antecedent of behaviour (Ajzen, 2002). The intention to perform a certain behaviour is directly influenced by three conceptually independent determinants, namely, an individual's attitude towards the behaviour, subjective norm, as well as perceived behavioural control. The stronger attitude, subjective norm, and perceived behavioural control are, the more likely is the intention to perform a certain behaviour. However, the relative importance of the three determinants on intention varies across behaviours and situations - there might be applications where only one of the three determinants has a significant impact on intention.

2.4.2 Attitude

Attitude "refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question" (Ajzen, 1991, p.188). The stronger the attitude towards a behaviour, the stronger is the intention (Ajzen, 1991). Various research about the influence of pro-environmental attitude on purchase intention of ethical products has been conducted. The findings clearly support a significant positive effect of pro-environmental attitude on the intention to buy ethical products (e.g., Birgelen et al., 2009; Choi & Johnson, 2019). It is assumed that the findings can be transferred to the field of cruelty-free consumption as well, meaning a positive attitude towards cruelty-free products will positively influence the purchase intention of cruelty-free products. Based on this assumption, the following hypothesis can be derived:

H_4: Attitude will mediate the positive relationship between label type and purchase intention.

For the purpose of this study, the subjective norm, as well as perceived behavioural control, will not be considered, meaning that only the mediating effect of attitude on intention will be further examined. As mentioned earlier, not all three determinants exert equal significance in all situations. Since the scope of this study does not allow a proper examination of all three constructs, only attitude will be considered. Attitude has been proven to influence intention significantly in various studies (e.g., Vermeir & Verbeke, 2008) and, thus, is chosen as the main mediator of intention.

2.5 Conceptual Framework

To conclude the literature review, the following conceptual framework summarizes the hypothesised relationships between the variables.

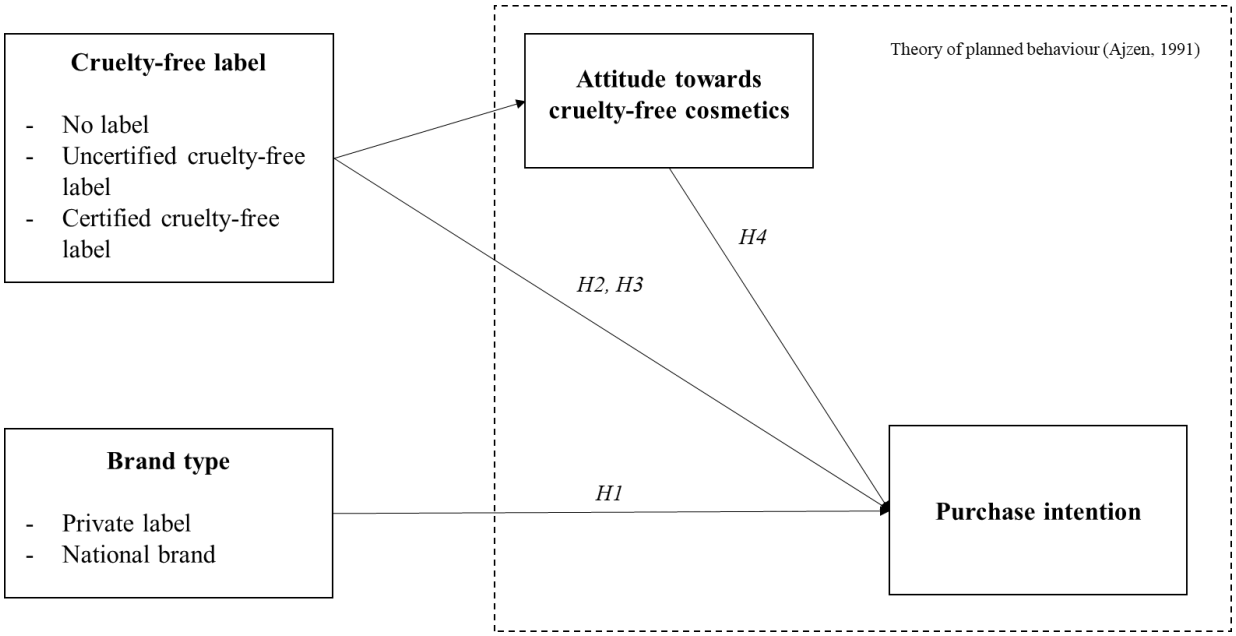


Figure 1: Conceptual framework

CHAPTER 3: METHODOLOGY

In the following chapter, the methodology used to test the research questions and derived hypotheses is presented and explained. The chapter starts with an explanation of the research approach and is followed by detailed information about the collection process of primary data, including information about sample, research design as well as data analysis.

3.1 Research Approach

The goal of this research is to expand the knowledge in the field of cruelty-free consumption. More specifically, it is examined how brand type and the type of cruelty-free label influence consumers' purchase intention following a deductive reasoning approach.

The research was conducted using exploratory and explanatory research methods. Starting with exploratory research, the preliminary step was to scan existing literature, primarily from renowned journals and highly reputable authors, to define the research problem. After identifying research gaps, more specific research questions were derived, intending to partly cover the gaps and to help to form a complete understanding of the research topic. As mentioned in the previous chapter, the academic literature has also formed the foundation for the development of this study's hypotheses as well as the conceptual framework.

Explanatory research was conducted to test the previously derived hypotheses and explain the relationship between cause and effect, namely brand type, cruelty-free label, and purchase intention. In order to understand the relationships, both qualitative and quantitative methods were used.

To answer the research questions, primary data had to be collected solely for this study's purpose. To avoid researcher bias, before the main study, a focus group was conducted, and a pre-survey was shared online. The results were used to define the design of the main survey.

3.2 Qualitative research

For this study, direct (non-disguised) qualitative research was conducted in the form of a focus group (Malhotra et al., 2017). The focus group's objective was to examine the participants' familiarity with cruelty-free labels and their current state of ethical consumption. Moreover, a scenario was proposed in which the participants of the focus group had to act as a product

manager and think of a logo that communicates cruelty-free production standards to consumers. Lastly, the participants were asked to recall national brands available in the mass market.

3.2.1 Data collection

The 40-minutes focus group was organized with eight participants from five different nationalities. Participants of similar age were chosen to make everyone feel comfortable and to enhance discussion among the participants. The focus group was divided into five parts. After the introduction part, where everyone was asked to present themselves, the participants were then asked questions about their consumption and usage behaviour with the purpose of introducing them to the research topic. In the third part, participants received questions about national brands available in supermarkets and drugstores. Since this study focuses on the mass market, national brands from pharmacies or beauty retailers were excluded. It is also believed that national brands operating in the mass market are better known by the majority of participants. In the fourth part of the focus group, the participants were proposed a scenario in which they were asked to act as a product manager launching a new cruelty-free product (for further explanation, please refer to Appendix 1). The goal of this part was to develop an uncertified cruelty-free logo for the main survey. The focus group ended with a closing part.

3.2.2 Results

The brands that were recalled during the focus group were L'Oréal, Neutrogena, Weleda, Schwarzkopf, Garnier, Pantene Pro-V, Fructis, Elvital, Maxfactor, Dove, Nivea, and Herbal Essences. From the twelve mentioned brands, eight were added to the pre-survey. Weleda was excluded since it is not commonly available in many countries. Maxfactor was also excluded from the pre-survey since this research focuses on skin, body, and hair care and thus, leaves out the category of makeup to enable all genders to take part in this research. Lastly, Elvital and Fructis were eliminated and merged under L'Oréal Paris and Garnier.

It became evident that the majority of the participants was familiar with the term "cruelty-free". However, none had deliberately purchased a cosmetic product because of this feature. When asked for cruelty-free logos, none of the participants was able to describe one in detail. Nonetheless, all participants recalled "bunnies" as the main element of the logos. When the participants were presented the three certified logos, all were equally recognized, which led to the decision to add all three logos to the pre-survey. When asked for design ideas for an

uncertified cruelty-free label, two design suggestions were developed, which were added to the pre-survey as well (for detailed results, please refer to Appendix 1).

3.3 Quantitative research

The focus group's insights have defined the foundation for the pre-survey, which helps to define the main survey. For the quantitative research, online surveys were chosen as means as they offer many advantages in terms of speed, cost, and quality of response over traditional methods as telephone or postal surveys (Malhotra et al., 2017).

3.3.1 Pre-survey

The pre-survey's main purpose was to identify a certified and an uncertified cruelty-free logo and a national brand suitable for the main study. To answer the research question, how brand type influences purchase intention of cruelty-free cosmetics, participants were asked to choose a brand that they perceive as the most cruelty-free. The question determined which brand would be included in the main survey.

A convenience sample was chosen for the pre-survey. The survey was available in English, enabling everyone to participate in the survey since the research was not limited to any specific nationality. The survey was shared online on various social networks. The target group of the pre-survey and the main survey consisted of individuals who are regular consumers of cosmetic products. For the target group's purpose, a screening question was added at the beginning of the survey, eliminating the participants whose last purchase of cosmetics was more than three months ago.

The pre-survey started with a screening question which asked if the participant has bought any cosmetic product from a supermarket or drugstore within the last three months. Participants were only able to continue with the survey if they answered the question with “yes”; the survey ended for all other participants. After the screening question, participants of the survey were presented with eight national brands and were asked to pick the one they perceive as the most cruelty-free. The purpose of this question was to eliminate brands that are associated with an unethical image, and that could bias the results in the main survey. It was expected to mostly have German and Portuguese participants in the study, therefore, only national brands were included, which are available in Germany as well as in Portugal, to ensure brand familiarity among the participants. With the goal of identifying appropriate stimuli for the main survey,

participants were also asked from which category they purchase most of their cosmetic products (hair, skin, or body) in case a national brand would be chosen that offers products in several categories (e.g., Garnier Skin Active and Garnier Fructis).

In the next step, participants were presented the three certified logos (Figure 2) and were asked to pick the one they are most familiar with. After choosing a certified cruelty-free logo, participants were also asked to name a preference in terms of an uncertified cruelty-free logo. For this purpose, the two design suggestions from the focus group were presented (Figure 3).

Leaping Bunny Program	Beauty Without Bunnies Program	Choose Cruelty-Free
		

Figure 2: Certified cruelty-free labels

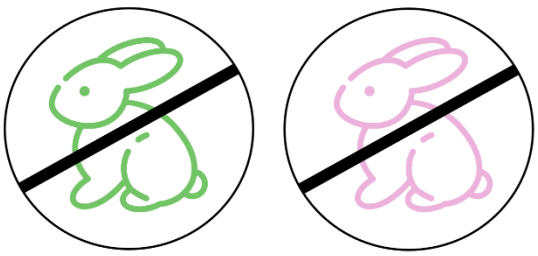
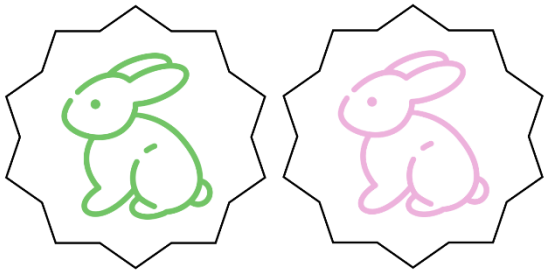
Design idea #1	Design idea #2
	

Figure 3: Design suggestions for uncertified cruelty-free labels

The results from the pre-survey were analysed using SPSS. The national brand that was ranked the most cruelty-free was Herbal Essences, which was chosen as the main survey's national brand, resulting in shampoo as the final stimulus for the main survey. Regarding the private label, after extensive research, Cien from LIDL was chosen since it is the only private label available in Portugal and Germany. As mentioned before, the two countries were expected to be most represented in the main study, thus, familiarity with the private label was crucial. The

certified cruelty-free logo that was acquainted the most was the one from Choose Cruelty-Free. The preferred design for an uncertified cruelty-free logo was design idea #1.

3.3.2 Main survey

The main survey was defined after having obtained the results from the pre-survey. The main survey's goal was to measure consumers' purchase intention of cruelty-free cosmetics and how the latter varies with brand type and different types of cruelty-free logos. Moreover, the mediating effect of attitude towards cruelty-free cosmetics was examined. Lastly, demographics were gathered.

As for the pre-survey, a convenience sample was chosen. Again, the online survey was available in English and was shared on social networks. The target group changed slightly. Since shampoo was chosen as the final stimulus, regular consumers of shampoo were needed instead of cosmetic products in general. Therefore, the screening question was adjusted.

The survey followed a cross-sectional design and used a two (national brand, private label) by three (no logo, uncertified cruelty-free logo, certified cruelty-free logo) design.

	National Brand	*Private Label*
No logo		
Uncertified cruelty-free logo		
Certified cruelty-free logo		

Figure 4: Cross sectional design matrix

The survey started with a screening question, eliminating all participants whose last purchase of shampoo was more than six months ago. In the next part, questions about the participants' consumption habits were asked, in particular, how often they buy shampoo and how many different cosmetic products they use in one week.

In the following part, participants were either asked to indicate their attitude regarding cruelty-free cosmetics or they were shown one of six stimuli. The question about participants' attitude and the stimuli were randomized to eliminate potential biases that could have influenced the answers of the two questions. As mentioned earlier, shampoo was chosen as stimulus for the main survey. Participants were either presented a shampoo from Herbal Essences (national

brand) or Cien (private label), and either saw no additional label, an uncertified cruelty-free label, or a certified cruelty-free label.

	National Brand	Private Label
No label		
Uncertified cruelty-free label		
Certified cruelty-free label		

Table 1: Stimuli

After being exposed to one of the six stimuli, participants were asked to answer questions measuring their purchase intention. Additionally, a manipulation check was performed with the purpose to assess the participants' perception and interpretation of the stimuli (Gravetter & Forzano, 2011). Lastly, participants' demographics were gathered.

The variables from the conceptual framework were measured using different constructs. Purchase intention was measured using a three-item scale developed by Bao et al. (2011), who has based his questions on the findings from Dodds et al. (1991) and Grewal et al. (1998). For all three questions, participants had to indicate their preference on a 7-point Likert scale. Attitude was measured using a five-item scale from Madden et al. (1992), asking participants to give answers based on a 7-point semantic differential.

Framework	Measure	Items	Scale	Literature
IV	Cruelty-free label	N/A	Stimuli	Own development
IV	Brand type	N/A	Stimuli	Own development
DV	Purchase intention	3	7-point Likert Scale	Bao et al., 2011
Mediator	Attitude	5	7-point semantic differential	Madden et al., 1992

Table 2: Operational Model

All quantitative data collected through the main survey was analysed using IBM's software SPSS. Prior to sharing the survey on social networks, a pilot and a pre-test were conducted to make sure that all questions were well understood by the participants. Moreover, the manipulation was verified. Thereafter, the main analysis was conducted. First, the sample demographics were analysed using descriptive statistics. Subsequently, the constructs' degree of reliability was calculated using Cronbach's alpha. After verifying the requirements for the statistical tests, the latter were performed and analysed. To verify H1, an independent sample t-test was conducted. For H2 and H3, a linear regression as well as a One-Way ANOVA were performed. H4 refers to a mediation, thus, Haye's Process Macro Model was used to measure the effect of attitude. For all statistical tests, a significance level of 5% was set.

CHAPTER 4: RESULTS AND DISCUSSION

In the following chapter the results obtained from the main survey will be discussed. After characterizing the sample in terms of demographics, each hypothesis will be tested, and the results will be explained in detail. Finally, after having tested the hypotheses, the results will be interpreted and discussed.

4.1 Sample characterization

The sample consisted of 345 participants, from which 31 did not finish the survey. The latter were removed from the data set. Of the remaining 314 participants, 19 did not pass the screening question, and 8 participants were removed due to unrealistic long answer times, leaving 287 answers. In the next step, multivariate outliers were identified, using Mahalanobis Distance. The identified outliers, 3 in total, were not considered in the data set which left 284 valid answers for the analysis. Each stimulus was exposed to a number between 43 and 49 participants.

Out of the 284 participants, 63% were female and most of the respondents (76%) belonged to the age group of 20-29 years. Although the survey was shared among 35 nationalities, most participants stemmed from Europe, Germany being the most represented nationality (58%). To make the analysis easier and more lucid, the countries were grouped in Germany, Portugal, and other. In terms of occupation, most participants were students (59%) with a completed Bachelor's degree (52%). Furthermore, almost half of the sample has a monthly net income of less than 1,000€. Regarding their consumption behaviour, 41% buy shampoo every 3-6 months, and 38% use 4-6 cosmetic products during one week.

	NB no label	*NB UCFL*	*NB CCFL*	*PL no label*	*PL UCFL*	*PL CCFL*	*Total*
Total	43	48	48	47	49	49	284
Gender							
Female	65.1%	68.8%	62.5%	59.6%	59.2%	61.2%	62.7%
Male	34.9%	31.2%	37.5%	40.4%	40.8%	38.8%	37.3%
Age							
19 or younger	4.7%	0%	2.1%	0%	0%	0%	1.1%
20-29	81.4%	85.4%	64.6%	70.2%	73.5%	83.7%	76.4%

30-39	9.3%	10.4%	20.8%	14.9%	10.2%	10.2%	12.7%
40-49	4.7%	4.2%	2.1%	4.3%	2%	2%	3.2%
50-59	0%	0%	8.3%	8.5%	4.1%	0%	3.5%
60-69	0%	0%	2.1%	2.1%	8.2%	2%	2.5%
70 or older	0%	0%	0%	0%	2%	2%	0.7%
Nationalities							
Germany	55.8%	58.3%	62.5%	55.3%	57.1%	59.2%	58.1%
Portugal	11.6%	4.2%	2.1%	14.9%	2%	8.2%	7%
Other	32.6%	37.5%	35.4%	29.8%	40.9%	32.6%	34.9%
Occupation							
Student	69.8%	68.8%	52.1%	57.4%	57.1%	49%	58.8%
Employed	25.6%	31.3%	41.7%	34%	30.6%	46.9%	35.2%
Self-employed	4.7%	0%	6.3%	4.3%	4.1%	0%	3.2%
Unemployed	0%	0%	0%	0%	4.1%	0%	1.1%
Retired	0%	0%	0%	4.3%	4.1%	2%	1.8%
Education							
High School	11.6%	14.6%	14.6%	8.5%	24.5%	10.2%	14.1%
Bachelor	51.2%	58.3%	50%	61.7%	44.9%	46.9%	52.1%
Master/MBA	30.2%	18.8%	25%	27.7%	26.5%	40.8%	28.2%
Doctorate	4.7%	6.3%	8.3%	2.1%	4.1%	2%	4.6%
Other	2.3%	2.1%	2.1%	0%	0%	0%	1.1%
Monthly net income							
Less than 1,000€	53.5%	50%	37.5%	53.2%	51%	34.7%	46.5%
1,000€ - 1,999€	23.3%	20.8%	20.8%	21.3%	20.4%	22.4%	21.5%
2,000€ - 2,999€	14%	14.6%	18.8%	4.3%	14.3%	14.3%	13.4%
3,000€ - 3,999€	4.7%	10.4%	6.3%	8.5%	6.1%	20.4%	9.5%
4,000€ - 4,999€	4.7%	4.2%	14.6%	4.3%	0%	6.1%	5.6%
5,000€ or more	0%	0%	2.1%	8.5%	8.2%	2%	3.5%

Table 3: Sample characterization

4.2 Reliability of constructs

To test the hypotheses, constructs were used, which were already employed and proven by other authors. However, the scales' reliability and internal consistency had to be confirmed. The latter was done through the calculation of Cronbach's alpha. Due to the existence of both, positive and negative variables in the attitude construct, one item had to be recoded to assess the construct's reliability successfully. For purchase intention, Cronbach's alpha was calculated in two ways. First, each stimulus was examined independently. Then, Cronbach's alpha was calculated for the three items of each stimulus, resulting in six independent values. Next, three new variables were created, which represented the mean of each item. The three new variables were then used to calculate Cronbach's alpha for the whole construct. Lastly, the values were assessed following the guidelines proposed by George and Mallery (2003).

In this study, attitude has a Cronbach's alpha of 0.834, indicating a good internal consistency. Cronbach's alpha for overall purchase intention is 0.947 and therefore indicates excellent internal consistency. The same accounts for purchase intention of the six stimuli, all values are above 0.9 indicating high reliability.

Reliability statistics

Construct	#items	Cronbach's alpha	Quality
Attitude	5	0.834	Good
Purchase intention (overall)	3	0.947	Excellent
PI NB no label	3	0.917	Excellent
PI NB uncertified label	3	0.946	Excellent
PI NB certified label	3	0.940	Excellent
PI PL no label	3	0.973	Excellent
PI PL uncertified label	3	0.938	Excellent
PI PL certified label	3	0.946	Excellent

Table 4: Cronbach's alpha

4.3 Manipulation check

To test if the manipulation of the independent variable was successful, a One-Way ANOVA was conducted. A prerequisite of ANOVA is equal variances of the compared groups. The latter

was assessed using Levene statistics. As it can be seen, the p-value based on the mean is below 0.05 for all three manipulation items, indicating differences between variances.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Brand_type	Based on Mean	8,605	5	278	,000
	Based on Median	2,286	5	278	,046
	Based on Median and with adjusted df	2,286	5	271,808	,047
	Based on trimmed mean	8,605	5	278	,000
Label_presence	Based on Mean	6,778	5	278	,000
	Based on Median	1,939	5	278	,088
	Based on Median and with adjusted df	1,939	5	241,238	,089
	Based on trimmed mean	6,778	5	278	,000
Label_type	Based on Mean	199,722	5	278	,000
	Based on Median	11,889	5	278	,000
	Based on Median and with adjusted df	11,889	5	188,945	,000
	Based on trimmed mean	159,080	5	278	,000

Table 5: Manipulation check – homogeneity of variances

The assumption of homogeneity of variance is violated and thus, a Kruskal-Wallis test was conducted. The null hypothesis states that there are no differences between the treatments. For all three groups, the asymptotic significance is 0.0. Therefore, the null hypothesis can be rejected. Consequently, there are significant differences between the treatments for all three groups, indicating that the manipulation was successful.

Test Statistics

	Brand_type	Label_presence	Label_type
Kruskal-Wallis H	27,136	148,832	213,194
df	5	5	5
Asymp. Sig.	,000	,000	,000
Exact Sig.	,000	,000	
Point Probability	,000	,000	

Table 6: Manipulation check – Kruskal-Wallis test statistics

4.4 Results from the hypotheses testing

For the validation of the proposed hypotheses, statistical tests had to be performed. Independent sample t-test, ANOVA, and linear regressions were conducted. Ahead of the hypotheses testing, the required statistical criteria were verified.

4.4.1 The influence of brand type

H_1: Purchase intention will be higher for national brand products than for private labels.

To test the validation of this hypothesis, an independent sample t-test was conducted with the null hypothesis stating that the two independent groups have equal means.

$$\mu 1 = \mu 2$$

Where μ1 represents the mean purchase intention of national brand shampoo and μ2 represents the mean purchase intention of private label shampoo.

To conduct an independent sample t-test, the dependent variable should be metric. In contrast, the independent variable should be categorical. The test also requires independence of observations, no significant outliers, normal distribution, and homogeneity of variances. The dependent variable is represented by purchase intention, which was measured on a 7-point Likert Scale and thus, fulfils the metric criterion. The independent variable consists of the different brand types, consequently, it is categorical. Due to the survey design, each participant was assigned to only one of the stimuli. Therefore, each group consists of different respondents and there are no relationships between the observations in each group, indicating independence of observations. Another criterion is the absence of outliers. The latter can be verified since all outliers were removed in the data preparation process beforehand. For each stimulus, the number of observations was above 30 which indicates that the Central Limit Theorem applies and thus, normal distribution can also be verified. Lastly, homogeneity of variances was tested and verified using Levene statistics. The p-value was 0.827, thus, the null hypothesis of homogenous variances could not be violated.

The independent sample t-test has proven significant statistical differences among the two groups ($p<0.001$). Furthermore, looking at the descriptive statistics, it becomes evident that purchase intention is higher for national brand products than for private label products ($4.24>3.5$). Accordingly, H_1 is verified (Appendix 4).

4.4.2 The influence of cruelty-free labels

H_2: Cruelty-free labels positively influence purchase intention.

To test if the presence of cruelty-free labels positively influences purchase intention, a linear regression was conducted.

$$PI_i = \beta_0 + \beta_1 CFL_i + \varepsilon_i$$
$$i = 1,...,N$$

PI represents the purchase intention of shampoo, CFL stands for the cruelty-free label, and N is the number of observations (N=284). For CFL, a dummy variable was created, indicating if a cruelty-free label was present or not.

The assumptions for this statistical test are linearity, homoscedasticity, independence of observations, normality and absence of multicollinearity. As explained earlier, independence of observations and normality can be verified due to the survey design and the Central Limit Theorem. The latter was additionally verified with a normal P-P Plot which confirmed normal distribution. Multicollinearity was checked and confirmed using collinearity statistics. Lastly, homoscedasticity was controlled using a scatterplot. The results show that homoscedasticity cannot be fully verified. This might be since the independent variable is binary. Multicollinearity can be violated since the condition index is below 15 (Appendix 5).

The model is statistically significant ($p<0.05$) with an R square of 0.021, meaning that it only explains 2% of the variance in purchase intention. β_1 is 0.482 and it is statistically significant with a $p<0.05$. The results show that an increase of one unit in CFL leads to an increase of 0.482 units in purchase intention.

To overcome the limitations of missing homoscedasticity, an additional independent sample t-test was performed. The assumption of homogenous variances was controlled and approved using Levene's test for equality of variances. The model is significant ($p<0.05$) and indicates a higher mean purchase intention for CFL shampoo than for non-CFL shampoo (Appendix 6).

Consequently, H2 is verified. The presence of cruelty-free labels positively influences purchase intention of shampoo.

4.4.3 The influence of label type

H_3: Certified cruelty-free labels have a stronger positive effect on purchase intention than uncertified cruelty-free labels.

A linear regression was conducted to determine if certified cruelty-free labels have a stronger effect on purchase intention than uncertified cruelty-free labels.

$$PI_i = \beta_0 + \beta_1 CCFL_i + \beta_2 UCFL + \varepsilon_i$$
$$i = 1,...,N$$

Again, PI represents the purchase intention of shampoo and N is the number of observations (N=284). CCFL is a dummy variable for certified cruelty-free labels, and UCFL represents a dummy variable for uncertified cruelty-free labels.

As for the linear regression for H2, all assumptions for the statistical test were fully met, except homoscedasticity.

The model itself is significant ($p<0.05$) with an R square of 2.3%. β_1 is statistically significant ($p<0.05$) and has a value of 0.553. Thus, for each additional unit of the certified cruelty-free label, purchase intention increases by 0.553. β_2 has a value of 0.412, indicating a 0.412 increase of purchase intention for each unit increase of uncertified cruelty-free label. However, it is not statistically significant ($p=0.066$) (Appendix 7).

To support the results from the linear regression, a One-Way ANOVA was conducted to compare the mean purchase intentions of participants who have seen no label, an uncertified cruelty-free or a certified cruelty-free shampoo. The requirements for the statistical test, namely, independence of observations, normal distribution, and homogeneity of variances, were all met. The model itself is significant ($p<0.05$), suggesting that there are differences between the groups. The Post Hoc test reveals statistically significant differences between the "no label" and "CCFL" groups. However, there is no significant difference between "UCFL" and "CCFL" ($p=0.52$). The descriptive statistics show only small differences between the mean purchase intentions for uncertified and certified cruelty-free shampoo (Appendix 8).

Certified cruelty-free labels do not have a stronger effect on purchase intention compared to uncertified cruelty-free labels. Therefore, H3 cannot be verified.

4.4.4 The influence of attitude

H4: Attitude will mediate the positive relationship between label type and purchase intention.

To study the mediating effect of attitude on purchase intention, Process model 4 from Andrew F. Hayes was used. The latter accounts for simple mediation analysis.

Starting with the effect of label type on attitude (path a), the model has an R square of 0.12%, indicating that only 0.12% of the attitude variance is explained through label type. Therefore, the effect is not significant (p=0.5608) and has a coefficient of -0.0504.

The indirect effect of attitude on purchase intention is -0.0571 and is not significant (p=0.4571) (path b). In contrast, the effect of label type on purchase intention (path c) is 0.2717 and statistically significant (p<0.05).

To determine if attitude has a mediating effect on purchase intention, the total effect of label type on purchase intention is compared to the value which represents the direct plus indirect effect of label type on purchase intention through attitude. The indirect effect is 0.0029, whereas the direct effect is 0.2717, resulting in a total effect of 0.2746. Appendix 9 indicates that the total effect is also significant (p<0.05). However, since the indirect effect is relatively small, a mediating effect through attitude can be neglected. Moreover, the bootstrapping confidence interval is close to zero, suggesting the absence of mediation through attitude. As a consequence, H4 cannot be verified.

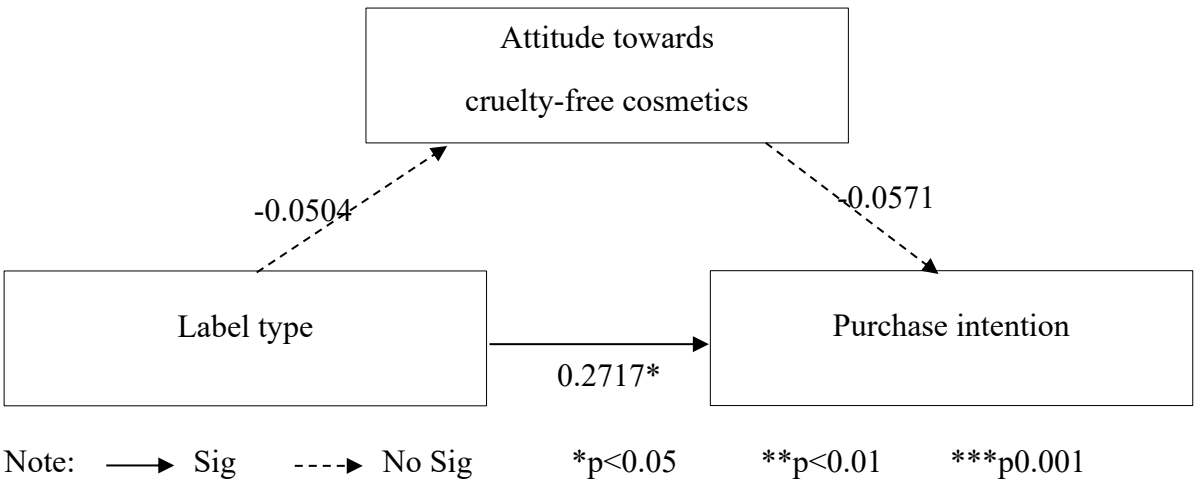


Figure 5: Statistical model with coefficients (H4)

The results from the Process Model 4 were enhanced through the performance of a Two-Way ANOVA: The results clearly indicate no statistically significant differences based on resopondents' attitude (Appendix 10).

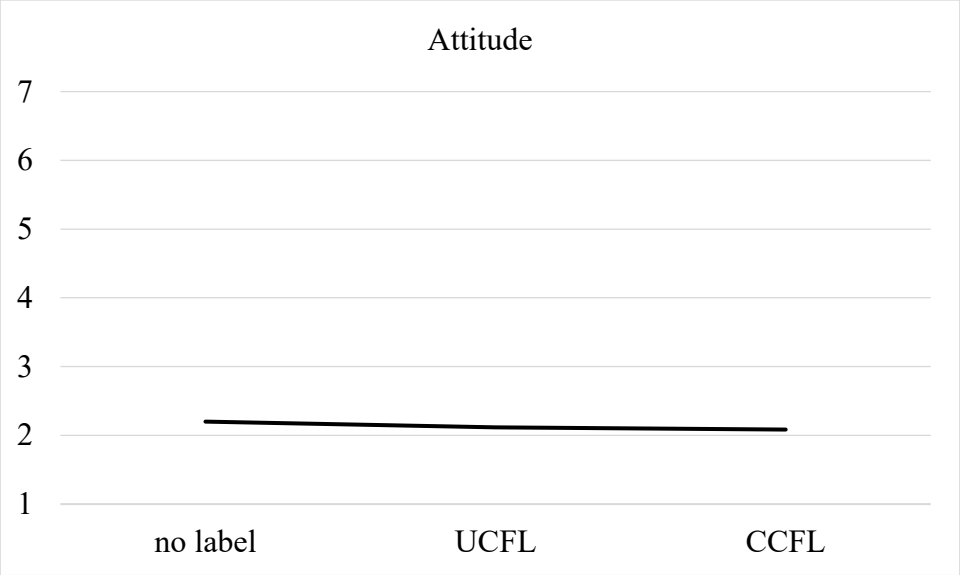


Figure 6: Two-Way ANOVA Plot

4.5 Further results

In this section, descriptive statistics and inferential statistics will be shown which were performed in addition to the hypotheses testing.

4.5.1 Frequency of shampoo purchase

Participants were asked to indicate how often they buy shampoo. In the sample (N=284), 13% buy shampoo every six months or less. The majority of the participants (41.2%) buys shampoo every three to six months, followed by 28.9% indicating that they repurchase shampoo every two months. Lastly, 16.5% of the sample buy shampoo every month.

On average, how often do you buy shampoo?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	,4	,4	,4
	Every 6 months or less	37	13,0	13,0	13,4
	Every 3-6 months	117	41,2	41,2	54,6
	Every 2 months	82	28,9	28,9	83,5
	Every month	47	16,5	16,5	100,0
	Total	284	100,0	100,0	

Table 7: Frequencies of shampoo purchases

4.5.2 Number of used cosmetics per week

Out of the 284 participants, 27.5 % use one to three cosmetic products within one week. Most respondents (38%) use four to six cosmetics products per week, 16.2% use seven to nine, and 17.3% use ten or more cosmetic products per week.

How many different cosmetic products do you use within one week?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	3	1,1	1,1	1,1
	1-3	78	27,5	27,5	28,5
	4-6	108	38,0	38,0	66,5
	7-9	46	16,2	16,2	82,7
	10 or more	49	17,3	17,3	100,0
	Total	284	100,0	100,0	

Table 8: Number of used cosmetic products per week

4.5.3 Cien awareness

Cien from LIDL was chosen as the study's private label. Looking at the results from the question asking how familiar participants are with Cien, it becomes evident that 24.6% of the sample are very unfamiliar with the private label, 14.7% are unfamiliar, and 4.8% are slightly unfamiliar with the private label. In sum, 44.1% are not acquainted, representing almost half of the sample. Additionally, almost 35% of the sample are from countries other than Germany and Portugal, reinforcing unfamiliarity with Cien.

How familiar are you with the private label "Cien" from LIDL?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very unfamiliar	67	23,6	24,6	24,6
	Unfamiliar	40	14,1	14,7	39,3
	Slightly unfamiliar	13	4,6	4,8	44,1
	Slightly familiar	79	27,8	29,0	73,2
	Familiar	52	18,3	19,1	92,3
	Very familiar	21	7,4	7,7	100,0
	Total	272	95,8	100,0	
Missing	System	12	4,2		
Total		284	100,0		

Table 9: Cien awareness

4.5.4 Mean purchase intention per treatment

To understand which stimulus has yield the highest purchase intention, a One-Way ANOVA was conducted. The null hypothesis states that all treatments have the same effect on the mean responses.

$$\mu1 = \mu2 = \mu3 = \mu4 = \mu5 = \mu6$$

Normal distribution, independence of observations, and equal variances are requirements of a One-Way ANOVA and were fully met. The ANOVA is significant ($p<0.001$), resulting in the rejection of the null hypothesis. There are significant statistical differences between the six independent groups. When looking at the descriptive statistics, it can be seen that the mean purchase intention is higher for national brand than for private label products (confirmed through H1). Also, shampoos marked with a cruelty-free label were preferred over the non-labelled shampoos (confirmed through H2). The table also indicates that certified cruelty-free labels are preferred over uncertified cruelty-free labels (no confirmation through H3).

However, the Post Hoc test only revealed statistically significant differences between a few groups. There are statistically significant differences between NB_no label and PL_no label ($p<0.05$), between NB_uncertified and PL_no label ($p<0.001$), PL_uncertified ($p<0.01$), and PL_certified ($p<0.05$). Significant differences can also be found between the group NB_certified and PL_no label ($p<0.001$), PL_uncertified ($p<0.01$), and PL_certified ($p<0.05$) (Appendix 11).

4.5.5 Interaction effects

*PI * Number of used cosmetics*

To assess if there is an interaction between the mean purchase intention and the number of used cosmetics per week, a Two-Way ANOVA was conducted. The purpose of this statistical test was to examine if consumers who use many cosmetics (7+) per week react differently to the shown stimuli than consumers who use less. Whereas independence of observations and normality were fully met, homogeneity of variances could not be verified. The Levene statistic is significant ($p<0.05$), leading to the rejection of the null hypothesis. Furthermore, the error variance of the independent variable is not equal across groups, which is a limitation of this model.

Looking at the tests of between-subjects effects, it becomes evident that the stimulus is statistically significant ($p<0.001$), meaning that a statistically significant difference can be attributed to the stimuli. In contrast, the number of used cosmetics per week does not have any significant effect ($p=0.241$). The same accounts for the interaction of the two groups ($p=0.337$). Consequently, the number of used cosmetic products per week does not influence the purchase intention of the shown stimuli (Appendix 12).

*PI * Frequency of shampoo purchases*

Another Two-Way ANOVA was performed to examine if there is an influence of the frequencies of shampoo purchases on the mean purchase intention. For this analysis, all requirements were fully met, namely, independence of observations, normality, and homogeneity of variances. Again, looking at the tests of between-subjects effects, only stimulus is statistically significant ($p<0.01$). The frequency of shampoo purchases as well as the interaction is not significant ($p>0.13$). Thus, the results demonstrate no statistically significant influence of the frequency of shampoo purchases on purchase intention (Appendix 13).

4.6 Discussion

The employed statistical tests have revealed many interesting results regarding the influence of brand type, the presence of cruelty-free labels, and label type on purchase intention. Regarding the brand type, the analysis has clearly demonstrated a preference of NB products over PL products with the mean purchase intention for the NB shampoos being significantly higher than the mean purchase intention for PL shampoos. The latter aligns with the findings from previous

literature, emphasizing the positive effects of NB products, as increased trust within the brand and decreased risk associated with a purchase (Elliott, 2007). However, the results might be influenced by the methodology of this research. Whereas Herbal Essences was picked with the help of a pre-survey, Cien was chosen as the representing PL for this study based on its availability in Portugal and Germany. Nonetheless, the statistics demonstrate high unfamiliarity with the brand, indicating that Cien was not an appropriate PL for this study. Another PL, yielding higher familiarity among the participants, might have induced different results. Moreover, Herbal Essences, only operating in one category, can be considered as an expert for hair care, whereas Cien offers products in multiple categories making a comparison very difficult.

The findings further demonstrate a significant difference in purchase intention of shampoo labelled with a cruelty-free label over the non-labelled alternative. These results are also supported through findings from previous research. There is a growing share of ethically-minded consumers who wish to engage in sustainable and ethical consumption without being able to identify the right products. For these consumers, labels serve as a shopping aid, pointing their awareness to products fulfilling the desired features (Annunziata et al., 2011). However, again, limitations from the methodology design can be derived. Although the two blocks about attitude and purchase intention were randomized, the question about participants' attitude towards cruelty-free cosmetics might have caused a bias and consequently, a choice that seems to be more favourable in terms of animal welfare.

Whereas brand type and presence of cruelty-free labels have indicated significant results, label type reports less significant findings. There was no statistically significant difference in the mean purchase intention of certified cruelty-free label shampoo and uncertified cruelty-free label shampoo. However, the descriptive statistics show a slightly higher purchase intention for certified cruelty-free label shampoo. With an increased sample size, the results could become more meaningful. The findings of this study might be explained by the lack of respondents' knowledge about cruelty-free labels. None of the focus group's participants was able to recall all three certified cruelty-free labels or explain one of them in detail. Therefore, the uncertified cruelty-free label might have been mistaken with a certified cruelty-free label, although created within the focus group.

This research was based on the theory of planned behaviour and the idea of a mediating effect of attitude on purchase intention. However, Process Model 4 has indicated the absence of such

mediating effect. Participants' attitude, positive or negative, only has a very small effect on purchase intention. One of the possible reasons for the latter might be the social desirability bias. When asked for personal opinions, participants tend to indicate answers which are perceived as favourable, consequently leading to biased results. Moreover, the majority of the sample had a rather positive attitude towards cruelty-free cosmetics, resulting in a too homogenous sample. The latter might be further enhanced through the choice of a convenience sample, leading to a lack of diversity. To minimize the social desirability bias, the survey should have had more implicit questions included.

Lastly, the statistical tests have shown no significant differences between different types of consumers. For example, purchase intention for the shown shampoos, regardless of brand and label type, did not differ between participants who purchase shampoo every two months or every 6 months or less. Also, the number of used cosmetics per peek does not induce any differences in purchase intention.

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

In the following chapter, an overview of the main results of this research will be given. Managerial as well as academic implications will be derived based on the findings of this study and the insights from previous research. Lastly, limitations will be discussed and suggestions for future research will be presented.

5.1 Main Findings and Conclusions

This research was conducted with the overall goal to understand the effects stemming from brand type and label type on consumers' intention to purchase cruelty-free cosmetics using the example of shampoo. The main research problem was subdivided into three research questions which have formed the foundation for the structure of this study.

RQ1: Does purchase intention of cruelty-free cosmetics differ between private labels and national brands?

The results from this research indicate a clear difference in purchase intention between national brand and private label products. The mean purchase intention for shampoo was higher for the national brand shampoo, independent of label type. The results are statistically significant.

RQ2: Do cruelty-free labels impact consumers' intention to buy cruelty-free cosmetics?

The presence of a cruelty-free label influences purchase intention positively. On average, purchase intention increases about 50% for a shampoo which is denoted with a cruelty-free label, indicating a preference for cruelty-free shampoo over the non-cruelty-free alternative.

RQ3: Is there a difference in the effect of certified cruelty-free labels vs. uncertified cruelty-free labels on purchase intention?

Although purchase intention for the certified cruelty-free shampoo was slightly higher than purchase intention for the uncertified cruelty-free shampoo, the results are not significant. Consequently, within the scope of this study, no statistically significant preference of certified cruelty-free labels over uncertified cruelty-free labels could be derived. Moreover, the number of used cosmetics per week does not influence purchase intention. The same accounts for the frequency of shampoo purchases, denying a relationship between higher ethical consciousness and high cosmetic usage.

5.2 Managerial and Academic Implications

In the past, much research has been conducted, focusing on the drivers of ethical consumption. However, the previous literature has mainly examined purchase intention and willingness to pay for social and environmental-friendly alternatives, as fair-trade products and sustainable packaging. Little attention was directed at ethical consumption concerning animal welfare. This study has contributed to a partial understanding of this relatively new field of study and has proposed insights into how a different brand and label type influence consumers' purchase intention.

Based on the results, managerial implications can be derived. In general, the stimuli which were denoted with a cruelty-free label, exerted higher purchase intention, suggesting a positive perception of cruelty-free cosmetics. Consequently, more companies should include cruelty-free alternatives in their product portfolio to serve the growing demand. Especially national brands should act as pioneers and offer cruelty-free products since the latter are still not commonly known and perceived as novel products. Therefore, national brands should leverage the trust that consumers have in their brand to mitigate the risk associated with the purchase of cruelty-free alternatives.

Although, purchase intention was the highest for national brand shampoo in this study, private labels are also recommended to include cruelty-free products in their product offering since purchase intention was significantly higher for the cruelty-free alternatives. With the addition of cruelty-free products, private labels can increase their product diversity and reduce the perceived inferior quality of private labels compared to national brands. The latter will enable private labels to keep up with the national brand counterparts and will help them to increase their bargaining power in negotiations.

Offering cruelty-free cosmetics, regardless of brand type, will enable manufacturers to be perceived as innovative, modern, and responsive to the voice of the customer. Additionally, offering products that are perceived as ethically advanced will enable national brands and private labels to communicate their appreciation of the environment and animal welfare to the consumers, consequently improving the manufacturers' reputation. Moreover, new consumers can be attracted who might have avoided the brand before, due to perceived unethical product attributes and inferior quality.

Apart from the positive effects resulting from offering cruelty-free cosmetics, the study has demonstrated the need to educate consumers. Many individuals have limited knowledge of certified cruelty-free labels and might simply not understand the cruelty-free communication on the product packaging. Therefore, companies need to explain the purpose and background information of cruelty-free labels and the positive effects on animal welfare resulting from the implementation of cruelty-free labels. Having the latter in mind, cruelty-free products should be accompanied by powerful point of sale communication, clearly explaining the label and emphasizing the collaboration with independent third parties. It is also crucial to print the certified cruelty-free label on a prominent spot on the product packaging and to stick to the same label across all product ranges to increase recognition of the label and attenuate the consumer's confusion.

5.3 Limitations and Further Research

This research has generated various insights, however there are also some limitations. Firstly, the sample was relatively small, with a total number of 284 observations. Moreover, the sample mainly consisted of German university students, being in the age group of 20-29 years with a monthly net income of less than 1,000€ and therefore, clearly lacks diversity. Future research should increase the sample size and include more diversity in terms of age, nationality, and occupation. The latter can be achieved by shifting from a convenience sample to a representative quota sample.

Moreover, the private label which was used for this study might have been suboptimal. In contrast to the national brand, the private label was not picked through a pre-survey but was simply chosen as the representative brand. However, the results indicate high unfamiliarity with Cien. Therefore, future research should either pick a private label that is more commonly known in various countries or limit the research to a specific geographical region and let participants choose the most appropriate private label through a pre-survey to guarantee brand familiarity.

Another limitation stems from the survey design itself. In the questionnaire, terms as "national brand" and "private label" were used without further explanation. These terms might have confused the respondents and should have been clarified before. Moreover, the missing significant differences in purchase intention of certified and uncertified cruelty-free shampoo indicates participants' lack of knowledge in this field. Future research should consider explaining the labels before showing the stimuli to yield more reliable results.

Lastly, attitude towards cruelty-free cosmetics has no significant influence in this study. Nonetheless, the theory of planned behaviour has proven a measurable effect of attitude on intention. It is assumed, that the sample was too homogenous regarding attitude. The latter might be due to the social desirability bias. In the future, more than one construct should be implemented to measure attitude, additionally, implicit questions should be used to receive more accurate results.

Although this study has generated many interesting results, there is still a lot of potential for future research in this relatively new field of study. It would be interesting to understand how purchase intention varies across different product categories and if purchase intention differs, for example, between cleansing products and products related to care. Consumers usually attribute different characteristics to those two categories, with care needing to be gentle, whereas for cleansing products, strength is valued. Future research should determine, if purchase intention for cruelty-free cosmetics varies with valued product attributes to help companies make more informed decisions. Moreover, consumers' willingness to pay for cruelty-free alternatives should be assessed to adjust pricing strategies. Lastly, it is crucial to understand more inherent drivers and obstacles of cruelty-free consumption to contribute to a more holistic understanding of this research field.

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APPENDICES

Appendix 1: Focus group questions and results

Introduction

Hello everyone,

welcome to my focus group. Fist of all, I would like to thank everyone for participating in this focus group and therefore, helping me with my thesis. In the following, I will ask you a couple of questions that we will discuss in this group. I would like to ask you to share your real thoughts with everyone - please note, that there are no right or wrong answers. The duration of this focus group will be approximately 40 minutes.

Part 1 – Warm up (5 minutes)

Before we start, I would like to ask everyone to shortly introduce themselves so the others can get to know you better.

Part 2 – Introduction to the topic (5 minutes)

- How often do you buy cosmetic products?
  From every week to every two months, mostly once per month.
- How often do you use cosmetic products?
  Daily.
- From what category do you buy most cosmetic products?
  Mostly skin (face cream, cleanser, peeling) and hair care (shampoo, conditioner, styling products), less body care.

Part 3 – National brands (10 minutes)

- What brands come to your mind when you think about cosmetics available in supermarkets and drugstores?
  L'Oréal, Neutrogena, Weleda, Schwarzkopf, Garnier, Fructis, Elvital, Maxfactor, Dove, Nivea, Herbal Essences
- What brands do you mostly buy?
  Weleda, Lavera, Garnier, Pantene Pro-V, Loreal, Dove, Nivea

- Please name brands that you buy repeatedly
    - in the category of skin care: *Garnier, L'Oréal, Nivea, Weleda, Lavera*
    - in the category of body care: *Dove, Nivea*
    - in the category of hair care: *Pantene Pro-V, Fructis, Elvital*
- Which brands do you perceive as above-average in terms of animal welfare? Which brands come to your mind when you think of cruelty-free cosmetics?
  Weleda, Garnier

Part 4 – Cruelty-free labels (15 minutes)

- What do you associate with the term "cruelty-free"?
  The term is commonly known but not everyone was able to define the term in detail. However, all participants associated the terms with products that were not tested on animals.
- Did you ever deliberately purchase a cosmetic product that was cruelty-free?
  Mixed results. Approximately 50% of the group did not deliberately buy a product because it was cruelty-free. The others have bought cruelty-free cosmetics as it was one of many product features (vegan + cruelty-free). No one has chosen one product over another just because of the cruelty-free feature.
- Which products did you buy?
  Skin care, Makeup
- Which cruelty-free labels do you know?
  No one was able to describe a logo in detail but 6 participants had a logo displaying a bunny in mind
- Thereafter, the moderator will show the participants the three official cruelty-free labels and ask if they have seen them before.
  All logos were equally recognized, however there was only one participant how had seen all three logos before. The other participants only knew one or two of the labels.
- Scenario: Imagine you are a product manager working at a large cosmetics manufacturer. You are about to launch a new cruelty-free product and have to make some decisions regarding the design of the packaging. You want to communicate the cruelty-free feature to the consumer in form of a logo on the package of your new product, but you do not want to spend any money on official certifications. How would the logo look like? Which features/elements should it have?

Design suggestion 1:

Crossed bunny

Not a detailed picture of a bunny, instead show outlines of the animal (simple design)

Circled

Colours: green and pink

The logo should be simple but cute

Design suggestion 2:

Bunny, but it should not be crossed

Not a detailed picture of a bunny, instead show outlines of the animal (simple design)

Outlined to make the logo look like a medal

Colours: green and pink

The logo should be simple but cute

Part 5 – Closing

Thank you very much for this discussion and your answers. If you have any questions regarding my research, please do not hesitate to contact me.

Appendix 2: Pre-survey design

Block 1: Introduction

Dear Participant,

Thank you for taking part in this survey.

The survey is part of my master thesis at Católica Lisbon SBE and will take approximately 3 minutes. Please answer the questions as truthfully as possible. Your participation is anonymous and data will be used for research purposes only.

If you have any questions regarding the study, feel free to contact me: s-cpulm@ucp.pt

Thank you for your support!

Caroline Pülm

Block 2: Screening question

Q1 – Have you purchased a cosmetic product from a supermarket or drugstore within the last three months?

(1) Yes (proceed)
(2) No (survey ends)

Block 3: National brand

Q2 – Please choose the brands that you perceive as most cruelty-free*

*cruelty-free means that a product was not tested on animals

Brands:

(1) Dove
(2) Garnier
(3) Herbal Essences
(4) L'Oréal Paris
(5) Neutrogena

(6) Nivea

(7) Pantene Pro-V

(8) Schwarzkopf

Block 4: Category

Q3 – From which category do you purchase most cosmetic products?

(1) Face care

(2) Body care

(3) Hair care

Block 5: Certified cruelty-free labels

Q4 – With which of the following logos are you most familiar with?

Leaping Bunny Program	Beauty Without Bunnies Program	Choose Cruelty-Free

Block 6: Uncertified cruelty-free labels

Q5 – Which of the following designs do you associate the most with cruelty-free product development and production?

Design idea #1	Design idea #2

Block 7: Demographics

Q6 – Please indicate your gender

(1) Female
(2) Male
(3) Other

Q7 – How old are you?

(1) 19 or younger
(2) 20-29
(3) 30-39
(4) 40-49
(5) 50-59
(6) 60-69
(7) 70 or older

Q8 – What is your current occupation?

(1) Student
(2) Employed
(3) Unemployed
(4) Self-employed
(5) Retired
(6) Other

Q9 – Where are you from?

Drop-down list from Qualtrics

Appendix 3: Main survey design

Block 1: Introduction

Dear Participant,

Thank you for taking part in this survey.

The survey is part of my master thesis at Católica Lisbon SBE and will take approximately 5 minutes. Please answer the questions as truthfully as possible. Your participation is anonymous, and data will be used for research purposes only.

If you have any questions regarding the study, feel free to contact me: s-cpulm@ucp.pt

Thank you for your support!

Caroline Pülm

Block 2: Screening question

Q1 – Have you purchased shampoo within the last six months?

(1) Yes (proceed)
(2) No (survey ends)

Block 3: Consumer behaviour

Q2 – On average, how often do you buy shampoo?

(1) Never
(2) Every 6 months or less
(3) Every 3-6 months
(4) Every 2 months
(5) Every month

Q3 – How many different cosmetic products do you use within one week?

(1) None
(2) 1-3

(3) 4-6

(4) 7-9

(5) 10 or more

Block 4: Stimuli

On the following page you will see a newly launched shampoo. Please look at it carefully and read all the given information. You will then be asked six questions about the shown product. You can move to the next page only after 10 seconds.

One of the six stimuli was shown to the participant:

	National Brand	*Private Label*
No logo		
Uncertified cruelty-free logo		

Certified cruelty-free logo

	

Block 5: Purchase Intention

Q4 – The likelihood of me purchasing the shown product is very high

(1) Strongly disagree
(2) Disagree
(3) Somewhat disagree
(4) Neither agree nor disagree
(5) Somewhat agree
(6) Agree
(7) Strongly agree

Q5 – The probability that I would try the shown product is very high

(1) Strongly disagree
(2) Disagree
(3) Somewhat disagree
(4) Neither agree nor disagree
(5) Somewhat agree
(6) Agree
(7) Strongly agree

Q6 – My willingness to buy the shown product is very high

(1) Strongly disagree
(2) Disagree

(3) Somewhat disagree
(4) Neither agree nor disagree
(5) Somewhat agree
(6) Agree
(7) Strongly agree

Block 6: Manipulation check

Q7 – The product shown in the image is a

(1) National brand
(2) Private label / retailer brand

Q8 – The product shown in the image

(1) Has a cruelty-free label
(2) Does not have a cruelty-free label

Q9 – The label present in the product shown is

(1) A certified label
(2) An uncertified label

Block 7: Attitude

Q10 – Please state your opinion about cruelty-free cosmetics, products which were not tested on animals during the product development process.

Purchasing cruelty-free cosmetics is....

Good (1)	__ __ __ __ __ __ __	Bad (7)
Pleasant (1)	__ __ __ __ __ __ __	Unpleasant (7)
Harmful (1)	__ __ __ __ __ __ __	Beneficial (7)
Useful (1)	__ __ __ __ __ __ __	Useless (7)
Enjoyable (1)	__ __ __ __ __ __ __	Unenjoyable (7)

Block 8: Cien awareness

Q11 – How familiar are you with the private label "Cien" from LIDL?

(1) Very unfamiliar
(2) Unfamiliar
(3) Slightly unfamiliar
(4) Neither familiar nor unfamiliar
(5) Slightly familiar
(6) Familiar
(7) Very familiar

Block 9: Demographics

Q12 – Please indicate your gender

(1) Female
(2) Male
(3) Other

Q13 – How old are you?

(1) 19 or younger
(2) 20-29
(3) 30-39
(4) 40-49
(5) 50-59
(6) 60-69
(7) 70 or older

Q14 – What is your nationality?

Drop down list from Qualtrics

Q15 – What is your current occupation?

(1) Student
(2) Employed
(3) Self-employed
(4) Unemployed
(5) Retired
(6) Other

Q16 – What is the highest level of education you have completed?

(1) High School or equivalent
(2) Bachelor
(3) Master/MBA
(4) Doctorate
(5) Other

Q17 – Only for statistical purposes, what is your monthly net income?

(1) Less than 1,000€
(2) 1,000€ - 1,999€
(3) 2,000€ - 2,999€
(4) 3,000€ - 3,999€
(5) 4,000€ - 4,999€
(6) 5,000€ or more

Appendix 4: SPSS Output – H1: Independent sample t-test

Group Statistics

	Stimuli_brandtype	N	Mean	Std. Deviation	Std. Error Mean
PI_summarized	NB	139	4,24	1,485	,126
	PL	145	3,50	1,498	,124

Independent Samples Test

									95% Conf. Interv. of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PI_summarized	Equal variances assumed	,048	,827	4,225	282	,000	,748	,177	,400	1,097
	Equal variances not assumed			4,225	281,679	,000	,748	,177	,400	1,097

Appendix 5: SPSS Output – H2: Linear regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,146[a]	,021	,018	1,522	1,917

a. Predictors: (Constant), CFL

b. Dependent Variable: PI_summarized

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,291	1	14,291	6,172	,014[b]
	Residual	652,909	282	2,315		
	Total	667,200	283			

a. Dependent Variable: PI_summarized

b. Predictors: (Constant), CFL

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Coll. Stat.	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3,533	,160		22,029	,000		
	CFL	,482	,194	,146	2,484	,014	1,000	1,000

a. Dependent Variable: PI_summarized

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	Variance Proportions CFL
1	1	1,826	1,000	,09	,09
	2	,174	3,245	,91	,91

a. Dependent Variable: PI_summarized

Appendix 6: SPSS output – H2: Independent sample t-test

Group Statistics

	CFL	N	Mean	Std. Deviation	Std. Error Mean
PI_mean	noCFL	90	3,53	1,466	,155
	CFL	194	4,02	1,547	,111

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PI_mean	Equal variances assumed	,698	,404	-2,484	282	,014	-,482	,194	-,864	-,100
	Equal variances not assumed			-2,534	182,219	,012	-,482	,190	-,858	-,107

Appendix 7: SPSS output – H3: Linear regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,151[a]	,023	,016	1,523	1,924

a. Predictors: (Constant), UCFL, CCFL

b. Dependent Variable: PI_summarized

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15,254	2	7,627	3,287	,039[b]
	Residual	651,946	281	2,320		
	Total	667,200	283			

a. Dependent Variable: PI_summarized

b. Predictors: (Constant), UCFL, CCFL

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3,533	,161		22,007	,000		
	CCFL	,553	,223	,171	2,479	,014	,731	1,368
	UCFL	,412	,223	,127	1,847	,066	,731	1,368

a. Dependent Variable: PI_summarized

Appendix 8: SPSS output – H3: One-Way ANOVA

Descriptives

PI_summarized

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
nolabel	90	3,53	1,466	,155	3,23	3,84	1	7
UCFL	97	3,95	1,507	,153	3,64	4,25	1	7
CCFL	97	4,09	1,589	,161	3,77	4,41	1	7
Total	284	3,86	1,535	,091	3,68	4,04	1	7

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
PI_summarized	Based on Mean	,708	2	281	,493
	Based on Median	,603	2	281	,548
	Based on Median and with adjusted df	,603	2	275,604	,548
	Based on trimmed mean	,697	2	281	,499

ANOVA

PI_summarized

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15,254	2	7,627	3,287	,039
Within Groups	651,946	281	2,320		
Total	667,200	283			

Multiple Comparisons

Dependent Variable: PI_summarized

LSD

(I) label_type	(J) label_type	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
nolabel	UCFL	-,412	,223	,066	-,85	,03
	CCFL	-,553*	,223	,014	-,99	-,11
UCFL	nolabel	,412	,223	,066	-,03	,85
	CCFL	-,141	,219	,520	-,57	,29
CCFL	nolabel	,553*	,223	,014	,11	,99
	UCFL	,141	,219	,520	-,29	,57

*. The mean difference is significant at the 0.05 level.

Appendix 9: SPSS output – H4: Process model 4

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.5.3 ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : PI_summa
    X  : label_ty
```

```
    M  : Attitude

Sample
Size:  284

**************************************************************************
OUTCOME VARIABLE:
 Attitude

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,0347      ,0012     1,3979      ,3391     1,0000   282,0000
,5608

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,2463      ,1887    11,9067      ,0000     1,8750     2,6177
label_ty     -,0504      ,0865     -,5823      ,5608     -,2206      ,1199

**************************************************************************
OUTCOME VARIABLE:
 PI_summa

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,1518      ,0230     2,3197     3,3129     2,0000   281,0000
,0378

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,4351      ,2979    11,5303      ,0000     2,8487     4,0216
label_ty      ,2717      ,1115     2,4367      ,0154      ,0522      ,4911
Attitude     -,0571      ,0767     -,7447      ,4571     -,2081      ,0939

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 PI_summa

Model Summary
          R       R-sq        MSE          F        df1        df2
p
      ,1453      ,0211     2,3160     6,0808     1,0000   282,0000
,0143

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,3068      ,2428    13,6172      ,0000     2,8288     3,7848
label_ty      ,2746      ,1113     2,4659      ,0143      ,0554      ,4937

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
c_ps       c_cs
      ,2746      ,1113     2,4659      ,0143      ,0554      ,4937
,1788      ,1453

Direct effect of X on Y
```

```
     Effect         se          t          p       LLCI       ULCI
c'_ps      c'_cs
      ,2717      ,1115     2,4367      ,0154      ,0522      ,4911
,1769      ,1438

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0029      ,0093     -,0130      ,0274

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0019      ,0061     -,0084      ,0177

Completely standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0015      ,0049     -,0067      ,0142

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

WARNING: Variables names longer than eight characters can produce incorrect
output
when some variables in the data file have the same first eight characters.
Shorter
variable names are recommended. By using this output, you are accepting all
risk
and consequences of interpreting or reporting results that may be
incorrect.

------ END MATRIX -----
```

Appendix 10: SPSS output – Two-Way ANOVA

Tests of Between-Subjects Effects

Dependent Variable: PI_mean

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55,072[a]	18	3,060	1,325	,172
Intercept	686,941	1	686,941	297,388	,000
label_type	14,455	2	7,227	3,129	,045
ATT_mean	14,853	6	2,475	1,072	,380
label_type * ATT_mean	25,141	10	2,514	1,088	,371
Error	612,128	265	2,310		
Total	4904,556	284			
Corrected Total	667,200	283			

a. R Squared = ,083 (Adjusted R Squared = ,020)

Appendix 11: SPSS output – One-Way ANOVA

Descriptives

PI_summarized

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
NB_nolabel	43	3,88	1,380	,210	3,45	4,30	1	7
NB_uncertified	48	4,35	1,413	,204	3,94	4,76	1	7
NB_certified	48	4,47	1,609	,232	4,00	4,93	1	7
PL_nolabel	47	3,22	1,486	,217	2,78	3,66	1	6
PL_uncertified	49	3,54	1,503	,215	3,11	3,98	1	7
PL_certified	49	3,71	1,494	,213	3,29	4,14	1	7
Total	284	3,86	1,535	,091	3,68	4,04	1	7

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
PI_summarized	Based on Mean	,508	5	278	,770
	Based on Median	,434	5	278	,825
	Based on Median and with adjusted df	,434	5	249,414	,825
	Based on trimmed mean	,509	5	278	,770

ANOVA

PI_summarized

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	54,502	5	10,900	4,946	,000
Within Groups	612,698	278	2,204		
Total	667,200	283			

Multiple Comparisons

Dependent Variable: PI_summarized

LSD

(I) Stimuli	(J) Stimuli	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
NB_nolabel	NB_uncertified	-,478	,312	,126	-1,09	,14
	NB_certified	-,589	,312	,060	-1,20	,02
	PL_nolabel	,656*	,313	,037	,04	1,27
	PL_uncertified	,332	,310	,286	-,28	,94
	PL_certified	,162	,310	,603	-,45	,77
NB_uncertified	NB_nolabel	,478	,312	,126	-,14	1,09
	NB_certified	-,111	,303	,714	-,71	,49
	PL_nolabel	1,134*	,305	,000	,53	1,73
	PL_uncertified	,810*	,301	,008	,22	1,40
	PL_certified	,640*	,301	,035	,05	1,23
NB_certified	NB_nolabel	,589	,312	,060	-,02	1,20
	NB_uncertified	,111	,303	,714	-,49	,71
	PL_nolabel	1,245*	,305	,000	,65	1,85
	PL_uncertified	,921*	,301	,002	,33	1,51
	PL_certified	,751*	,301	,013	,16	1,34
PL_nolabel	NB_nolabel	-,656*	,313	,037	-1,27	-,04
	NB_uncertified	-1,134*	,305	,000	-1,73	-,53
	NB_certified	-1,245*	,305	,000	-1,85	-,65
	PL_uncertified	-,324	,303	,285	-,92	,27
	PL_certified	-,494	,303	,104	-1,09	,10
PL_uncertified	NB_nolabel	-,332	,310	,286	-,94	,28
	NB_uncertified	-,810*	,301	,008	-1,40	-,22
	NB_certified	-,921*	,301	,002	-1,51	-,33
	PL_nolabel	,324	,303	,285	-,27	,92
	PL_certified	-,170	,300	,571	-,76	,42
PL_certified	NB_nolabel	-,162	,310	,603	-,77	,45
	NB_uncertified	-,640*	,301	,035	-1,23	-,05
	NB_certified	-,751*	,301	,013	-1,34	-,16
	PL_nolabel	,494	,303	,104	-,10	1,09
	PL_uncertified	,170	,300	,571	-,42	,76

*. The mean difference is significant at the 0.05 level.

Appendix 12: SPSS output - Interaction effect

PI *Number of used cosmetics per week

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
PI_summarized	Based on Mean	1,594	24	259	,042
	Based on Median	1,324	24	259	,147
	Based on Median and with adjusted df	1,324	24	226,673	,149
	Based on trimmed mean	1,590	24	259	,043

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: PI_summarized

b. Design: Intercept + Stimuli + Q4 + Stimuli * Q4

Tests of Between-Subjects Effects

Dependent Variable: PI_summarized

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	101,475[a]	24	4,228	1,936	,007	,152
Intercept	1665,677	1	1665,677	762,580	,000	,746
Stimuli	60,782	5	12,156	5,565	,000	,097
Q4	12,072	4	3,018	1,382	,241	,021
Stimuli * Q4	36,745	15	2,450	1,121	,337	,061
Error	565,725	259	2,184			
Total	4904,556	284				
Corrected Total	667,200	283				

a. R Squared = ,152 (Adjusted R Squared = ,074)

Appendix 13: SPSS output - Interaction effect

PI * Frequency of shampoo purchases

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
PI_summarized	Based on Mean	1,054	23	259	,398
	Based on Median	,837	23	259	,683
	Based on Median and with adjusted df	,837	23	210,998	,682
	Based on trimmed mean	1,058	23	259	,393

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: PI_summarized

b. Design: Intercept + Stimuli + Q3 + Stimuli * Q3

Tests of Between-Subjects Effects

Dependent Variable: PI_summarized

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	115,523[a]	24	4,813	2,260	,001	,173
Intercept	792,941	1	792,941	372,268	,000	,590
Stimuli	41,033	5	8,207	3,853	,002	,069
Q3	13,311	4	3,328	1,562	,185	,024
Stimuli * Q3	45,258	15	3,017	1,417	,139	,076
Error	551,677	259	2,130			
Total	4904,556	284				
Corrected Total	667,200	283				

a. R Squared = ,173 (Adjusted R Squared = ,097)