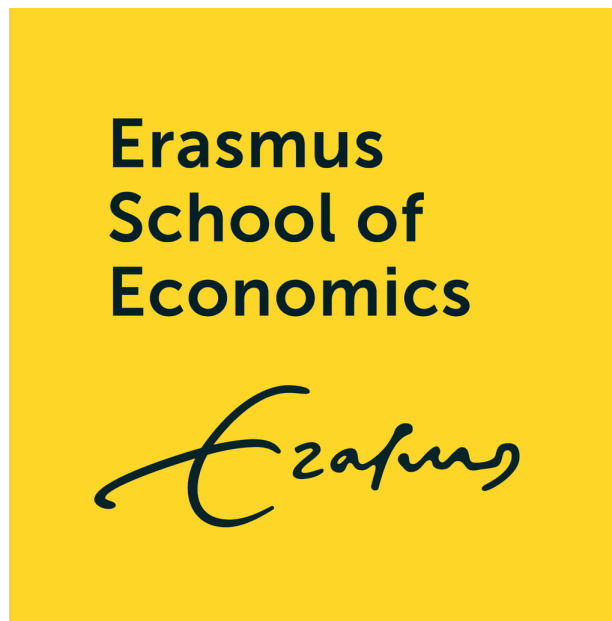


# The impact of marketing tools on the choice of natural cosmetic products

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## ABSTRACT

In the last couple of years, consumers have changed their consumption habits and acclimated themselves to green consumption. Consumers are willing to purchase green products as a perspective of being sustainable, with the aim to protect the environment and for the benefits that those products can have on their bodies and health. As a result, a lot of companies are now offering various cosmetic products that they claim to be natural even if they are not completely natural. From the consumers' perspective, it can be difficult to choose among the huge number of products offered and confusion between which products to select can arise. Therefore, the goal of this research is to explore what marketing tools to use to promote reliable natural cosmetic products. What are the factors that influence consumers when they purchase natural cosmetic products? What do they pay attention to when they look for natural cosmetic products among lots of choices, and why do they select a specific product? The effects of price, color, labels, brand, gender, and sustainable mindset have been tested with the help of a choice-based conjoint analysis based on a multinomial logit. The results show that the most preferred natural cosmetic product is sold at a low price. Its packaging is red, with the labels "98% natural ingredients" and "no preservatives". It seems consumers also prefer a natural product from a premium brand, but the preference differences between the premium brand and mass-market brand were not large enough to conclude on a specific brand preference, except for consumers who has a sustainable mindset.

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# 1. Introduction

## 1.1 Background

In the last couple of years, a Social Movement has arisen. Many consumers are now more aware of the damaging impact of their consumption on the planet and decided to take action to protect the environment. Therefore, intending to reduce this negative impact, the consumers have changed their consumption habits and acclimated themselves to green consumption. According to the definition, “green consumption is a form of consumption that is compatible with the safeguard of the environment for the present and future generations” (Connolly & Prothero, 2008, pp. 117-145). Some examples of the consumers’ green consumption are the rising use of green energies and reusable home supplies (such as reusable sponges, cotton swabs, cotton pads, etc.), or the adoption of vegetarian or vegan diets (Nasr, 2019). To answer this new lifestyle trend, many industries have diversified their offer by introducing more natural products, and the natural-product revenue growth of 25% from mid-2015 through mid-2019 illustrates this gain of popularity for this kind of product (von Koeller, et al., 2019). This movement has been followed by the cosmetic industry. The cosmetic industry has adapted its range of products for answering customers’ willingness to have a healthier lifestyle and desiring to purchase natural cosmetics (Dimitrova, Kaneva, & Gallucci, 2009). It has decided to become more sustainable by changing its way of working together with the conception of its products. The aim was to manufacture products that are more sustainable all along their life cycle, from the type of ingredients used to the packaging composition (Danley, 2012). With the positive sides of this trend came an adverse phenomenon called “Greenwashing”. The practice of greenwashing relies on companies that, to captivate consumers interested in sustainable products, use “vague or misleading green claims about their products” (Babcock, 2010). Due to this bias, companies respectful of the sustainable criteria faced some difficulties to prove that they are trustworthy, but it also brought confusion to the customers to know which products from which brands to buy. Consumers are willing to purchase green products as a perspective of being sustainable and with the aim to protect the environment. This way of consumption is also related to health concerns. Consumers have the desire to buy natural products because they are aware of the benefits those products can have on their bodies and health. As explained by Scott et al. (2020), consumers prefer natural

products for the preventative advantages they bring to their health. However, everyday life products contain many chemical ingredients, and it is not always easy to understand their effect on human bodies and health (Sim, et al., 2019). For example, between preservatives, cleaning agents, fragrances, or plasticizers, it is difficult to discern the quality of a cosmetic product and distinguish natural from other type of beauty products (Kim & Seock, 2009). Furthermore, some chemicals alone do not present a danger to the consumers' health. However, the redundancy of their presence in multiple products used every day and the mix of chemical ingredients can have some harmful effect (Park, Lee, & Hwang, 2015). Given this context, some consumers even go for the "Do It Yourself" method and make their own products out of raw materials and ingredients because they find the products on the market not sustainable enough or not answering their needs (Williams, 2004). Lastly, some consumers choose products they believe that are natural and think they are good for their health (Kim & Seock, 2009). However, some cosmetic products supposed to be natural still contain chemicals that can be revealed as harmful for the health (Kortenkamp & Faust, 2018). Thus, from the consumers' perspective, it can be difficult to choose among the huge number of products offered and confusion between which products to select can arise.

In 2016, a smartphone app called "Yuka" has emerged and is now available in France, Belgium, Switzerland, Luxembourg, Spain, The United Kingdom, Ireland, the USA, Canada, and Australia. With this app, users can scan food or cosmetics products. The app then gives a product's grade out of 100. This grade is computed from the ingredients found in the products. The lower the grade is, the more harmful components lie in the good. On the other hand, the better the grade is, the healthier and safer is the product. Since the release of the app, the number of users has not stopped growing. According to a study, 94% of Yuka users changed their purchase habits after using the app (Kimso, 2019). Furthermore, 90% of them think the app can influence the brands to offer better products. This impact has already started to be observed. In 2019, Nestlé France and Unilever France indicated they have changed the composition of some of their products and improved the quality of their ingredients to get a better grade from the Yuka App. The cosmetic brand Caudalie also improved its range, by offering now 80% of good products (grade higher than 80/100), compared to 60% in 2019. Those examples demonstrate that consumers have more awareness about the products they buy and they can have stronger control over what they buy.

Therefore, it would be interesting to investigate how the cosmetic industry could adapt to this new consumer trend and the consumers' desire to buy more natural products that are safe and good for their bodies and health. How should the cosmetic industry react to this need in terms of marketing strategy and help the customers in their buying decision?

## 1.2 Problem description and research questions

This research aims to determine what influences consumers when they purchase natural cosmetic products, and how marketing strategies can help them choose among the variety of choices available. How can they determine if a specific natural product is better than another one, and how can they know if it answers consumers' expectation? Marketing strategies can be a solution to provide consumers with more information about the products. They can guide the consumers towards natural cosmetic products that are safer and healthier for their bodies. Consumers can hence get a better view and understanding of the natural cosmetic market. They know which product to select to avoid potential harm.

Research about marketing strategies for organic products has already been conducted (Bezawada & Pauwels, 2013), highlighting how assortment, price, and promotion can influence the sales performance in retailer shops. However, studies have not been done for natural cosmetic products yet. Also, in some countries, some specific regulations apply for organic products. For example, in the USA, the Food and Drug Administration regulates the use of organic certification. A cosmetic product needs to answer to certain rules and criteria to get this appellation. On the contrary, in most countries, the use of the term "natural" does not get those regulations. Therefore, some products can claim they are natural even if they are not. They can contain ingredients that are natural but highly processed and hence potentially harmful. Naturally, the market also offers great natural cosmetic products that are composed of safe natural ingredients. Consumers can read those ingredients on the product's packaging and use an app to help them to get a better understanding. However, as stated by Matic et al. in their research (2016), there are "so many products that claim to be natural that it's hard to tell which ones are the most natural".

In the current literature about naturalness have been made on food goods (Roman, Sánchez-Siles, & Siegrist, 2017), but it seems it has not been studied what drives people to choose natural cosmetic products. Even if food and cosmetics are aimed to be used by humans,



they do not have the same purpose. Food has a nutritive goal. It is a substance that people eat or drink to keep them alive, whereas “cosmetics are substances that people put on their face or body that are intended to improve their appearance” (Cambridge international dictionary of English, 1995, p. 375). Moreover, the consumer journey is not the same for food products compared to cosmetic products. Even though food and cosmetics are both daily-use products, those products are not purchased at the same frequency. Due to shelf life, food products have to be consumed fast and bought frequently. Whereas cosmetic products such as shower gel, shampoo, or make-up can be purchased every few weeks or even months, depending on the number of times they are used per day and the number of consumers who utilize them. The purchase approach between food products and cosmetic products is hence different. Consumers might take more time to decide which cosmetic products they will buy since they know that once the product is purchased, they will have to use it for a certain period. They might also look for some additional information before buying cosmetic products. They might research for some online reviews, tutorials, recommendations, or blogs where they can read more information about the products. The marketing strategy is adapted to the type of products and the targeted consumers (Dickson & Ginter, 1987). That is why there might be some differences between the strategy applied for food and the strategy applied for cosmetic products. Hence, to bridge the gap in literature, this work focuses on identifying the different aspects that influence the consumers’ purchase decision to buy natural cosmetic products. This is done by comparing the applied marketing strategies with those of natural food products to detect potential similarities and differences.

This thesis is of managerial relevance since it will highlight key points for increasing the purchase intention of natural cosmetic products. By understanding in a better way consumer’s expectation and proving which attributes influence consumers when they buy natural cosmetic products, the research will allow reliable brands to adapt their marketing strategies and communication efficiently. They will therefore distinguish themselves from other brands that might not offer such reliable natural products. This distinction from other brands might also make them more notable and more privileged by the consumers. Consumers will know that they buy those products for good reasons (for the natural, safe, and healthy aspects). That might consequently lead to an increase in consumers’ loyalty and market share, hence an increase of the companies' profit (Bowen & Chen, 2001).

Therefore, the purpose of this research is to help companies to promote their natural products most efficiently and appropriately, and hence guide customers during their buying process. It will consequently answer the following question:

*What marketing tools to use to promote reliable natural cosmetic products?*

As Moscato & Machin explained in their article (2018), to ensure a truthful promotion about trusted products, a clear understanding of the associations and motivations of consumers needs to be done. That is why this research will first try to understand what consumers are looking forward to and expecting when buying natural products. This leads to the first sub-question:

*Sub-question 1: Why do consumers buy natural products?*

Secondly, the research will focus on what kind of marketing tools can be used by companies to promote and communicate about natural products. This points the second sub-question out:

*Sub-question 2: How can different marketing tools be used to influence the consumers' choice for natural cosmetic products?*

### **1.3 Goal and explanation of the research**

The research questions stated above will be addressed using the following methodology. The goal of this research is to explore what factors influence consumers when they purchase natural cosmetic products. What do they pay attention to when they look for natural cosmetic products among lots of choices, and why do they select a specific product? According to those insights, how can marketing tools influence their preferences? First, to determine the consumer's expectations towards natural products, a qualitative study will be done. A question in the survey will aim to get a better understanding of consumers' expectations regarding natural products. The survey respondents will be asked to state which words reflect the best their will to purchase natural products; what are the reasons why they want to buy those types of products. The answers to this question will allow us to point out what consumers are looking for when they buy natural; what is important for them, what do they expect. Secondly, to evaluate how consumers value different aspects of the products, a

choice-based conjoint analysis will be used. The objective of this choice-based conjoint analysis is to understand what combination of different attributes and variations of attributes influences the most the consumers in their buying process for natural cosmetic products (Green & Srinivasan, 1978). For this choice-based conjoint analysis, the natural cosmetic products' attributes will be identified from literature research. Afterward, the attributes will be broken down and different combinations and levels of those attributes will be shown to participants. Among diverse concepts, the participants will be asked to choose which product they would buy. The benefit of choice-based conjoint analysis is that it simulates the actual buying process that consumers can experience and helps them to be placed in a real-life situation. The output of this analysis will provide good insights to understand the importance of each attribute in the eyes of the consumers.

## **2. Theory**

This chapter introduces the literature review that provides an overview of relevant research that has been done, current knowledge and theories. Those findings are necessary for the research conducted in this paper. First, the consumers' motivation to purchase natural cosmetic products will be discussed. Secondly, some theoretical concepts related to marketing tools that are used to promote natural products will be presented. Finally, this chapter ends by explaining the conceptual model that is used in this research and the hypotheses that are tested.

### **2.1 Why do consumers buy natural**

Research done by Rozin (2005) expounds that people have a preference for natural. This preference comes from instrumental and ideational reasons. The instrumental reasons are based on the fact that natural products are seen as being functionally superior, with more effectiveness, more taste, being safer, and having environmental benefits. Whereas ideational reasons rely on moral or aesthetic superiority; natural simply feels “right”. Scott et al. (2020) also highlight that consumers choose natural products for the preventive aspect those products can bring to their health. Moreover, according to Wilson (1984), humans have an intrinsic attachment to natural things, and are innately attracted by products that have natural attributes.

Roman et al. (2017) discussed the naturalness aspect of food for consumers. Naturalness is perceived as a positive attribute for food products (Rozin, 2005). When food products are stated as “natural”, they are perceived more healthy, fresh, flourish and local (Rozin, et al., 2004). It came out that natural food is perceived as free from artificial ingredients, preservatives, and additives, chemical hormones & pesticides. Natural ingredients are components of natural food goods, and they are minimally processed. Additionally, natural food products are considered healthy, eco-friendly, tasty, and fresh.

As explained previously, the number of natural products has risen, hence its awareness. This rise of natural products concerns natural food products but also natural cosmetic products. Consumers are now paying more attention to ingredients, natural formula, and competitive performance for natural cosmetic products in comparison to the “conventional” beauty products. Thus, the marketing strategy for such products had to adapt and displayed diverse branding, advertising, and communication strategies (Lixandru, 2017). Advertising messages for cosmetic products evolved. Compared to previously, they are now focusing on highlighting the benefits cosmetic products have in terms of sustainability, health, and youthfulness. Marketing communications are engaged in combining messages about how the products maintain the skin within its better physiological state but also how the products are manufactured in an environmentally conscious manner. Speaking about organic and naturalness became glamorous, bringing to the products a bigger impact on the market (Lixandru, 2017). The influence of marketing tools on the consumers’ purchase decisions has been mainly observed for natural food products (Bezawada & Pauwels, 2013). It will hence be studied for natural cosmetic products in this research.

## **2.2 Price**

First, it has been highlighted by Li and Chapman (2012) that people are willing to pay more for natural products in comparison to unnatural alternatives. Consumers interpret the price as proof of the product's value (Tellis & Birger B., 1987). Low prices may convey a low-quality image and can affect the premium aspect that the brands claim (Yoo, Boonghee, Naveen Donthu, & Sungho Lee, 2000). The price may help to differentiate natural and conventional products. Low prices can be associated with low quality and "popular" products (Bezawada & Pauwels, 2013), whereas higher prices for natural products can increase the quality perception

and might attract consumers to buy natural products. Reducing the price difference between natural and conventional products might affect the reliability of natural products. According to Fotopoulos and Krystallis (2001), consumers are willing to pay a price premium of at least 50% for organic food products, and their actual behavior shows they pay a price for organic food products that is 20% higher than conventional products.

Additionally, Haws et al. explain that consumers believe that healthy is a synonym of expensive (2016). When buying natural food products, consumers prefer choosing the most expensive choice among diverse options because they have the intuition that the more expensive a product is, the healthier the product will be (Haws, Reczek, & Sample, 2016).

This research verifies if this effect is also applied to natural cosmetic products. Does a high price increase positively the perception of the naturalness of natural cosmetic products? The aim is to determine if a high price for natural cosmetic products is a synonym of better quality for consumers and whether it positively encourages consumers in their purchase decision.

### **2.3 Color**

Visual cues from the packaging and more specifically the color and labels present also seem to influence the purchase decision (Brach, Walsh, G., & Shaw, D, 2018).

According to research conducted (HART Design & Manufacturing, 2016), it takes only 90 seconds for consumers to make a subconscious judgment about a product when they see it and 62-90% of this judgment comes from the color of the packaging. This assessment is emphasized by 85% of consumers who admit that color is one of the main criteria when purchasing a food product. Color helps to differentiate products and make some of them stand out from competitors' products (HART Design & Manufacturing, 2016). When thinking of green, organic, and sustainable products, the color that comes to mind is green. The green color is used as a marketing tool to convey an image of sustainability and is related to the environment (Labrecque & Milne, 2013). When consumers see packaging that is green, they predict that the products inside this packaging have environmental and sustainable features. This can also help them to differentiate the products from other conventional products and will give them an insight into the environmental superiority that the products can have (Whittlesea, 1993). Seo

and Scammon (2017) conducted a study and compared the impact of different package color conditions on the environmental judgment consumers can have about food brands. They wanted to study the impact of the color on the perception of a message, and the efficiency of the message when the color perceived activates a "conceptual fluency" in the consumer mind. The conceptual fluency relies on a "conceptual match between the color and the message" implying that when a consumer sees a certain color, this color is connected to a certain meaning (Seo & Scammon, 2017). Hence, the color has a positive influence on how the consumer understands the message. Seo & Scammon (2017) opposed green, red, blue, and yellow package color conditions. The results of their study showed that the environmental impact of brands was perceived more positive with green color compared to most other colors for food products (Seo & Scammon, 2017). This could be explained by the fact that the colors green and blue have the same meaning of eco-friendliness (Sundar & Kellaris, 2015), and they also have the same meaning of peacefulness, calm and gentleness (Madden, Hewett, & Roth, 2000). However, even if green and blue can potentially have some similar color meanings, Seo and Scammon (2017) observed that consumers perceive a green food package as more environmentally friendly compared to a blue food package. Green color brings a more positive perception of a brand's environmental and sustainable impact when it comes to food products. Those observations have been made for food products. This research therefore verifies if the color green has a stronger positive impact on consumers' purchase decision for natural cosmetic products compared to the colors blue, red and yellow.

## 2.4 Labels

Furthermore, it has been studied that the use of colors together with other environmental cues increases the perception of sustainability and green to the eyes of the consumers. The combination between colors and environmental claims on the packaging enhances the product's efficacy and positive green image (Pancer, McShane, & Noseworthy, 2017). It is, therefore, more efficient to use colors and labels compared to color only when promoting green products. Food products with organic labels are perceived healthier than conventional foods without a label (Grankwist & Biel, 1001), and eco-labels are powerful tools for differentiating green food products (Pervin, Ranchhod, & Wilman, 2014). According to Mason (2009), food brands that explicitly show information about the product's ingredients are more valuable to consumers, and traceability label has a significant impact on the

willingness to buy (Bradu, Orquin, & Thøgersen, 2014). When it comes to food, more and more consumers are already carefully reading the products' ingredients because they want to know whether a product is 5% or 90% natural (Organic Monitor, 2007). Lastly, labels that have a negative connotation (such as "no preservative, no chemical ingredients") reduce the consumers' risk perception and guide them in their decision-making (Rozin, Fischler, & Shields-Argelès, 2012). When a product has a label on its packaging, it increases its reliability. It gives the consumers information about the naturalness of the products. Furthermore, the number of labels needed to convey a message on the food packaging has been questioned by Brach et al. (2018) in their study. Is one label enough or are several labels more efficient to carry the information about the sustainable aspect of a product (Brach, Walsh, G., & Shaw, D, 2018)? Since previous research has been made for the food category, the influence of labels on the natural cosmetic products buying process can be interesting to study.

## **2.5 Type of brands**

Another aspect that plays a role in consumers' purchase decisions is the type of brand. The level of trust in some products can depend on the type of brand. How consumers perceive the brand has an impact on their purchase decision. For organic food products, some consumers prefer premium brands compared to mass market brands (Moscatto, 2018). The claim for the naturalness of a product is perceived as more credible when the product comes from a premium brand than when it comes from a mass-market brand (Lunardo & Saintives, 2013). Ngobo (2011) also adds that consumers have little confidence in widely distributed organic food products, meaning that they have more trust in food products that come from brands that are more exclusive and premium (Ngobo, 2011). Additionally, when consumers have more trust in a brand and the risk perceived is less, this influences their decision making and they are more likely to buy the considered food product (Teas & Agarwal, 2000). This research will hence study whether brands have an impact on the purchase decision for natural cosmetic products.

## **2.6 Implication of sustainable and organic mindset**

Consumers' awareness about the products' composition has risen. Consumers are more aware of the effect of chemical ingredients. They are therefore influenced by their purchase

decision and the control of their health. According to Roman, Sanchez-Siles & Siegrist (2017) consumers who are already involved in sustainable and organic consumption are also more subject to buy natural products. They are more familiar with those types of products and usually want to keep buying in respect to the environment and their convictions. They are committed to a more sustainable way of living; hence they already have some knowledge about organic consumption. This sustainable mindset might influence them when buying natural cosmetic products since they already know how to select products. Consumers recognize what product criteria are relevant to them, and they already know how to interpret some information displayed on the natural food products (Petty & Cacioppo, 1984) . Those consumers value the arguments offered in green advertisements and the messages conveyed (Matthes, Wonneberger, & Schmuck, 2014). On the other hand, consumers less involved in green consumption are less sensitive to sustainable marketing messages for food products (Matthes, Wonneberger, & Schmuck, 2014). Therefore, the effects described previously (the effects of price, color, labels, and brand) can be interpreted differently, depending on the sustainable mindset consumers can have. Those effects can be stronger for people who already have a sustainable mindset (Matthes, Wonneberger, & Schmuck, 2014). This research focuses on the moderating effect to observe whether the influence of the factors on purchase decision changes depending on the presence of the sustainable mindset. It determines if the effects of price, color, labels, and brand are stronger for consumers who already have an existing interest in a sustainable way of living.

## **2.7 Gender**

Finally, it has been observed that gender can influence the will to purchase natural food products. Women value more the natural aspect of a product compared to men. For example, food naturalness importance is higher for female consumers compared to male consumers (Roman, Sánchez-Siles, & Siegrist, 2017). Women and men have different purchase decisions. For instance, when it comes to clothing, while men tend to buy new items when they really need them, women can often be subject to impulse buys, or they purchase goods to enhance their mood and social self-esteem (Lucas & Koff, 2014). Furthermore, women and men react differently to visual messages. For example, regarding colors, “women respond more positively than men to bright colors, and they also respond more negatively to dark colors” (Hemphill, 1996, pp. 275-280). That means that visual messages can have a different impact on the



purchase decision, depending on the gender of the consumers. Observations have been made for natural food products and clothing categories. Therefore, this study analyzes the influence of gender on the purchase decision for natural cosmetic products. It examines if the effects of price, color, labels and brand are stronger for women than for men for the purchase decision of natural cosmetic products.

### 2.8 Conceptual Model and Hypotheses

This paper aims to determine what can influence consumers when they purchase natural cosmetic products and how marketing strategies can help them along their buying process. How can they make efficient choices among the variety of products available, and how can they evaluate if a natural product is better than another one? Figure 1 illustrates the conceptual framework of this research paper.

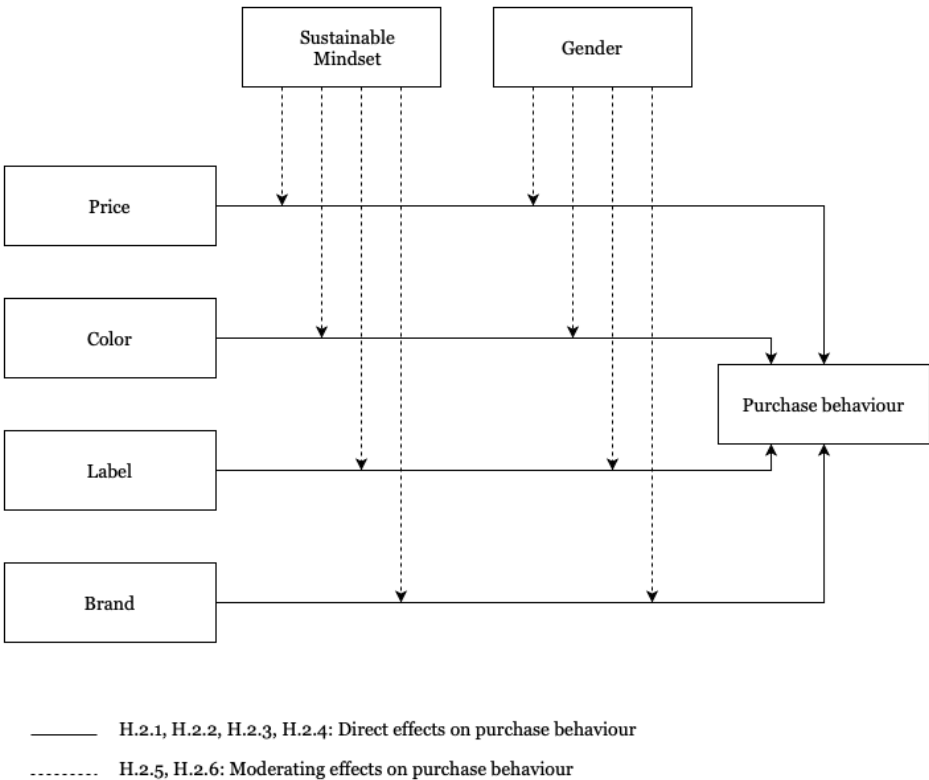


Figure 1: Conceptual Framework

The conceptual framework shows that the dependent variable Purchase decision is directly influenced by the independent variables Price, Colors, Labels, and Brands.

Furthermore, the effect of those independent variables is moderated by the variables of Gender and Sustainable mindset.

To answer the research question of this paper “What marketing tools to use to promote reliable natural cosmetic products?”, eight hypotheses are tested. Those hypotheses have been constructed based on the literature review.

H.1: Health interests, environment, and composition are the naturalness attributes the most relevant for natural cosmetic products’ consumers.

The first hypothesis relates to the motivation that drives consumers to buy natural cosmetic products. This hypothesis is based on the fact that consumers are now more conscious buyers when it comes to cosmetic products. They want to take care of their health and body by using healthier products such as natural cosmetics (Dimitrova, Kaneva, & Gallucci, 2009). The assumption from Hypothesis 1 follows the findings from Roman et al. (2017) who highlighted that consumers are buying natural food products for health, environmental, and ingredients purposes. However, as explained earlier, food and cosmetic are not used the same way by consumers. Therefore, this study tests if consumers' motivations for natural cosmetic products are also related to health, environmental, and composition aspects.

Secondly, as explained by Kim & Seock (2009) and Kortenkamp & Faust (2018), it can be difficult for consumers to choose a natural cosmetic product among the large choice of natural cosmetic products offered on the market. Some natural cosmetic products claim to be natural but can still be harmful to the body. Some natural cosmetic products are sometimes not even natural. Brands use this appellation to attract consumers and sell more (Lixandru, 2017). The purchase decision for natural cosmetic products can be confusing for consumers who are looking for good and reliable natural cosmetic products. Therefore, this research tests the following hypotheses. Those hypotheses have the aim to determine what kind of marketing tools can inform the best way the naturalness of the product and help the consumers during their purchase decision.

H.2.1: Price has a positive influence on the purchase decision for natural cosmetic products.

According to Tellis & Birger (1987), high prices can be interpreted by consumers as a proof of a product's value. The more expensive a product is, the more valuable it can be perceived. Some consumers also think that by choosing the most expensive product, they will certainly obtain a healthy product, whereas a product sold at a low price is synonym of low quality and is less healthy (Haws, Reczek, & Sample, 2016). That is why Hypothesis H.2.1 is tested. The aim is to determine if a high price for natural cosmetic products influences positively the purchase decision compared to a lower price. In this study, the natural cosmetic product that is tested is a natural shower gel. This research aims to observe the influence of marketing tools on the purchase decision of any gender. That is why a natural shower gel has been chosen. It is a cosmetic product used by any gender.

H.2.2: The green package color compared to blue, red, or yellow package color for natural cosmetic products has a stronger positive impact on the purchase decision.

Hypothesis H.2.2 is based on the notion that color resonates with symbolism hence the color perception affects people's purchase decision (Casas & Chinoperekweyi, 2019). Color can convey a certain message to the consumers and trigger them to buy or not buy. During this research, several products' containers are displayed in four different colors: green, blue, red, and yellow. Those four colors were tested by Seo and Scammon (2017) who wanted to study the impact of those colors on the environmental judgment for a food brand. They observed that even if green and blue have both a meaning of eco-friendliness, when green is used on a product, the product is perceived as more environmentally friendly compared to when the product' container is blue (Seo & Scammon, 2017). This means that green has a stronger positive environmental and sustainable meaning compared to blue, red, and yellow for food products. As those findings were perceived for brands, they are tested on natural cosmetic products.

H.2.3. a: The label "pure natural ingredients" has a positive impact on the purchase decision for natural cosmetic products compared to the labels "natural ingredients", "98% natural ingredients" or no label.

H.2.3. b: The label "no preservatives" has a positive impact on the purchase decision for natural cosmetic products compared to no label.

Hypothesis H.2.3 relies on the expectation that the use of environmental claims on packaging such as labels brings more value and enhances the positive sustainable image of the product. It is more efficient to use a combination of color and labels for an effective marketing strategy (Pancer, McShane, & Noseworthy, 2017). Two different categories of labels are analyzed: labels about the natural aspect of the product, to test if this type of information is meaningful for cosmetic natural products, as it is for the food industry (McFadden & Huffman, 2017); and labels with a negative connotation since they help to define the naturalness of a food product (Rozin, Fischler, & Shields-Argelès, European and American perspectives on the meaning of natural., 2012). The labels testing the natural aspect of the product are the following: “natural ingredients”, “98% natural ingredients”, “pure natural ingredients” and no label. The reason why the three labels “natural ingredients”, “98% natural ingredients” and “pure natural ingredients” have been chosen is that all of them inform about the naturalness of a product. The labels “natural ingredients” and “pure natural ingredients” increase the quality and the consumers’ perceived value of natural food products (Brach, Walsh, & Shaw, Sustainable consumption and third-party certification labels: Consumers' perceptions and reactions., 2018). Since the observation was done for natural food category, they are hence tested for natural cosmetic products. Besides, Mehla (Mehla, 2013) informs about the fact that numbers are becoming a trend in packaging. Labels informing about the percentage of natural ingredients are more and more visible on natural cosmetic products, and the percentage “98%” is tested in this study because it corresponds to a high degree of purity for a product. According to the Food Standards Agency (2012), the term “natural” means that the product’s ingredients are essentially natural, and the term “pure” is used to highlight the quality of the ingredients. For the label “98% natural ingredients”, the 2% remaining could indicate that even if 98% of the composition is natural, there is still a small percentage of ingredients that can be harmful. Those are the reasons why in Hypothesis H.2.3.a, the label “pure natural ingredients” is expected to have a positive impact on the purchase decision of natural cosmetic products compared to the other labels (and the absence of label). The term “pure” adds value to the perception of the ingredients’ quality.

To study the influence of labels with a negative connotation, this research tests the effect of the presence of the label “no preservatives” on the packaging. As explained by Rozin et al. (2012), “natural is principally defined by highlighting ‘negative’ features rather than

'positive' features" (p. 454). Onyango et al. (2006) add that natural foods is mainly described as "food containing no preservatives" (pp. 61-78). Observations being done for natural foods products, this research analyzes if the presence of the label "no preservatives" compared to its absence has a positive impact on the purchase decision for natural cosmetic products.

This research wants to test how the labels "natural ingredients", "pure natural ingredients", "98% natural ingredients" and "no preservatives" can have a different impact on consumers. The aim of this hypothesis is to determine if labels have a positive impact on the purchase decision and if yes, what type of labels have a stronger impact; and which combination of labels is the most efficient?

H.2.4: Consumers prefer premium brands and more high-standard brands for natural cosmetic products compared to mass-market brands.

It has been highlighted by Moscato (2018) that for natural food products, some consumers prefer premium brands because the claim of naturalness is perceived as more credible compared to mass-market brands (Lunardo & Saintives, 2013). Consumers have more trust in natural food products that come from premium brands, and it influences their purchase decision (Ngobo, 2011). Hypothesis H.2.4 tests whether the brand perception has an impact on the purchase decision for natural cosmetic products. Do premium brands have a stronger effect on the purchase decision of natural cosmetic products compared to mass-market brands? The goal of using two different brands is to evaluate the effect of brands on the purchase decision of natural cosmetic products and to observe if there is a stronger influence of premium brands compared to mass-market brands on purchase decision.

H.2.5: A sustainable mindset moderates the effects presented in the previous hypotheses. Visual messages shown on the product packaging of natural cosmetic products have a stronger impact on consumers who already have a sustainable mindset.

According to Petty & Cacioppo (1984), consumers highly involved in an environmental and sustainable way of consumption are keener to consider and evaluate the arguments offered in green advertisements. Moreover, those consumers have more the tendency to judge the products from the advertisement messages rather than from emotional perception (Matthes, Wonneberger, & Schmuck, 2014). On the other hand, consumers less involved in green consumption are more likely to build their opinions from emotions and feelings and are

not sensitive to sustainable messages (Matthes, Wonneberger, & Schmuck, 2014). That implies the influence of marketing tools on the purchase decision for natural products is stronger for consumers who already have a sustainable mindset. They might have a stronger perception and better understanding of the visual sustainable messages shown on the packaging since they are already familiar with green consumption and are used to buy natural products. This aspect is studied as a moderator of purchase decision of natural cosmetic products in the Hypothesis H.2.5. This hypothesis aims to detect whether an existing interest in green products moderates the effects of price, color, labels, and brand on the decision to purchase natural cosmetic products.

H.2.6: Gender moderates the main effects on the purchase decision for natural cosmetic products seen in the previous hypotheses such that those effects are stronger for women compared to men.

As seen previously, purchase decision can differ depending on the gender of the consumers (Lucas & Koff, 2014). Certain visual messages have a stronger impact on women compared to men, or the opposite (Hemphill, 1996). Women are more careful about the naturalness aspect of products and pay more attention to visual messages displayed on product packaging (Roman, Sánchez-Siles, & Siegrist, 2017). This leads to a different interpretation of the products and different preferences among genders. This aspect is studied in Hypothesis H.2.6. as a moderator of the decision to purchase natural cosmetic products. The research tests whether gender moderates the effect of price, color, labels, and brand on the purchase decision of natural cosmetic products.

### 3. METHOD

In this chapter, the methodological procedure followed for this research will be discussed. First, the choice of methodology, a qualitative study, and a choice-based conjoint analysis will be detailed. Secondly, how the variables are measured will be explained. Finally, the statistical model used to test the hypotheses of this research is described.

#### 3.1 Methodological approach

This research aims to determine what factors influence consumers when they purchase natural cosmetic products and the impact that those factors can have on the consumers, taking into account potential moderators that can positively emphasize the effect, such as an existing sustainable mindset and gender. This paper intends to answer the main research question “What marketing tools to use to promote reliable natural cosmetic products?”. From this main research question are derived the sub-questions “Why do consumers buy natural products?” and “How can different marketing tools be used to influence the consumers’ purchase decision for natural cosmetic products?” and their related hypotheses, as discussed previously. To answer the main research question, an experiment is conducted using an online survey. This survey is handled among several participants.

This first hypothesis (H.1: Health interests, environment, and composition are the naturalness attributes the most relevant for natural cosmetic products’ consumers) is tested qualitatively. A question at the end of the survey aims to get a better understanding of consumers’ expectations regarding natural products. Respondents are asked to state which words reflect the best their will to purchase natural products and what are the reasons why they want to buy those types of products. The answers to this question allow us to point out what consumers are looking for when they buy natural; what is important for them, what do they expect. Are the health interest and sustainability aspects the main effects that drive them or is there any other argument that made them switch their purchase habits? The word cloud generator from MonkeyLearn is used and the words collected are set in a word cloud. The word cloud adapts the position and size of the words depending on the frequency the words have been stated. If a word came up often, it would appear bigger on the word cloud than a word that was mentioned less often.

To test the hypotheses related to the second sub-question, a choice-based conjoint analysis is used. In conjoint analysis, respondents have to select their most preferred option among a set of choices. Conjoint analysis is prized because it is a significant set of techniques for measuring consumers' trade-offs among multi-attributed products and services (Green & Srinivasan, 1990) (Fader & Hardie, 1996). This method of analysis is used to determine consumers' preferences. Choice-based conjoint analysis is the type of conjoint analysis where participants have to choose the most preferred product among diverse alternatives. Whereas rating or ranking-based conjoint analysis offer the respondent to rank or rate a product. The choice-based conjoint analysis allows understanding the relationship between the consumers' choices and the product's attributes (Champan & McDonnell Feit, 2015). It gives more insights into what drives the consumers toward their choices and what can influence them in their purchase decision.

A survey is offered to respondents. At the beginning of the survey, a short text places the respondents in a situation where they want to buy a natural shower gel. They are told that several alternatives will be presented to them and they have to select the alternative they would be most likely to buy. All the natural shower gels presented are identical in terms of consistency and fragrance. They only vary on different features. Those features correspond to the attributes and levels of attributes. These attributes and levels of attributes come from the variables introduced earlier (price, color, labels, and brand) that have been broken down. Those attributes and attribute levels are presented in Table 1 below, and are described to the respondents in the survey:



Table 1: Attributes and attribute levels

Attributes	Attribute Levels
Price	3€ 6€ 9€
Color of packaging	Green Blue Yellow Red
Label 1	Natural Ingredients 98% Natural Ingredients Pure Natural Ingredients No Label
Label 2	No preservatives No Label
Brand	Love, Beauty and Planet Weleda

The price levels chosen are 3€, 6€ and 9€. The reasons for the choice of those attributes' levels are that in 2016, the average price for a 400 ml bottle of conventional shampoo was 2.57€ in the Netherlands (European Commission, 2016) and this study tests the willingness to pay a price premium higher for a certain type of natural cosmetic products compared to other natural cosmetic products. That is why the prices of 3€, 6€, and 9€ for a 400 ml bottle of shower gel are tested. Current natural shower gels sold on the market have a price of 9€, hence the price of 9€ is tested. The price of 6€ has been chosen because it gives a noticeable difference compared to 3€. A price of 5€ would be too close to 3€ when comparing natural products.

Regarding the brand' attribute, the two brands "Love Beauty and Planet" and "Weleda" are tested. Love Beauty and Planet is a brand from Unilever which has been launched in 2017. Unilever launched this brand with the idea of providing consumers with products made from natural ingredients. Love Beauty and Planet products are made of naturally derived ingredients with different levels of naturality percentages going from 93% to 98% of naturally derived content (Love Beauty and Planet, 2021). The products are sold in supermarkets and drugstores. Weleda is a Swiss brand offering 100% certified natural cosmetic products. The brand focuses on offering products made from plants. Weleda aims to respect the consumers' body and wants

its product to increase consumers' well-being (Weleda, 2021). Weleda products are offered in pharmacies and specific beauty shops.

After this description of the situation, ten different choices between two products are offered (one choice after another) to the respondents. In this experiment, the choice sets are the same for each participant, but the order in which the choices are offered is randomized. Each choice shows two shower gels that have different visual aspects. To design the ten sets of two options, the statistical software named JMP has been used. The details of this set of choices can be found in Table A.1 in the Appendix. At each choice, two pictures of natural shower gel are presented next to each other with different levels of price, different colors, different labels on the packaging, and different types of brands. For example, the product's picture on the left contains one label, and the picture on the right contains another label. One natural shower gel has green packaging, whereas another natural shower gel depicts blue, red, or yellow packaging. Two brands and three different prices are presented, and the consumers have to choose one natural shower gel between the two alternatives. The aim of this set of choices is to test each of the variables stated earlier. Respondents are asked the question "which of the following natural shower gels would you buy?" and they need to select which of the options A or B they would choose according to the products' information provided. Two different sets of choices are depicted in Figure 2 and the eight other sets of choices can be found in Table A.2 in the Appendix.

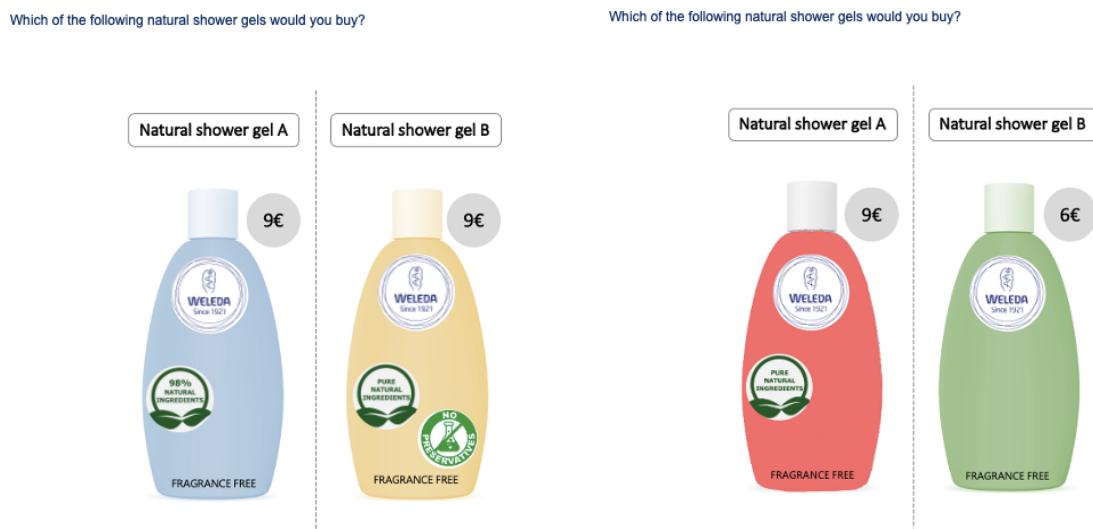


Figure 2: Two set of choices offered to respondents

The pictures depict the same natural shower gel with different levels of attributes. The price, the labels, and the brand name have exactly the same position on each image. When they vary, the position of the attributes on the packaging stays the same. Only the texts and messages are changing on the picture. This consistency and recurrence regarding the location are required for helping the respondents to make their choice and reveal their preferences. The aim is to avoid the confounding effects of location and size (Mahmoud, 2017).

With the participants' feedback and opinion, we are able to discern what attributes consumers are more responsive to. How price, packaging, colors, labels, and the type of brand influence the purchase decision for natural cosmetic products? After the ten alternatives offered, two questions ask the respondents if they know the two natural cosmetic brands used in the survey. Those questions aim to ask about the familiarity with the two brands. The brand familiarity is not tested as a categorical variable, but it can be interesting to be asked to determine if the brand familiarity influences respondents' answers. Thereafter, two other questions invite respondents to report if they often buy organic or natural products, and if they look at the ingredient's composition of the products when they want to buy them, and/or do they use an app to scan your products and check their composition? The first question intends to measure the sustainable mindset among consumers and determine if there is a moderation effect by using this sustainable mindset. The second question about the composition check is to understand to what degree consumers involve themselves when they buy natural products. At the end of the survey, few demographic questions are asked to get knowledge about the sample. The question about the gender is used to determine if gender also has a moderator effect on the purchase decision. The data used for this research is collected from the survey distributed between June 7th and June 14th, 2021. The survey has been shared among friends, family, acquaintances, and students with the aim of reaching at least 200 respondents.

The data collected is used for the conjoint analysis and the results are processed via the statistical software JMP. From the survey results, marketing tools for natural products are detected. They will be used to promote the real natural aspect of natural cosmetic products and positively influence the consumers' purchase decision among many choices.

## 3.2 Model specification

We work with JMP software to first construct a data collection instrument and later model the discrete choice. The outputs help to determine the main effects and potential moderations of the variables, and the results from the survey are interpreted to accept or reject our hypotheses. When conducting a choice-based conjoint analysis, the participants need to choose the combination they prefer. The theory behind this method is that the participants select the combinations of attributes that maximize their satisfaction and utility. The choice-based conjoint analysis highlights their preferences.

In this study, the dependent variable (the choice) and independent variables are categorical variables since they can only take on a finite number of values (buy or not buy; price of 3€, 6€ or 9€; brand Love Beauty and Planet or Weleda; color green, blue, red or yellow; and different type of labels). This is the reason why a multinomial logit model is used. This model allows to evaluate the probability that consumers choose a specific alternative that increases their utilities.

The choice-based conjoint analysis relies on this type of equation:

$$y_i = \beta_0 + \beta_1 * x_i + \beta_2 * x_i + \dots + \beta_k * x_i + \varepsilon_i$$

Where  $y = 0$  for non-purchase decision and  $y = 1$  for purchase decision. We assume there is a continuous latent variable  $z$  that drives  $y$  and there is a threshold  $\delta$  such that:

$$y_i = 1 \text{ when } z_i > \delta \text{ and } y_i = 0 \text{ when } z_i \leq \delta ; \text{ and } z_i = \beta_0 + \beta_1 * x_i + \beta_2 * x_i + \dots + \beta_k * x_i + \varepsilon_i$$

The relation between  $y$  and  $z$  is given by the logistic function:  $P(y=1) = p_i = e^z / (1+e^z)$  where  $p_i$  indicates the probability of choosing an option.

The model specification that is processed in this study to test the main effects is the following:

### Model 1

$$z = \beta_1 * X_{j1} + \beta_2 * X_{j2} + \beta_3 * X_{j3} + \beta_4 * X_{j4} + \beta_5 * X_{j5} + \beta_6 * X_{j6} + \beta_7 * X_{j7} + \beta_8 * X_{j8} + \beta_9 * X_{j9} + \beta_{10} * X_{j10} + \varepsilon_{nj}$$

The meaning of the terms in the model are as follows:

- $X_{j1}$  and  $X_{j2}$  indicate whether the price of the natural shower gel  $j$  is 3€ or 6€ respectively.
- $X_{j3}$ ,  $X_{j4}$  and  $X_{j5}$  indicate whether the packaging color of the natural shower gel  $j$  is blue, red or yellow respectively.
- $X_{j6}$ ,  $X_{j7}$  and  $X_{j8}$  indicate whether the label 1 displayed on the natural shower gel  $j$  is “Natural ingredients”, “98% natural ingredients” or if there is no label displayed.
- $X_{j9}$  indicates whether the label “no preservatives” is displayed or not on the natural shower gel  $j$ .
- $X_{j10}$  indicates whether the brand of the natural shower gel  $j$  is Weleda.

From this equation, the main effects of the attributes on  $z$  can be understood. For example,  $\beta_n$  indicates the effect of the attributes (price, color, label 1 and label 2 and brand) on  $z$ .  $\text{Exp}(\beta_n)$  indicates the odds ratio of  $y$  happening for a change in the level of attribute versus the baseline of the attribute, which means the change in odds of the act of purchase happening.

This model is expanded the following way to include for the moderation interactions:

### Model 2

$$z = \beta_1 * X_{j1} + \beta_2 * X_{j2} + \beta_3 * X_{j3} + \beta_4 * X_{j4} + \beta_5 * X_{j5} + \beta_6 * X_{j6} + \beta_7 * X_{j7} + \beta_8 * X_{j8} + \beta_9 * X_{j9} + \beta_{10} * X_{j10} + \gamma_1 * X_{j1} * G_n + \gamma_2 * X_{j2} * G_n + \gamma_3 * X_{j3} * G_n + \gamma_4 * X_{j4} * G_n + \gamma_5 * X_{j5} * G_n + \gamma_6 * X_{j6} * G_n + \gamma_7 * X_{j7} * G_n + \gamma_8 * X_{j8} * G_n + \gamma_9 * X_{j9} * G_n + \gamma_{10} * X_{j10} * G_n + \delta_1 * X_{j1} * M_n + \delta_2 * X_{j2} * M_n + \delta_3 * X_{j3} * M_n + \delta_4 * X_{j4} * M_n + \delta_5 * X_{j5} * M_n + \delta_6 * X_{j6} * M_n + \delta_7 * X_{j7} * M_n + \delta_8 * X_{j8} * M_n + \delta_9 * X_{j9} * M_n + \delta_{10} * X_{j10} * M_n + \epsilon_{nj}$$

The meaning of the additional terms in the model are as follows:

- $G_n$  indicates the gender of participant  $n$  buying the natural shower gel
- $M_n$  indicates the presence of an organic or natural mindset among participant  $n$  buying the natural shower gel
- $\epsilon_{nj}$  stands for the error component in the model

From this expanded equation, the effects of the moderators on  $z$  can be determined. For example,  $\gamma_1$  indicates the moderator effect that the gender can have on  $z$ , and  $\delta_1$  indicates the moderator effect that a sustainable mindset can have on  $z$ .

The following tests are used to analyze the data.

### 3.3 Likelihood ratio test

This research employs a multinomial logit model. For testing this model, a likelihood ratio test is used to test whether the attributes of price, color, label 1 and 2, and brand have a significant effect on the willingness to buy a natural shower gel. The likelihood ratio test is a hypothesis test that helps to determine which is the most preferred model between two nested models. Nested models mean that one model has a subset of the parameters of the other model (Chapman & McDonnell, 2015). The most preferred model is the one that maximizes the likelihood function. The null hypothesis is that one model is considered being the best one. When the null hypothesis is rejected, that means the other model is significant and it is an improvement of the other one. To interpret the effects of the attributes, the p-value of each variable is observed. For a significant level of 5%, when the p-value is inferior to 0.05, that means there is enough evidence to reject the null hypothesis. Thus, the effect of the variable is statistically significant, meaning it has an effect on the likelihood to buy the natural shower gel. However, when the p-value is superior to 0.05, there is not enough evidence to reject the null hypothesis, indicating that the effect of the variable is not statistically significant.

### 3.4 Marginal effects

This research also employs marginal effects to measure and interpret how a change in one of the independent variables can affect the dependent variable while all other variables remain constant. The marginal effects can be manipulated to make predictions. The attributes that bring the highest marginal utility can be considered as the best attribute to choose. They reveal what consumers preferred the most. Higher utility means that consumers are most likely to buy the product. This helps to determine the attribute's importance. The price, the color, the labels, and the brand that bring the highest marginal utility to the natural shower gel are exposed and this highlights which product will most likely be bought by the consumers.

The Utility Profiler tool in JMP helps to visualize the marginal effects of the attributes. It explains how the attributes and interactions among them affect consumers' choices. There are five profilers, one for each attribute: price, color, label 1, label 2, and brand.

## 4. RESULTS

This chapter starts with the sample characteristics. It is followed by the results of the qualitative study used to answer the first sub-question “Why do consumers buy natural products?”, and the conjoint analysis used to answer the second sub-question “How can different marketing tools be used to influence the consumers’ purchase decision for natural cosmetic products?”. Those two sub-questions help to answer the main research question of this study. The hypotheses of this research are tested with a significance level of 5%.

### 4.1 Data description

The survey has been taken by friends, family, acquaintances, and students, leading to 259 respondents whose 41 responses are partial. Consequently, 218 responses are analyzed for this research. This sample is composed of 155 women, 61 men and 2 non-binary participants. The gender distribution of the respondents is illustrated in Figure 3.

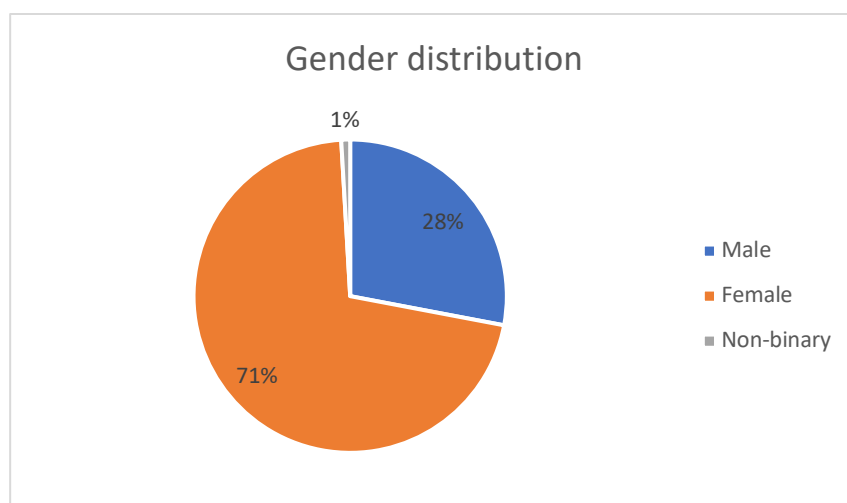


Figure 3: Gender distribution

The participants come from four different age groups. That gives meaningful insights into the choice made by different generations. There are 91 respondents between 18 and 24 years old, 88 respondents between 25 and 40 years old, 14 respondents between 41 and 56 years old, and 25 respondents between 57 and 75 years old. The age distribution is shown in Figure 4.

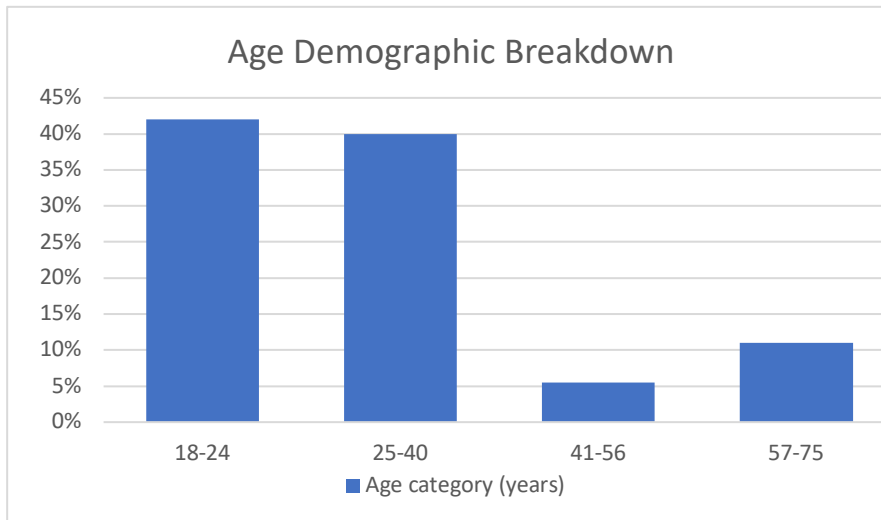


Figure 4: Age demographic breakdown

Regarding the nationality of the participants, 65 of them are Dutch, 82 are French, 45 have a nationality from a country in the continent of Europe and 26 have a nationality from a country outside Europe. The majority of the respondents is living in the Netherlands (53%) and France (31%), 10% of the respondents are residents of Europe, and 6% of them are living in a country outside the continent of Europe. The number and percentage of respondents per nationality and per country of residence are presented in Table 2.

Table 2: Respondents per nationality and per country of residence

Country of nationality	Number of respondents	Percentage	Country of residence	Number of respondents	Percentage
Netherlands	65	30%	Netherlands	115	53%
France	82	37%	France	68	31%
Other country in the continent of Europe	45	21%	Other country in the continent of Europe	21	10%
Other country outside the continent of Europe	26	12%	Other country outside the continent of Europe	14	6%



### Purchase of organic or natural products

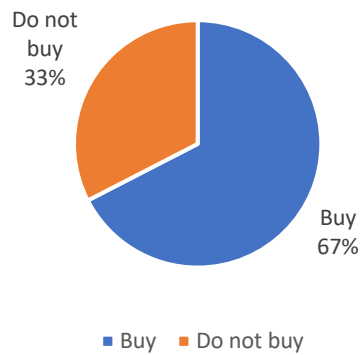


Figure 5: Sustainability mindset in terms of organic and natural product's purchase

### Ingredients' check

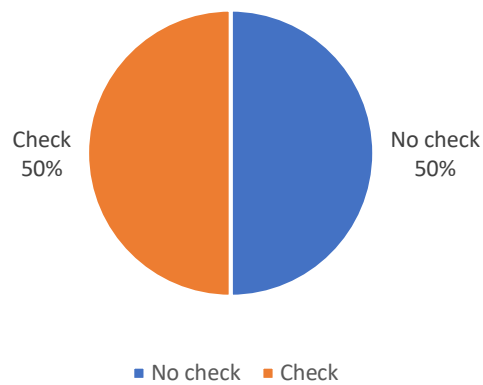


Figure 6: Ingredients' check

Among the 218 respondents, 67% of them buy organic or natural products and 33% of them do not buy organic or natural products (Figure 5). Half of the respondents check the ingredients' composition by either looking at the list of ingredients or by using an app. The remaining half of the respondents do not check the ingredients (Figure 6).

## 4.2 Results for Hypothesis H.1.

The first Hypothesis H.1 is tested qualitatively with the help of the word cloud generator MonkeyLearn. During the survey, the respondents were asked what words describe the best their willingness to purchase natural cosmetic products. The word cloud is a visual representation of the keywords answered by the respondents. On the word cloud, the words are displayed in different sizes depending on their relevance and the frequency they were answered. The larger the word appears, the more relevant and frequent the word is. The relevancy score to each word is computed by multiplying the relative word frequency by the IDF (inverse document frequency), which is a score measuring the uniqueness of a word (MonkeyLearn, 2021). The relevancy score and the number of times each word appears are accounted for within the word cloud. Figure 7 is the word cloud showing the result of the qualitative test. According to this figure, environment is the word with the strongest relevance, meaning that it is the main reason why respondents consume natural cosmetic products. The following main reasons for buying natural cosmetic products are that those natural products reduce skin irritations, and they are better for the health and skin. Reducing the risk of cancer, avoiding the animal cruelty, offering recyclable packaging, and avoiding chemicals are the next main reasons why respondents buy natural cosmetic products. The complete results of this qualitative study can be found in Table A.3 in the Appendix. Those results support Hypothesis H.1 since they show that consumers buy natural cosmetic products because they mainly want to take care of the environment and their health, and they also pay attention to the ingredient's composition.



Figure 7: Word Cloud

### 4.3 Results for Hypotheses H.2.1, H.2.2, H.2.3 a, H.2.3 b, and H.2.4

The data collected from the survey are analyzed with the use of the multinomial logit. The parameters are estimated, the effect Likelihood Ratio tests are run, and the effect marginals for the attributes are predicted. Model 1 answers the hypotheses H.2.1, H.2.2, H.2.3 a, H.2.3 b, and H.2.4. It is the base model that presents the main effects of this research. As it can be seen in Table 4, the intercept represents a Weleda natural shower gel costing a price of 9€, with a green bottle packaging, and presenting the labels “pure natural ingredients” and “no preservatives”.

Table 3: Effect Likelihood Ratio Tests Model 1




Source	L-R ChiSquare	DF	Prob. > ChiSq	
Price	326,756	2	<,0001*	
Color	15,248	3	0,0016*	
Label 1	178,313	3	<,0001*	
Label 2	180,433	1	<,0001*	
Brand	0,213	1	0,6447	

Table 4: Parameter estimates for Model 1

Term	Estimate	Std. Error	Lower 95 %	Upper 95 %
Price[3]	1,01851816	0,0786183789	0,8716257	1,1805955
Price[6]	0,10651115	0,0522041501	0,0036496	0,2083361
Color[Blue]	-0,28636186	0,0826059750	-0,447388	-0,122618
Color[Yellow]	-0,10351073	0,0644920298	-0,229759	0,0226324
Color[Red]	0,26588897	0,1020665544	0,0699567	0,470069
Label 1[98%]	0,37443103	0,0789168921	0,2225447	0,5320122
Label 1[No Label]	-0,74680498	0,0741112490	-0,897232	-0,606494
Label 1[Natural]	0,04780917	0,0883231875	-0,124669	0,2210797
Label 2[No Label]	-0,72196491	0,0611103637	-0,844624	-0,605288
Brand[L B P]	-0,01813902	0,0394993319	-0,095453	0,0591087

Table 4 displays the parameter estimates, the standard errors, and the confidence intervals for each of the main effect attributes. The main effect attributes (Table 3) include the price, the color, label 1, label 2, and the brand. The attribute price has a p-value inferior to 0.0001 meaning that at a significance level of 5% (0.05), the effect of price is statistically significant (Table 3). In Table 4 can be seen that the price attribute of 3€ has an estimate of 1.0185 and the price of 6€ has an attribute of 0.1065. That indicates consumers are sensitive to the price, and a price of 3€ has a more positive impact compared to the price of 6€. Furthermore, it can be noticed in Table 5 that the marginal utility of the price of 9€ is equal to -1.1250, meaning that the price of 9€ has a negative utility effect of -1.1250. Hypothesis H.2.1 is then not supported. There is not enough evidence to conclude that higher price has a positive influence on the purchase decision for natural cosmetic products. That might be supported by the fact that consumers still have strong preferences for low prices even when it is about natural products. The effect of low price is stronger than what expected, that is why the price of 3€ is the one that has the strongest positive effect on the utility.

Table 5: Effect Marginal Model 1 for Price

Marginal Probability	Marginal Utility		Price
0,6583	1,0185		3
0,2645	0,1065		6
0,0772	-1,1250		9

Secondly, the p-value for the color attribute is 0.0016, which is smaller than the significance level of 0.05. Therefore, the effect of color is statistically significant. According to Table 4, the estimate for blue is  $-0.2864$ , yellow is  $-0.1035$  and red is  $0.2659$ . The 95% confidence intervals inform that red and blue are significantly different than 0. Therefore, blue decreases the utility and red increases the utility compared to the effect of the color green. Yellow is not significantly different than 0 since its 95% confidence intervals contains 0. According to Table 4, green and red have similar positive effects on the utility, whereas blue and yellow have negative effects. Those effects can also be seen in Table 6. Green and red have a positive marginal utility of 0.1240 and 0.2659 respectively; and blue and yellow have a negative effect on the utility ( $-0.2864$  and  $-0.1035$  respectively). Red is the attribute that has the highest positive utility effect, which does not fully support H.2.2. This could be explained by the fact that this color attracts respondents' eyes better than the green color. Or green color might be a color too much used on the market, that is why consumers are more attracted by the red bottle. Therefore, consumers do not perceive the same way a natural shower gel with a red bottle compared to a natural shower gel with a green bottle.

Table 6: Effect Marginal Model 1 for Color

Marginal Probability	Marginal Utility		Color
0,2768	0,12398		Green
0,1837	-0,28636		Blue
0,2205	-0,10351		Yellow
0,3190	0,26589		Red

Thirdly, according to Table 3, the effect of the Label 1 is statistically significant at a 5% significance level ( $p\text{-value} < 0.0001$  which is lower than 0.005). The estimate for the label “98% natural ingredients” is equal to 0.3744, when there is no label it is equal to  $-0.7468$ , and for label “natural ingredients” the estimate is 0.0478 (Table 4). This means that “98% natural ingredients”, “natural ingredients” and “pure natural ingredients” have positive effects on the utility of buying natural cosmetic products. However, when there is no label on the bottle of the natural shower gel, the utility decreases by 0.7468 compared to “pure natural ingredients”. The label that has the highest utility margin is label “98% natural ingredients”. This label increases the utility by 0.3744 compared to the baseline (Table 7). The confidential intervals in Table 4 indicates that the label “98% natural ingredients” is significantly different than the

baseline which is “pure natural ingredients”. “No label” is also significantly different than “pure natural ingredients”. Nevertheless, the label “natural ingredients” is not significantly different than the label “pure natural ingredients”. Those results do not support Hypothesis H.2.3.a This Hypothesis is saying that the label “pure natural ingredients” has a positive impact on the purchase decision for natural cosmetic products compared to other labels. Nonetheless, “98% natural ingredients” has the highest positive utility margin. As seen, the label “pure natural ingredients” is not significant different than “natural ingredients”, meaning that those two labels are perceived the same way by the consumers. They both have a positive effect on the utility. The reason why the label “98% natural ingredients” has the highest marginal utility is that consumers might be more sensitive to numbers. This label gives more detailed information about the composition. Consumers might prefer having a specific percentage compared to an adjective when buying natural cosmetic products. They could think the brand is transparent about the composition and do not want to be too vague, even if 2% of the ingredients are not pure. The similar effect of “natural ingredients” and “pure natural ingredients” could be explained by the fact that those labels both convey positive information about the naturalness of cosmetic products. The word “natural” already informs about the quality of the product and the ingredients’ composition and can be already enough information for the consumers. Finally, when there is no label, it can imply that the ingredients’ composition lacks quality or naturalness. That is why it has a negative effect on the perception of the product compared to when there is a label.

Table 7: Effect Marginal Model 1 for Label 1

Marginal Probability	Marginal Utility		Label 1
0,3173	0,32456		Pure
0,3335	0,37443		98%
0,1087	-0,74680		No Label
0,2406	0,04781		Natural

Table 3 shows that the p-value of label 2 is lower than 0.0001 meaning that the effect of the label 2 is statistically significant at a 5% significance level. It can be identified from Table 8 that the label “no preservatives” has a total positive utility effect of 0.7220, meaning that if this logo is present on the bottle, and all other attributes remain constant, the utility increases

by 0.7220. On the contrary, the attribute “no label” has a marginal utility of – 0.7220. Therefore, when there is no label on the bottle, the utility decreases by 0.7220 compared to when there is the label “no preservatives”. This supports Hypothesis H.2.3.b since the presence of the label “no preservatives” has a positive impact on the purchase decision for natural cosmetic products compared to when there is no label. This can result from the fact that consumers value the type of information that ensures that there are no harmful ingredients in the natural cosmetic products they buy. This comforts them about the quality of the products they apply to their bodies.

Table 8: Effect Marginal Model 1 for Label 2

Marginal Probability	Marginal Utility		Label 2
0,1909	-0,72196		No Label
0,8091	0,72196		No preservatives

Finally, the estimate for the brand Love Beauty and Planet equals – 0.0181. This effect is not statistically significant at a 5% significance level (p-value = 0.6447). Therefore, Hypothesis H.2.4 is rejected at a 5% significance level. There is not enough evidence to conclude that consumers prefer premium brands and more high-standard brands for natural products compared to mass-market brands. Nevertheless, Table 9 demonstrates that the brand Love Beauty and Planet has a negative marginal utility of – 0.0181 and the brand Weleda has a positive marginal utility of 0.0181.

Table 9: Effect Marginal Model 1 for Brand

Marginal Probability	Marginal Utility		Brand
0,4909	-0,01814		L B P
0,5091	0,01814		Weleda

Table 10: Summary report Model 1 for attribute’s importance

Column	Main Effect	Total Effect	
Price	0,476	0,498	
Label 2	0,312	0,334	
Label 1	0,115	0,137	
Color	0,016	0,03	
Brand	3e-4	0,001	

Table 10 tells us the importance of each attribute in terms of percentage. The attribute that has the highest percentage is the one that has the strongest effect on the purchase decision in this context. On the contrary, the attribute that has the lowest value is the attribute that has the smallest effect on the consumers' choice. The price is the factor that plays the biggest role in the willingness to buy. Color, on the other hand, only plays a small role in the decision. These effects can also be observed in the graph below (Figure 8).

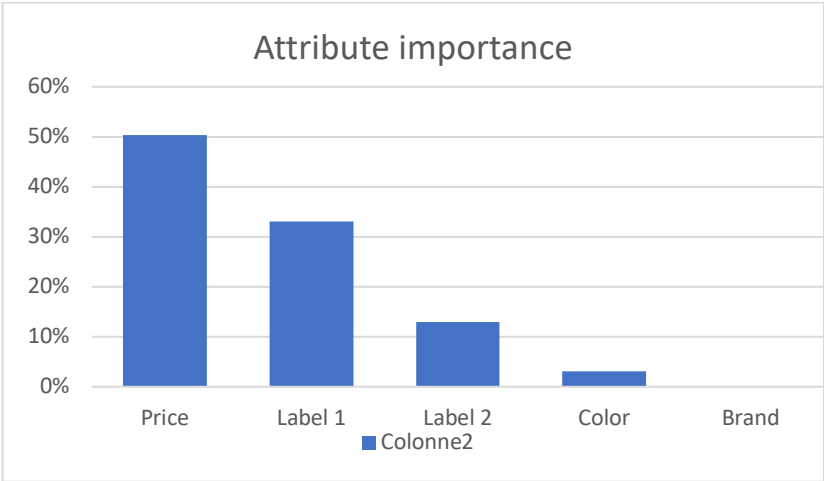


Figure 8: Attribute importance in Model 1

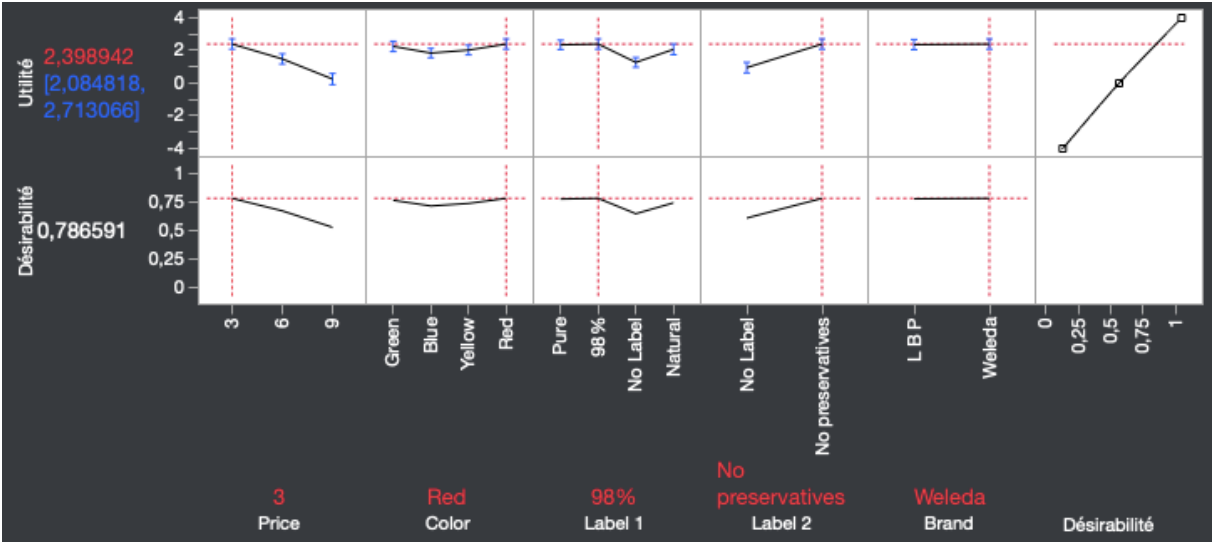


Figure 9: Prediction Profiler in Model 1

Figure 9 informs what attributes bring the highest utility to consumers. By maximizing the utility, the most preferred natural shower gel is a shower gel from the brand Weleda that costs 3€ with a red bottle, a label "98% natural product" and a label "no preservatives". This most preferred product can be seen in Figure 9.





*Figure 10: Most preferred choice for Model 1*

The results of the base model show that the parameters price, color, label 1, and label 2 are significant at the 0.05 significance level. Respondents obtain the most utility from a natural shower gel from the brand Weleda, for 3€, in a red bottle, with the labels “98% natural ingredients” and “no preservatives” (Figure 10).

The results show that compared to what was expected from the theory, the marginal utility of the price of 9€ is negative meaning that higher prices make the natural shower gel less attractive to consumers. Consumers are still more attracted in lower prices compared to higher prices for natural shower gel. Moreover, it seems that red is the most preferred color compared to green. Even if green is synonym of naturalness, consumers prefer a red bottle for natural shower gel. It could be explained by the fact that green is too much seen and used on the market, so red brings more value in the eyes of the consumers. Furthermore, against the expectations, the label “98% natural ingredients” has the highest marginal utility on consumer’s purchase decision. Consumers might prefer this label because it gives more detailed information about the ingredients’ composition. The labels “natural ingredients” and “pure natural ingredients” are both perceived the same positive way by consumers. Besides, the presence of the label “no preservatives” has a positive impact on the purchase decision for natural cosmetic products. Finally, the brand is not significant on the purchase decision. Nevertheless, the brand Weleda has a positive utility effect compared to the brand Love Beauty and Planet that has a negative effect.

#### 4.4 Results for Hypothesis H.2.5 and H.2.6

Model 2 is the base model including the interactions with the moderators Gender and Sustainable mindset. This model is estimated with the multinomial logit. As described previously, the sample analyzed is composed of 155 women, 61 men and 2 non-binary participants. Because of disbalance and since Hypothesis H.2.6 concerns male vs. female, the results from the non-binary participants are not included in the moderation analysis.

In the survey, a question was asked to determine if respondents had a sustainable way of consumption and mindset. The question was “do you often buy organic or natural products?”. The result from this question is interpreted in Model 2. The objective is to evaluate if respondents who buy organic or natural products will be more influenced by the marketing tools tested in this research, compared to respondents who do not buy organic or natural products. Another question intended to discern if respondents were looking at ingredients’ composition or if they are using a smartphone app when buying their products. This question is used for exploratory research and will be developed later in this research.

Table 11: Effect Likelihood Ratio Tests Model 2

Source	L-R ChiSquare	DF	Prob. > ChiSq	
Price	42,630	2	<,0001*	
Color	0,000	3	1,0000	
Label 1	4,056	3	0,2555	
Label 2	5,432	1	0,0198*	
Brand	0,000	1	1,0000	
Gender*Price	0,948	4	0,9175	
Gender*Color	1,528	6	0,9576	
Gender*Label 1	0,435	6	0,9985	
Gender*Label 2	4,632	2	0,0986	
Gender*Brand	1,049	2	0,5918	
Often organic*Price	8,933	2	0,0115*	
Often organic*Color	4,407	3	0,2208	
Often organic*Label 1	14,167	3	0,0027*	
Often organic*Label 2	0,282	1	0,5954	
Often organic*Brand	4,020	1	0,0450*	

Table 12: Parameter estimates Model 2

Term	Estimate	Std Error	Lower 95 %	Upper 95 %
Price[3]	1,10745101	0,2165078994	0,7779569	1,5396122
Price[6]	0,03215240	0,1736891160	-0,264742	0,3495033
Color[Blue]	-0,27831703	0,2318459400	-0,723442	0,1238368
Color[Yellow]	0,03124572	0,2214741335	-0,339331	0,4029308
Color[Red]	0,20438750	0,3418636291	-0,311688	0,9543963
Label 1[98%]	0,38009943	0,2471125496	-0,007839	0,8401477
Label 1[No Label]	-0,38398851	0,2242521566	-0,792908	-0,006057
Label 1[Natural]	-0,19173118	0,3817618534	-1,017817	0,3704839
Label 2[No Label]	-0,43515670	0,1752601647	-0,734218	-0,136898
Brand[L B P]	-0,06621591	0,1863937885	-0,425792	0,2678047
Gender[1]*Price[3]	0,10311996	0,2352431942	-0,353762	0,4969701
Gender[1]*Price[6]	0,03406935	0,1832919087	-0,300294	0,3496298
Gender[1]*Color[Blue]	0,04826958	0,2502286228	-0,387904	0,525342
Gender[1]*Color[Yellow]	-0,14248516	0,2311794063	-0,534849	0,2487916
Gender[1]*Color[Red]	-0,08834962	0,3580578294	-0,857721	0,4715077
Gender[1]*Label 1[98%]	0,01454166	0,2629591442	-0,471191	0,4455537
Gender[1]*Label 1[No Label]	-0,40143093	0,2405719966	-0,819627	0,0337499
Gender[1]*Label 1[Natural]	0,25618650	0,3942026756	-0,338554	1,0979545
Gender[1]*Label 2[No Label]	-0,12952659	0,1846970531	-0,448562	0,1878313
Often organic[1]*Price[3]	-0,23944738	0,0853682940	-0,418912	-0,076662
Often organic[1]*Price[6]	0,04321306	0,0563792683	-0,067281	0,1538951
Often organic[1]*Color[Blue]	-0,04117018	0,0882490646	-0,22007	0,1310948
Often organic[1]*Color[Yellow]	-0,14025609	0,0706480803	-0,277885	-0,002366
Often organic[1]*Color[Red]	0,18535067	0,1104361286	-0,03274	0,4003437
Often organic[1]*Label 1[98%]	0,16991590	0,0845461111	0,0026483	0,3350346
Often organic[1]*Label 1[No Label]	-0,19247940	0,0801255235	-0,346947	-0,02889
Often organic[1]*Label 1[Natural]	-0,14348683	0,0979896730	-0,336204	0,0465508
Often organic[1]*Label 2[No Label]	-0,03875889	0,0654336222	-0,164763	0,0911075
Often organic[1]*Brand[L B P]	-0,08696569	0,0442093267	-0,173294	-0,00127

In Table 11 can be seen the overall effects on choice likelihood of the variables price, color, label 1, label 2, brand, and of the interaction effects of gender and sustainable mindset (named “often organic”). The Table 12 shows the parameter estimates for Model 2. In this Table 12, the Gender 1 group is composed by the male respondents, and the Often organic 1 group is composed by the respondents who answered “yes” to the question “do you often buy organic or natural products?”. That means that the Often organic 1 group is composed only by people who often buy organic or natural products.

The Table 11 depicts that overall effect of the attributes price (p-value < 0.0001), the overall effect of label 2 (p-value = 0.0198), the interaction between the sustainable mindset and price (p-value = 0.0115), the interaction between the sustainable mindset and the label 1 (p-value = 0.0027), and the interaction between the sustainable mindset and the brand (p-value

= 0.0450) are statistically significant at a 5% significant level since their respective p-values are lower than 0.05.

When there are the interactions with gender and sustainable mindset, the attributes of color (p-value = 1.000), label 1 (p-value = 0.2555) and brand (p-value = 1.000) are not significant at a significance level of 5%. While color and label 1 were statistically significant in Model 1, they are not in Model 2 when taking into account an alpha of 5%.

Moreover, Table 11 indicates that the interaction between the sustainable mindset and the price (p-value = 0.0115 < 0.05), the interaction between the sustainable mindset and the label 1 (p-value = 0.0027 < 0.05), and the interaction between the sustainable mindset and the brand (p-value = 0.0450 < 0.05) are statistically significant at a 5% significant level. However, the interaction between the sustainable mindset and the color (p-value = 0.2208) and the interaction between the sustainable mindset and the label 2 (p-value = 0.5954) are not statistically significant at a 5% significant level since the p-values are higher than 0.05. Therefore, the significant interactions indicate there are some moderation effects for price, label 1 and brand.

While a price of 3 increases the likelihood of choice by 1.1075, this effect is lower for consumers who have a sustainable mindset. This can be seen from Table 12, where the estimate for the interaction Oftenorganic(1)\*Price(3) is equal to – 0.2394 and is statistically significant at a 5% significant level. This also indicates that this effect of price 3€ is significantly different than the effect of the baseline which is 9€. The overall effect of Price 6 is not statistically significant at a 5% significance level. And the interaction Oftenorganic(1)\*Price(6) is slightly significantly different than the effect of the base level Price9, hence is not significant either at a 5% significance level. To summarize, the price has an overall positive effect on the purchase decision for natural cosmetic products. It increases the likelihood of choice. However, for consumers who have a sustainable mindset, this positive effect is lower when the price is 3€. Consumers with a sustainable mindset can interpret natural cosmetic products sold at a low price as bad quality natural products compared to natural products with a higher price. A low price decreases the value perceived for the product for those consumers.

The likelihood tests in Table 11 shows that the overall effect of label 1 is not statistically significant at a 5% significance level since the p-value is equal to 0.2555. However, the parameter estimates indicate the interaction between the sustainable mindset and the label 1 is statistically significant (p-value = 0.0027) at a 5% significance level, meaning there is a moderation effect. According to Table 12 the estimate for the interaction Oftenorganic(1)\*Label 1(98%) is equal to 0.1699 and is statistically significant at a 5% significant level, meaning that for respondents who often buy organic or natural products, the label “98% natural ingredients” increases the likelihood of choice. Furthermore, the estimate for the interaction Oftenorganic(1)\*Label 1(No Label) is equal to –0.1925 and is statistically significant at a 5% significant level. That means for respondents who have a sustainable mindset, the absence of label decreases the likelihood of choice. Finally, the estimate for the interaction Oftenorganic(1)\*Label 1(Natural) is not statistically significant at a 5% significant level.

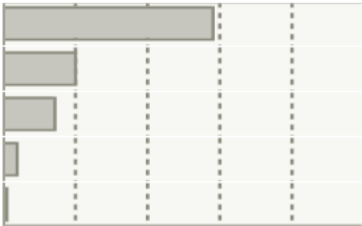
The label “natural ingredients” has the same effect than the label “pure natural ingredients”. Those effects are the same than in Model 1 when there is no moderation effect. The labels “98% natural ingredients”, “natural ingredients”, “pure natural ingredients” and the absence of label are interpreted differently for respondents who have a sustainable mindset and respondents who do not have a sustainable mindset. The labels “98% natural ingredients” and “pure natural ingredients” are more different for respondents with a sustainable mindset.

Finally, the Likelihood test in Table 11 indicates that the overall effect of brand is not statistically significant at a 5% significance level since the p-value is equal to 1.0000. However, the parameter estimates indicate the interaction between the sustainable mindset and the brand is statistically significant (p-value = 0.0450) at a 5% significance level, meaning there is a moderation effect. The estimate for the interaction Oftenorganic(1)\*Brand (LBP) is equal to –0.0870 and is statistically significant at a 5% significant level since the 95% confidence interval does not contain 0. This result informs that for respondents with a sustainable mindset, the brand Love Beauty and Planet has a negative effect on the choice likelihood, compared to the brand Weleda. Therefore, the sustainable mindset moderates the effect of the brand on the purchase decision.

Hypothesis H.2.5 states that a sustainable mindset moderates the effects of price, color, label 1, label 2 and brand on the purchase decision of natural cosmetic products. This hypothesis is partially validated since there are some significant interactions between the sustainable mindset and the price, the label 1 and the brand. For consumers who have a sustainable mindset, the positive effect of price on the choice likelihood is lower when the price is 3€. Moreover, the likelihood of choice is increased by the label “98% natural ingredients” when there is a sustainable mindset, which does not support H.2.5 that states that the label “pure natural ingredients” is better than the label “98% natural ingredients”. Finally, the perception of the brand is also influenced by the sustainable mindset since the mass-market brand Love Beauty and Planet has a negative effect on the likelihood of choice compared to the more high-standard brand Weleda.

According to the Likelihood test (Table 11), there is no significant interaction with gender at a 5% significance level since the p-values of Gender\*Price (p-value = 0.9175), Gender\*Color (p-value = 0.9576), Gender\*Label 1 (p-value = 0.9985), Gender\*Label 2 (p-value = 0.0986), and Gender\*Brand (p-value = 0.5918) are all higher than 0.05. That means that Hypothesis H.2.6 is not supported. The gender does not moderate the main effects on the purchase decision for natural cosmetic products. The effects of price, color, label 1, label 2, and brand are not stronger for women compared to men.

Table 13: Summary report Model 2 for attributes’ importance

Column	Main Effect	Total Effect	
Price	0,553	0,587	
Label 2	0,125	0,209	
Label 1	0,058	0,146	
Color	0,017	0,04	
Brand	0,006	0,014	

The attributes’ importance remains the same in this model 2 where the interaction effects are added. Price still plays the biggest role in the total utility. It is followed by label 2, label 1, the color, and the brand (Table 13).

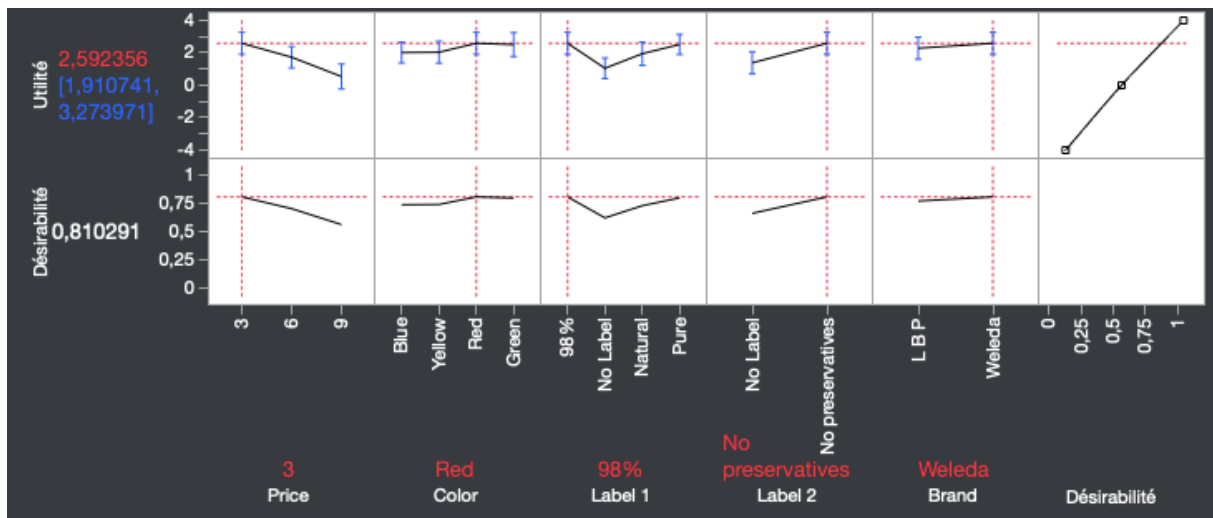


Figure 11: Prediction Profiler in Model 2 for consumers with sustainable mindset

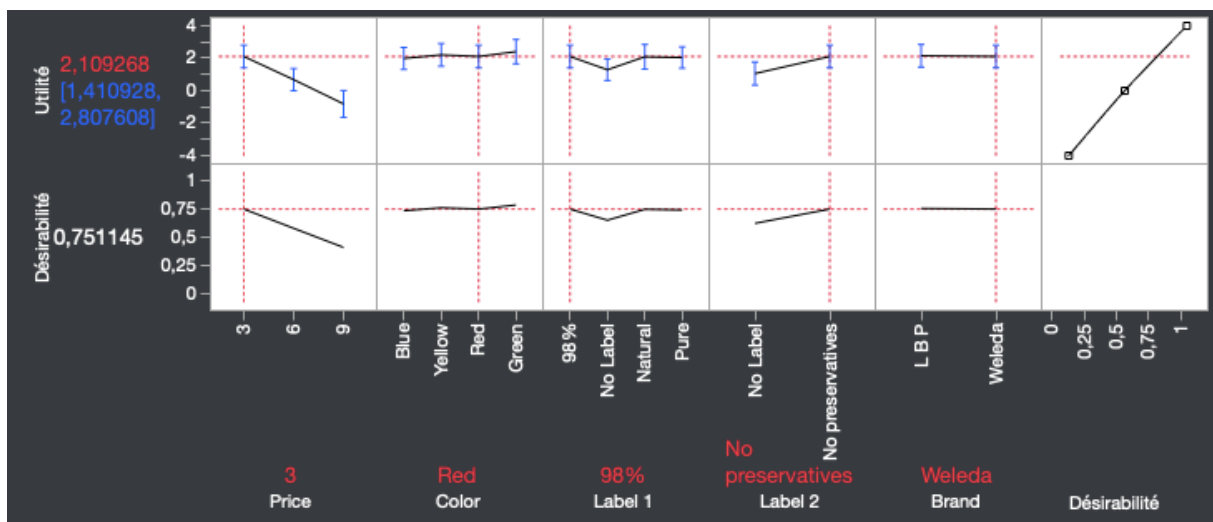


Figure 12: Prediction Profiler in Model 2 for consumers without sustainable mindset

In Figure 11 and Figure 12 can be seen the ideal product profiles for consumers with and without a sustainable mindset. When looking at the profilers and comparing the two groups between consumers who have a sustainable mindset and consumers who do not have it, it can be seen that there is no big difference for each variable. Only minor differences are noticeable. The utility for the colors blue and yellow decreases more compared to green and red for consumers who have a sustainable mindset; and the difference of utility between red and green is less for this group. Regarding label 1, the label “natural ingredients” has a lower

utility compared to “pure natural ingredients” for people with a sustainable mindset, whereas when there is no sustainable mindset, those two labels practically have the same utility. The absence of label has a bigger negative impact on utility for the group with a sustainable mindset. Lastly, the mass-market brand Love Beauty and Planet has a negative impact on the utility for consumers with a sustainable mindset. For consumers without this mindset, the brand Love Beauty and Planet and Weleda have almost a similar utility.

Finally, the most preferred natural shower gel for consumers with and without a sustainable mindset is the same and can be retrieved from those prediction profilers. Consumers prefer a natural shower gel from the brand Weleda, sold for 3€, with the labels “98% natural ingredients” and “no preservative” and a red bottle. Therefore, even if some effects are slightly stronger (as explained previously), the natural product that brings the highest utility is the same for both groups.

To summarize, the results indicate that the overall effects of price and label 2 are statistically significant at a 5% significance level. Besides, the interactions between the sustainable mindset and the price, the label 1 and the brand are also statistically significant at a 5% significance level. For consumers who have a sustainable mindset, this mindset moderates the effect of price, label 1 and brand on their purchase decision of natural cosmetic products. The price of 3€ has a positive effect on the likelihood of choice compared to price of 9€, but this difference is decreased for consumers with a sustainable mindset. The label “98% natural ingredients” also has a positive effect on the likelihood of choice, whereas the mass-market brand Love Beauty and Planet has negative effect on the likelihood of choice for consumers with a sustainable mindset. Those results validate partially Hypothesis H.2.5. Lastly, gender does not have any statistical significance at a 5% significance level, which does not support Hypothesis H.2.6. The gender does not moderate the effects of price, color, label 1, label 2 and brand on the purchase decision for natural cosmetic products.

#### **4.5 Exploratory analysis**

In the survey, after the question asked to know if respondents often buy organic or natural products, a second question intend to discern if respondents usually look at ingredients’ composition or use an app on their smartphone when they buy their natural products. The aim



of this second question was to get more insights from people who buy natural products. Not everyone knows about the existence of a smartphone app, or not everyone has a smartphone. That is why this question is used as exploratory variable to evaluate if respondents who already pay attention to the ingredients' composition of organic or natural products are influenced by the marketing tools tested in this research. As seen previously (Figure 6), half of the respondents check the ingredients' composition, whereas the remaining half does not check. The results in Table A.4 in the Appendix show that when this exploratory variable is tested, only the price ( $p$ -value  $< 0.001$ ), the label 2 ( $p$ -value = 0.0219) and the interaction between the sustainable mindset and the label 1 ( $p$ -value = 0.0139) are statistically significant at a 5% significance level. There is no significant interaction from the ingredients' check.

Furthermore, this research tests the main effects of price, color, label 1, label 2, brand, and the interaction effects of sustainable mindset and gender. The familiarity with the brands introduced in this research is not tested as main effect, neither interaction effect. However, it could be interesting to evaluate if the familiarity plays a role in the purchase decision. Therefore, as additional analysis and in an exploratory manner, the control variable brand's familiarity is added to Model 2. The purpose is to check if familiarity with the brand can have an interaction effect on the purchase decision. The parameter estimates and the effect Likelihood Ratio Tests for this additional analysis can be found in Table A.6 in the Appendix. The survey results indicate that out of the 218 respondents, 57% (125 respondents) of them know the brand Weleda, and 43% (93 respondents) do not know this brand. Regarding the brand Love Beauty and Planet, 32% (69 respondents) of the respondents know it and 68% (149 respondents) do not know it.

According to the Likelihood test results in Table A.6 in the Appendix, in this model, the price ( $p$ -value  $< 0.0001$ ), label 2 ( $p$ -value = 0.0059), the interaction between the sustainable mindset and price ( $p$ -value = 0.0251), the interaction between the sustainable mindset and label 1 ( $p$ -value = 0.0034), the interaction between the familiarity with the brand Love Beauty and Planet and the price ( $p$ -value = 0.0108), the interaction between the familiarity with the brand Love Beauty and Planet and the label 2 ( $p$ -value = 0.0449), the interaction between the familiarity with the brand Love Beauty and Planet and the brand ( $p$ -value = 0.0057), and the interaction between the familiarity with the brand Weleda and the brand ( $p$ -value = 0.0022) are all inferior to 0.05, hence they are statistically significant at a significance level of 5%. In

Table A.7, the group Often organic (1) refers to respondents with a sustainable mindset. The group LBP (1) is composed by the respondents who know the brand Love Beauty and Planet, and the group Weleda (1) is composed by the respondents who know the brand Weleda.

Similar effects regarding the significant price, label 2, the interaction between the sustainable mindset and the price, and the interaction between sustainable mindset and label 1 were found in model 2. The key difference relies on the significant interaction effects with the brand familiarity.

There is a significant interaction between the positive familiarity to the brand Love Beauty and Planet and the price. Price3 increases the likelihood of choice, and this effect is higher for respondents who are familiar to this brand (estimate = 0.2441). The effect of Price6 is not significantly different than the effect of Price9 for respondents familiar to Love Beauty and Planet. The label “no preservatives” has a positive effect on the likelihood of choice, and this effect is moderated by the familiarity to the brand Love Beauty and Planet (p-value = 0.0449). The interaction between the familiarity to Love Beauty and Planet and the effect of the brand Love Beauty and Planet on the likelihood of choice is significantly different than the baseline. It has a positive effect of 0.1263. This could mean that when respondents are familiar to the brand Love Beauty and Planet, it increases positively their perception of a natural cosmetic products from that same brand. Finally, the interaction between the familiarity to Weleda and the effect of the brand Love Beauty and Planet on the likelihood of choice is significantly different than the baseline. It has a negative effect of - 0.1340. This could indicate that respondents who are familiar to the brand Weleda can perceive in a negative way natural cosmetic products from the brand Love Beauty and Planet.

Those results show that the familiarity to the brands can influence the effects of price, label 2 and brand on the purchase decision for natural cosmetic products. The effects of a price of 3€, the label “no preservatives”, and the brand Love Beauty and Planet and Weleda can influence in a different way the purchase decision of consumers who are familiar to the brands compared to consumers who are not familiar to the brands.

## 5. GENERAL DISCUSSION

The goal of this research was to answer the research question “*What marketing tools to use to promote reliable natural cosmetic products?*”. To elucidate this question, the study has been divided into two sub-questions. This chapter will first answer the sub-questions. This section will be next followed by the academic and managerial implications. Finally, the limitations and directions for future research will be discussed.

### 5.1 Research questions

The first sub-question was the following:

*Sub-question 1: Why do consumers buy natural products?*

Hypothesis H.1 was created to determine the main reasons that trigger consumers to buy natural products. The aim of this hypothesis was to observe if consumers mainly focus on health, environment, and ingredients’ composition when they buy natural cosmetic products. This hypothesis has been tested in a qualitative way with the use of a word cloud. The result of this qualitative analysis explains that the main motivations for consumers to buy natural cosmetic products are that they want to protect and take care of the environment. They also want products that are better for their health and body, and more specifically better for their skins. By using natural cosmetic products, they witnessed that they have fewer allergy reactions and skin irritations. Moreover, consumers are driven to buy natural products for reducing potential risks of cancer, but also to avoid animal cruelty and to favor the use of recyclable packaging. Those results validate Hypothesis H.1 that was saying that consumers buy natural cosmetic products for health, environmental, and ingredients’ composition purposes.

The second sub-question was formulated as followed:

*Sub-question 2: How can different marketing tools be used to influence the consumers’ purchase decision for natural cosmetic products?*

In order to answer this sub-question, seven hypotheses were developed: H.2.1 for the influence of price, H.2.2 for the impact of color of the packaging, H.3.a and H.3.b for the use of a certain type of labels (label 1 and label 2), H.2.4 for the effect of the brand, H.2.5 for the interaction effect of having a sustainable way of life and mindset, and H.2.6 for the interaction

effect of the gender. Those hypotheses have been tested using two choice-based conjoint analyses employing a multinomial logit model. The first conjoint analysis tested the influence of the main effects on the purchase decision in Model 1, such as price, color, labels (label 1 and label 2), and brand. The aim was to understand if those variables have a significant effect on the purchase decision of natural cosmetic products. The results showed that the four variables price, color, label 1, and label 2 are statistically significant at a significance level of 5%. However, when looking at the estimates, it has been observed that a price of 3€ was preferred by respondents for a natural shower gel. It seems that a lower price has a stronger positive effect on purchase decision compared to a higher price. This result does not support Hypothesis H.2.1. Moreover, the estimate demonstrates that blue decreases the utility and red increases the utility compared to green. Yellow is not significantly different than 0. Hypothesis H.2.2 is hence not fully supported by the result of the conjoint analysis, there is a partial support. Besides, the color red has the highest marginal utility, meaning that the color green does not have the strongest positive impact on the purchase decision compared to red. Furthermore, Hypothesis H.2.3.a is not fully supported as well in the results of Model 1. The effect of label 1 is statistically significant at a significance level of 5%. However, the label “pure natural ingredients” is not the label that has the highest marginal utility on the purchase decision compared to the other labels. The label “98% natural ingredients” is the label that increases the most the consumers’ utility. Finally, label 2 “no preservatives” has a stronger positive impact on the purchase decision compared to the absence of a label. This supports Hypothesis H.2.3.b at a 5% significance level.

A second conjoint analysis has been used to test the interaction effects of gender and sustainable mindset stated in Hypotheses H.2.5 and H.2.6 in Model 2. The results demonstrate that Hypothesis H.2.5 is partially validated and Hypothesis H.2.6 is not supported at a significance level of 5%. Indeed, in Model 2, only price, label 2, the interaction between the sustainable mindset and price, the interaction between the sustainable mindset and label 1, and the interaction between the sustainable mindset and the brand are statistically significant at a 5% significance level. Price level 3 has a positive impact compared to price level 9. However, for consumers who have a sustainable mindset, this difference is decreased. The positive effect of 3€ is reduced. Besides, for this group of consumers, the label “98% natural ingredients” increases the likelihood of choice, which does not validate H.2.5 that states that the label “pure

natural ingredients” is better than “98% natural ingredients”. Furthermore, the perception of the brand is also influenced for consumers with a sustainable mindset. The mass-market brand Love Beauty and Planet has a negative effect on the likelihood of choice compared to the more high-standard brand Weleda. Finally, the interaction with gender is not significant at a 5% significance level. Gender does not moderate the main effects of price, color, label 1, label 2 and brand on the purchase decision for natural cosmetic products.

With the results from the sub-questions discussed above, it is possible to answer the main research question: “What marketing tools to use to promote reliable natural cosmetic products?”. The marketing tools that are advised to be used to promote reliable natural cosmetic products are related to price, color, and labels. As identified above, a natural cosmetic product sold at a low price, in red packaging, and presenting the labels “98% natural ingredients” and “no preservatives” is preferred among consumers. Those attribute preferences do not differ depending on the gender, neither a potential already existing commitment to a sustainable way of living. The sustainable mindset moderates slightly the effect of price, label 1 and brand on the purchase decision. The label “98% natural ingredients” moderates positively the likelihood of choice, meaning that this group of consumers is more sensitive to this label. And the brand Love Beauty and Planet has a negative effect on the choice likelihood compared to the brand Weleda. This indicates that consumers with a sustainable mindset pay more attention to the type of brand and the mass-market brand have a negative impact on their purchase decision. However, the product that brings the most utility is the same, whether there is the presence of a sustainable mindset or not. A natural cosmetic product at a low price, in a red bottle, with the labels “98% natural ingredients” and “no preservatives” is the most preferred product for consumers with and without a sustainable mindset.

## **5.2 Academic & Managerial Implications**

This research has several academic implications.

First of all, this paper gives more insights into consumers’ expectations for natural cosmetic products. It contributes to understanding what the consumers’ motivations are when they buy such products. The existing literature was focusing on the global meaning of

naturalness among consumers, and their decisions when buying natural food goods. This paper adds some observations about consumers' decisions towards natural cosmetic products and allows to provide in better way consumers with adapted products and messages.

Secondly, this research contributes to the existing literature by analyzing the use of different marketing tools for the promotion of natural cosmetic products. Previous research has been done for organic products but not for natural products. The findings of this paper inform that price, color, and labels have an impact on the purchase decision of natural cosmetic products. However, against academic expectations, a high price does not have a positive influence on purchase decision. Consumers seem to still have a higher preference for a low price compared to a high price for natural cosmetic products. Moreover, while green was assumed to be the color for natural products, the results of this research informed that red was also a preferred color for natural cosmetic products. Finally, the brand was supposed to play a role in the consumers' purchase decisions. However, the data from this research reveals that the difference between premium brands and mass-market brands is not significant, except for consumers who has a sustainable mindset. Natural cosmetic products from both types of brands get the same consideration from consumers.

This paper also presents several managerial implications.

First, in order to stand out from all the products that claim to be natural on the market, marketers should focus the communication of natural cosmetic products on several specific aspects such as the environmental benefits provided and the good influence of the products on the health and skin.

Furthermore, to attract attention compared to other natural products, the findings of this research suggest marketers also take into consideration consumers' preferences regarding the price, the color of the packaging, and the labels. This research revealed the most preferred attributes for a natural cosmetic product, in particular in the shower gel category. These are a product from the brand Weleda, at a price of "3€", in red packaging, with the labels "98% natural ingredients", and the label "no preservatives". From those results, marketing should mainly focus on pricing strategies of the natural cosmetic products, since the price attribute is the attribute that brings the highest marginal utility. Consumers put a lot of attention on the price when they choose a natural product. Moreover, the color used for the packaging is also

an element that strengthens the natural aspect of the product, and marketers should use appropriate colors for the packaging. Besides, when applicable, natural cosmetic products should contain labels with a negative connotation such as “no preservatives”. Consumers give a lot of consideration to this type of label when they purchase natural cosmetic products. Labels that inform with a percentage about a high degree of ingredients’ purity also highly contribute to a positive impact on the purchase decision. Such labels should therefore be present on the natural cosmetic products’ packaging to make the products standing out among other natural products.

### **5.3 Limitations and Directions for future research**

This paper has some limitations that are going to be discussed in this section.

First, the research in this paper had to test several different attributes and attribute levels. The sample size of respondents was 218 respondents. To obtain more reliable results and to test more possible moderator effects, future research should repeat the conjoint analysis to a larger sample size.

Secondly, most respondents were female respondents (71%) compared to male respondents (28%). This unbalanced proportion could impact the validity of the moderation results. Future study could test the research for more balanced gender distribution.

Thirdly, even if the age demographic breakdown includes respondents from 18 years old to 75 years old, the percentage of respondents is not equally distributed among those age categories. Obtaining more respondents aged 41 years old and older could bring more insights into future research.

Moreover, the survey taken by the respondents offered a set of ten different choices. This number was the minimal number of choices needed to get enough results while being at the same time still doable for respondents since too many choices could lead to fatigue. If the number of choices was too high, the concentration of respondents could become low, and this could decrease the quality of respondents’ answers (Johnson & Orme, 1996). However, few more choices could have brought more insightful results regarding the attributes tested. Future research could hence offer more choices to respondents to get more information from the data and estimate the parameters more precisely.

Furthermore, this research used specific attributes and attribute levels. By using other attributes and different levels, the results of the research could have been different. Thus, future research could investigate diverse attributes and attribute levels to determine if other potential marketing tools could have a positive influence on the consumers' decision.

This research tests the interactions with gender and sustainable mindset in the same model. A future study with larger sample size can be done with more trials to test those two interactions separately.

Besides, the exploratory analysis showed that the familiarity to the brands has a significant effect on the likelihood of choice for natural cosmetic products. The use of other brands could have led to different results. Future research could explore the interaction effect of the brand familiarity on the natural cosmetic products purchase decision with different brands.

Additionally, the set of choices was offered to respondents online. That means the respondents were not placed in the same environment they would be in real life. The type of products offered in a conjoint analysis is never equal to real products in a supermarket, and the amount of information the consumers are facing when they go to a real shop differs from the information they had when they took the survey (DeSarbo & Green, 1984). Therefore, future research could create an environment that is more similar to real-life experience for consumers who have to make some purchase decisions.

Finally, the results of this research revealed that consumers prefer a low price and a red color packaging for natural cosmetic products. However, on the cosmetic market, natural cosmetic products cost usually more than 3€, and the color of the packaging is not often red. The price range and the different colors tested in this paper might have not been the most appropriate ones. Besides, the product tested in this research was a natural shower gel. Using another type of natural cosmetic product could lead to other interpretation from the respondents, hence different results. Future research could investigate another product categories in cosmetics with another price range and other types of colors for the packaging. The aim is to understand more precisely consumers' preferences, and if the respondents' ideal preferences can be more realistic and applied to existing products.



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## APPENDIX

Table A.1: Choice sets used in this research

Personne interrogée	Ensemble de choix	Indicateur de réponse	Price	Color	Label 1	Label 2	Brand
1	1	• 9	9	Blue	98%	No preservatives	L B P
1	1	• 9	9	Yellow	Pure	No Label	L B P
1	2	• 3	3	Red	Pure	No preservatives	Weleda
1	2	• 3	3	Red	Natural	No preservatives	L B P
1	3	• 3	3	Green	98%	No preservatives	Weleda
1	3	• 6	6	Blue	No L...	No preservatives	Weleda
1	4	• 9	9	Red	Pure	No Label	Weleda
1	4	• 6	6	Green	No L...	No Label	Weleda
1	5	• 6	6	Yellow	98%	No preservatives	L B P
1	5	• 3	3	Green	No L...	No preservatives	L B P
1	6	• 6	6	Green	Pure	No Label	L B P
1	6	• 3	3	Yellow	No L...	No Label	Weleda
1	7	• 9	9	Green	No L...	No Label	Weleda
1	7	• 3	3	Blue	Pure	No Label	Weleda
1	8	• 6	6	Green	Natural	No preservatives	Weleda
1	8	• 3	3	Yellow	No L...	No preservatives	L B P
1	9	• 9	9	Blue	98%	No Label	Weleda
1	9	• 9	9	Yellow	Pure	No preservatives	Weleda
1	10	• 6	6	Red	Natural	No Label	L B P
1	10	• 9	9	Blue	Natural	No Label	L B P

Table A.2: Conjoint analysis set of choices

Question Number	Possible choice
Question 1	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Natural shower gel A</p>  <p>3€</p> </div> <div style="text-align: center;"> <p>Natural shower gel B</p>  <p>6€</p> </div> </div>
Question 2	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Natural shower gel A</p>  <p>9€</p> </div> <div style="text-align: center;"> <p>Natural shower gel B</p>  <p>9€</p> </div> </div>
Question 3	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Natural shower gel A</p>  <p>6€</p> </div> <div style="text-align: center;"> <p>Natural shower gel B</p>  <p>3€</p> </div> </div>



Question 4

Natural shower gel A



Natural shower gel B



Question 5

Natural shower gel A



Natural shower gel B



Question 6

Natural shower gel A



Natural shower gel B



Question 7

Natural shower gel A



Natural shower gel B



Question 8

Natural shower gel A



Natural shower gel B



Question 9

Natural shower gel A



Natural shower gel B



Question 10

Natural shower gel A



Natural shower gel B



Table A.3: Results ranked by relevance

Ranking	Words	Relevance score
1	Environment	0.997
2	Less skin irritation	0.824
3	Health	0.659
4	Skin	0.604
5	Risk of cancer	0.604
6	Animal cruelty	0.604
7	Recyclable packaging	0.485
8	Avoid chemicals	0.442
9	Natural perfume	0.439
10	Less pollution	0.439
11	Natural ingredients	0.384
12	Sensitive skin	0.329
13	Less irritation	0.275
14	Suitable to entire family	0.275
15	Planet	0.219
16	Skin care	0.186
17	Chemical	0.183
18	Price	0.166
19	Aspect of hair	0.165
20	Body	0.133
21	allergy	0.130
22	Less chemical	0.110
23	Better trust	0.110
24	Less risk	0.110
25	Sustainable engagement	0.110
26	Ingredient's composition	0.110
27	Toxic ingredients	0.110
28	Physical aspects	0.110
29	Good impact	0.110
30	Sustainability	0.103
31	Preservatives	0.096
32	Ingredients	0.092
33	Quality	0.091
34	Results of improvement	0.082
35	Composition	0.081
36	Ethical reason	0.055
37	Less waste	0.055
38	Organic brand	0.055
39	Artificial chemicals	0.055
40	Future generation	0.055

Table A.4: Effect Likelihood Ratio Tests for the Model with the interaction effect of ingredients' check and/or utilization of a smartphone app

Source	L-R ChiSquare	DF	Prob. > ChiSq	
Price	41,524	2	<,0001*	
Color	0,000	3	1,0000	
Label 1	4,164	3	0,2443	
Label 2	5,325	1	0,0210*	
Brand	0,000	1	1,0000	
Gender*Price	0,975	4	0,9135	
Gender*Color	1,625	6	0,9507	
Gender*Label 1	0,263	6	0,9997	
Gender*Label 2	4,642	2	0,0982	
Gender*Brand	0,984	2	0,6115	
Often organic*Price	5,652	2	0,0593	
Often organic*Color	5,768	3	0,1235	
Often organic*Label 1	10,632	3	0,0139*	
Often organic*Label 2	0,424	1	0,5148	
Often organic*Brand	2,424	1	0,1195	
Ingredients*Price	4,001	2	0,1352	
Ingredients*Color	2,579	3	0,4612	
Ingredients*Label 1	6,014	3	0,1109	
Ingredients*Label 2	0,218	1	0,6407	
Ingredients*Brand	2,445	1	0,1179	

Table A.5: Parameter estimates for the Model with the interaction effect of ingredients' check and/or utilization of a smartphone app

Term	Estimate	Std Error	Lower 95 %	Upper 95 %
Price[3]	1,08319220	0,2168505853	0,751949	1,5163132
Price[6]	0,03831318	0,1760294154	-0,261958	0,3585555
Color[Blue]	-0,27793524	0,2337076089	-0,724979	0,1265084
Color[Yellow]	0,03191409	0,2241485870	-0,343181	0,4082231
Color[Red]	0,21188767	0,3488278287	-0,31582	0,9674872
Label 1[98%]	0,38369058	0,2485321322	-0,00727	0,8457641
Label 1[No Label]	-0,39115595	0,2258944534	-0,802247	-0,010809
Label 1[Natural]	-0,19683945	0,3853856057	-1,025497	0,371089
Label 2[No Label]	-0,42782280	0,1756228884	-0,726936	-0,129357
Brand[L B P]	-0,07057791	0,1887787862	-0,432218	0,2654695
Gender[1]*Price[3]	0,11343927	0,2350511178	-0,344385	0,5085069
Gender[1]*Price[6]	0,03657787	0,1853530232	-0,300359	0,355296
Gender[1]*Color[Blue]	0,04297905	0,2513326549	-0,394945	0,5213268
Gender[1]*Color[Yellow]	-0,15049741	0,2337373313	-0,5473	0,2450335
Gender[1]*Color[Red]	-0,08330269	0,3643002222	-0,857351	0,4866343
Gender[1]*Label 1[98%]	0,00656120	0,2640614122	-0,48118	0,4401628
Gender[1]*Label 1[No Label]	-0,39152582	0,2417918964	-0,812009	0,0458744
Gender[1]*Label 1[Natural]	0,26364708	0,3977751255	-0,336798	1,1081432
Gender[1]*Label 2[No Label]	-0,13219209	0,1848525147	-0,451001	0,1848712
Gender[1]*Brand[L B P]	0,00001563	0,1939656596	-0,34468	0,3696769
Often organic[1]*Price[3]	-0,19465361	0,0876221371	-0,379656	-0,025454
Often organic[1]*Price[6]	0,05185590	0,0587026812	-0,063259	0,167421
Often organic[1]*Color[Blue]	-0,07603640	0,0913908797	-0,262278	0,1036717
Often organic[1]*Color[Yellow]	-0,15756055	0,0738234031	-0,301435	-0,01376
Often organic[1]*Color[Red]	0,23796655	0,1158995299	0,0098097	0,4647084
Often organic[1]*Label 1[98%]	0,17139753	0,0877230423	-0,002535	0,3433098
Often organic[1]*Label 1[No Label]	-0,14133942	0,0825556657	-0,301892	0,0279166
Often organic[1]*Label 1[Natural]	-0,16647937	0,1017456853	-0,36649	0,0308361
Often organic[1]*Label 2[No Label]	-0,04835969	0,0687061920	-0,180975	0,0877094
Often organic[1]*Brand[L B P]	-0,07009802	0,0459609049	-0,159512	0,0188565
Ingredients[1]*Price[3]	-0,15662019	0,0786785533	-0,315158	0,0013599
Ingredients[1]*Price[6]	-0,02144398	0,0552805839	-0,13097	0,0868916
Ingredients[1]*Color[Blue]	0,10913820	0,0845167190	-0,058526	0,2789493
Ingredients[1]*Color[Yellow]	0,05043590	0,0688869993	-0,083411	0,1850536
Ingredients[1]*Color[Red]	-0,15554715	0,1104293771	-0,377336	0,0578732
Ingredients[1]*Label 1[98%]	-0,00910336	0,0815978953	-0,170412	0,1513405
Ingredients[1]*Label 1[No Label]	-0,18073897	0,0752887655	-0,330653	-0,030366
Ingredients[1]*Label 1[Natural]	0,09686266	0,0938460879	-0,086311	0,2805745
Ingredients[1]*Label 2[No Label]	0,03056216	0,0644110881	-0,094523	0,1565277
Ingredients[1]*Brand[L B P]	-0,06576641	0,0427748873	-0,149094	0,0173599

Table A.6: Effect Likelihood Ratio Tests for the Model with the interaction effect of brand's familiarity

Source	L-R ChiSquare	DF	Prob. > ChiSq	
Price	22,473	2	<,0001*	
Color	0,000	3	1,0000	
Label 1	6,590	3	0,0862	
Label 2	7,580	1	0,0059*	
Brand	0,000	1	1,0000	
Gender*Price	2,745	4	0,6013	
Gender*Color	1,579	6	0,9540	
Gender*Label 1	0,686	6	0,9948	
Gender*Label 2	2,329	2	0,3122	
Gender*Brand	0,829	2	0,6607	
Often organic*Price	7,368	2	0,0251*	
Often organic*Color	4,304	3	0,2304	
Often organic*Label 1	13,681	3	0,0034*	
Often organic*Label 2	0,247	1	0,6191	
Often organic*Brand	1,799	1	0,1799	
LBP*Price	9,059	2	0,0108*	
LBP*Color	5,866	3	0,1183	
LBP*Label 1	4,862	3	0,1822	
LBP*Label 2	4,021	1	0,0449*	
LBP*Brand	7,633	1	0,0057*	
Weleda*Price	0,346	2	0,8412	
Weleda*Color	0,624	3	0,8910	
Weleda*Label 1	4,102	3	0,2507	
Weleda*Label 2	0,300	1	0,5836	
Weleda*Brand	9,404	1	0,0022*	

Table A.7: Parameter estimates for the Model with the interaction effect of brand's familiarity

Term	Estimate	Std. Error	Lower 95 %	Upper 95 %
Price[3]	1,27696166	0,2298285781	0,915931	1,7331846
Price[6]	-0,06252575	0,1829618412	-0,380919	0,2699033
Color[Blue]	-0,44995182	0,2463166502	-0,921593	-0,020337
Color[Yellow]	0,09185845	0,2292322330	-0,294467	0,479687
Color[Red]	0,20720654	0,3521275131	-0,335264	0,9703538
Label 1[98%]	0,48564683	0,2649420361	0,0588207	0,9817159
Label 1[No Label]	-0,47121361	0,2385775209	-0,911178	-0,065953
Label 1[Natural]	-0,15634828	0,3938036973	-0,99397	0,4312497
Label 2[No Label]	-0,53138229	0,1839972007	-0,849434	-0,216607
Brand[L B P]	-0,00567268	0,1911700219	-0,37095	0,3344986
Gender[1]*Price[3]	0,12255870	0,2354466408	-0,335979	0,5183897
Gender[1]*Price[6]	0,01758231	0,1838167304	-0,317977	0,3344237
Gender[1]*Color[Blue]	0,00673110	0,2502459850	-0,431533	0,4851422
Gender[1]*Color[Yellow]	-0,13483914	0,2322286632	-0,528653	0,2578889
Gender[1]*Color[Red]	-0,07916313	0,3582062152	-0,849193	0,4822841
Gender[1]*Label 1[98%]	0,04733850	0,2645159270	-0,440937	0,4823784
Gender[1]*Label 1[No Label]	-0,39707129	0,2412400227	-0,817668	0,0402406
Gender[1]*Label 1[Natural]	0,23127761	0,4010023988	-0,374999	1,0779269
Gender[1]*Label 2[No Label]	-0,15390828	0,1855921110	-0,474525	0,1645654
Gender[1]*Brand[L B P]	-0,00355147	0,1941102835	-0,348559	0,3660702
Often organic[1]*Price[3]	-0,22306364	0,0851692385	-0,404449	-0,057808
Often organic[1]*Price[6]	0,04201102	0,0574613696	-0,07115	0,1552882
Often organic[1]*Color[Blue]	-0,04173334	0,0885521851	-0,223345	0,1335322
Often organic[1]*Color[Yellow]	-0,14150419	0,0723336208	-0,282433	-0,000371
Often organic[1]*Color[Red]	0,18051630	0,1120923373	-0,041506	0,3994995
Often organic[1]*Label 1[98%]	0,16295189	0,0862575625	-0,008612	0,3325723
Often organic[1]*Label 1[No Label]	-0,21354796	0,0806355776	-0,371135	-0,047305
Often organic[1]*Label 1[Natural]	-0,11810391	0,1006841957	-0,315808	0,077444
Often organic[1]*Label 2[No Label]	-0,03751351	0,0671143915	-0,166978	0,0959057
Often organic[1]*Brand[L B P]	-0,06052611	0,0459108287	-0,149661	0,0283715
LBP[1]*Price[3]	0,24411148	0,0977724983	0,0596374	0,461351
LBP[1]*Price[6]	-0,12233337	0,0721519007	-0,283277	0,0131357
LBP[1]*Color[Blue]	-0,23273322	0,1064487137	-0,466291	-0,029188
LBP[1]*Color[Yellow]	0,07751339	0,0802859621	-0,078415	0,2368113
LBP[1]*Color[Red]	0,02121243	0,1228066160	-0,216456	0,2691489
LBP[1]*Label 1[98%]	0,11195136	0,1143029775	-0,098011	0,3763608
LBP[1]*Label 1[No Label]	-0,12159892	0,0997506463	-0,350356	0,0629377
LBP[1]*Label 1[Natural]	0,10094378	0,1040241804	-0,100942	0,3051802
LBP[1]*Label 2[No Label]	-0,14252258	0,0769600155	-0,300225	0,003062
LBP[1]*Brand[L B P]	0,12634357	0,0470583696	0,0354671	0,218161

Weleda[1]*Price[3]	-0,04051289	0,0835281290	-0,219994	0,1229568
Weleda[1]*Price[6]	-0,01853623	0,0552819851	-0,127732	0,0904671
Weleda[1]*Color[Blue]	-0,07069972	0,0866379763	-0,250568	0,1006516
Weleda[1]*Color[Yellow]	0,01082056	0,0696259051	-0,124799	0,1464903
Weleda[1]*Color[Red]	0,02289797	0,1082165924	-0,191426	0,2351949
Weleda[1]*Label 1[98%]	0,10111109	0,0832303296	-0,063697	0,2657388
Weleda[1]*Label 1[No Label]	0,09721499	0,0785288569	-0,057407	0,2599821
Weleda[1]*Label 1[Natural]	-0,18924383	0,0989886099	-0,385173	0,0029063
Weleda[1]*Label 2[No Label]	-0,03720805	0,0649336250	-0,163314	0,0901228
Weleda[1]*Brand[L B P]	-0,13398177	0,0451319576	-0,222331	-0,046797