Natural and Organic Cosmetics;

Consumer Willingness to Purchase and

Willingness to Pay for Labels

BSc Thesis

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1. Introduction

The last couple of years, the interest for the environment has been and still is rising. Images of the amounts of plastic in our oceans, the rising need for green-energy sources and polluted air in big cities made people aware of their own environmental impact (Cervellon et al., 2011). They realise a lot of damage is caused by their purchasing behaviours and lifestyles. Increasing interest in preserving the environment takes place, and for consumers this means a larger interest in more sustainable products such as organic food and also organic cosmetics (Dossier Duurzaam, 2017).

The current market for these natural and organic cosmetics is booming. People nowadays are not only concerned on what they put in their bodies food wise, but also what they apply on their body or skin as well (Cervellon et al., 2011). Cosmetics are products for personal maintenance, where our body is amongst other things cleansed, corrected, protected and held in good condition because of these products (‘’Wat zijn cosmetica’’, n.d). These personal care products are important for the consumer, as they are used to build self-esteem and are seen as important products for daily use in order to help improve the quality of the consumer’s life (Cosmetics Europe, 2017).

Companies anticipate on the growing interest in sustainability by using their corporate social responsibility to win the sympathy of their consumers. They use marketing-strategies and claims to advertise and sell their ‘green products’. A lot of companies make use of organic labels to gain consumer trust, as this third-party accreditation is an indication that the product the company is selling is trustworthy and of true organic quality (Janssen & Hamm, 2012). For food products, which also belong to fast moving consumer goods (FMCG) sector as cosmetics, these labels seem to be of great importance. It is mandatory for every organic food to be labelled with the EU organic logo, whilst leaving the freedom for the producer to add additional organic labels indicating supplementary preconditions (Janssen & Hamm, 2012).

For cosmetics however, there are no strong regulations for labelling these products, despite it being a FMCG as well. And in contrary to organic food products, hardly any studies tried to analyse the labels for natural organic cosmetics and the perception of these labels by the consumer (Cervellon, & Carey, 2011; Cervellon, Rinaldi, & Wernerfelt, 2011). So whilst a lot of research is focused on organic food and the accompanying consumer perceptions as a FMCG, questions still remain about how different organic cosmetic labels shape the consumers' willingness to purchase and willingness to pay. Besides, we do not know for sure that these studies about the perception of organic food products and organic labels for food can be generalized to other FMCG as well.

Therefore, this research aims at providing information about the Dutch consumers' willingness to purchase and willingness to pay for different natural and organic cosmetics labels. First a literature study is presented on natural and organic labelled FMCG. Most research on natural or organic labelled FMCG is focused on food. Therefore, the literature review first uses food as an example. Next, literature on cosmetics is summarized and focusses on the willingness to purchase and willingness to pay for cosmetics labelled as natural and organic. Second, the method is described for this study which uses a survey with three different natural and organic cosmetics labels to gain a better understanding about the consumers' perception of organic natural and cosmetics. Finally, the discussion and the conclusion of this research is presented, which answers the hypotheses, explains limitations and the practical relevance for other FMCG companies and provide possible future research opportunities.

2. Literature study

Fast Moving Consumer Goods

In current times, Fast Moving Consumer Goods (FMCG) can play an important role for consumer's households, retailers and policy-makers all over the world, as the expenses of FMCG are a large part of consumer's overall budget and vital for their daily lives (Erdoğan & Taymaz, 2005). Fast Moving Consumer Goods, or convenience goods, is the all-encompassing term for a broad range of products regularly used by consumers. These convenience products are inexpensive, frequently purchased and rapidly consumed items that demand only minimal purchasing effort (Dibb et al., 2006). This sector includes household items such as personal care products, foods and drinks, textiles such as clothing and multiple household items. According to Coughlan, Anderson, Stern and El-Ansary (2006), convenience goods are the stuff of everyday life. Retailers mass produce their products quickly with low costs. The commodities have a short lifespan, which means that they are re-purchased frequently. Because of the recurrent purchase of FMCG and the growth and importance of the FMCG sector worldwide, these goods might have a large environmental impact.

Food

One of the most known and purchased FMCG is food. As a small example, the Dutch individual consumer eats and drinks about 3kg per day (''Voedselconsumptie in Nederland'', 2016). For this massive demand and therefore the need for production of conventional food, use of synthetic pesticides, antibiotics and chemical fertilizers is allowed for boosting this process (Hoogenboom et al., 2008; Naik & Prasad, 2006). However, the use of these pesticides and other chemicals are seen to be harmful for the planet, as these pesticides are polluting the near (drinking) water, soil and air (Stoate et al., 2001; Naik & Prasad, 2006). In a study from Ott in 1990 related to food, half of the respondents showed concern for the use of pesticides in

food production and the remains of these chemicals in their food. Even though there is no sufficient amount of studies that have actually confirmed that the amount of residues of these chemicals are damaging to your health, consumers often believe it is (Hughner et al., 2007).

Organic Food

Because of the believes in the possible damaging properties of conventional food production, focus has shifted towards more sustainable consumption of FMCG. This created a lot potential for the organic food market. According to Siderer, Maquet and Anklam (2005): ‘’Organic food and farming is becoming a major opportunity for food producers in Europe, due to growing consumer interest for certified organic products’’ (p.337). Sales of organic foods in Europe grew by 11.4% to reach 33.5 billion euros in 2016 in comparison to 2015 (Willer & Lernoud, 2018). However, in 2016, only a small percentage of all agricultural land in the world was organic, namely 1.2 percent. And, as an example, only 2.6 percent of the farmland in the Netherlands was organic in 2015. For this organic food production, farming substances such as conventional nonorganic pesticides, insecticides and herbicides are restricted amongst other things, and may only be used if there are no other options available (Neacsu & Madar, 2011).

For the consumer, a couple of main motives for buying these organic food products can be seen (Hughner et al., 2007). Grankvist and Biel (2001) researched the consumer’s beliefs when purchasing eco-labelled food. They found that human health and environmental consequences were important purchase criteria indicators for the consumers’ purchase intentions of eco-labelled products. The study from Wandel & Brugge (1997) shows concern for the environment regarding the production of fruit and vegetables. One last motive is quality, as consumers believe that these organic foods have a better taste and are safer (Cervellon & Carey, 2011)

The consumers who actually purchase organic products are often older; however, young people have a more positive attitude towards organic products, but are lacking the financial resources to actually buy these products (Tsakiridou et al., 2008). The organic consumer is often college educated in comparison to non-organic buyers (Ott,1990; Onyango et al., 2007; Tsakiridou et al., 2008). Usually, women are the buyers of organic food (as they do most of the grocery shopping) and are more likely to be interested in the environment and its matters (Magnusson et al., 2001; Tsakiridou et al., 2008). However, they do not have a more positive attitude towards organic food than men.

Cosmetics

If people are interested in implementing organic products such as organic food into their lifestyles, it might be interesting to look at other organic FMCG to see if there is potential in this market for non-food FMCG. Therefore, this current research is focussed on cosmetics as a FMCG. Cosmetics, toiletries or personal care products are all phrases used interchangeably defining the products used by consumers for personal hygiene and appearance. The broadest, and at the same time the legal definition of cosmetics in the Netherlands is as follows: 'any substances or mixtures intended to be brought into contact with the parts of the surface of the human body (epidermis, body hair, hair, nails, lips and external sexual organs) or with teeth and molars and the oral mucosa, with the exclusive or primarily aim of cleaning, perfuming, changing its appearance and/or protecting or maintaining the previously mentioned body parts in good condition or correct body odors''(Verordening (EG) nr. 1223/2009, 2009). Thus it is important to clarify that, despite what a lot of people think, the term cosmetics utilized in this current research and communicated to the participants refers not only to make-up products. Commodities such as toothpaste, shampoo, body lotion and perfume are all considered to be cosmetics.

In the Netherlands, every person spends on average around 157 euro per year on cosmetics (Nederlandse Cosmetica Vereniging, 2018). In 2017, the total consumption of cosmetics in the Dutch market covered 2,6 milliard euros. Cosmetics play an important role in the consumer's everyday life, as 72% of the consumers recognize that cosmetics improve the quality of their lives by taking care of their hygiene and health (Cosmetics Europe, 2017). They consider personal care products to benefit their self-esteem, confidence and to help them with social interactions (Cosmetics Europe, 2017; Annis, 2011). The average female uses 12 personal care products a day and, as the average cosmetic product contains 14 ingredients, women are thus exposed to 168 different ingredients on a daily basis (Malkan, 2007). Men use on average 8 products with 85 different ingredients. Because of this frequent exposure, concern for 'unhealthy' ingredients such as parabens and fragrances is rising (Annis, 2011).

Natural and Organic Cosmetics

This recurrent exposure to ambiguous ingredients in cosmetics might be one of the reasons that lately, instead of using regular cosmetics, natural and organic personal care products are becoming increasingly popular among consumers. This particular research is therefore focussed on both the perception of natural and organic cosmetics only and the distinction in the perception between these terms. Both the terms are used simultaneously, but however have a different meaning.

In this present research, I define natural cosmetics as cosmetics that contain a small percentage (not more than 5%) of raw materials such as raw plants, spices, vegetable and animal derived oils (such as bee wax or oil from nuts) and essential oils or extracts (from fruit and flowers) as ingredients (''Natural Ingredients for Cosmetics'', n.d). The claim natural on cosmetics thus defines products with raw ingredients from nature and permitted synthetic cosmetic ingredients.

Dr. Hauschka, a German pharmacist, was one of the first people to launch a company in 1970 to sell naturally produced cosmetics (Cervellon & Carey, 2011; Cervellon et al., 2011). As an example, the products from Dr. Hauschka are free from synthetic fragrances and dyes, preservatives, silicone, mineral oils and polyethylene glycol (‘’Natuurcosmetica’’, n.d). More of such products have been launched ever since, either from entirely ‘natural’ brands such as Weleda, or particular product lines within certain companies such as L’Oréal Botanicals Fresh Care.

As mentioned, in this research, a distinction is made between natural cosmetics and organic cosmetics. True organic cosmetics also contain natural raw materials, and can thus be defined as ‘natural’ too, but the distinction from natural cosmetics is that they are obtained in a different and more ecological manner. This means that the raw materials are obtained with only few chemicals (such as pesticides and chemical fertilizers) added in the production process (Annis, 2011). The procedures can be perceived similar to those involving in organic food production (National Organic Program, 2008). Depending on the different organic cosmetics certification bodies, a specific set of rules is mandatory for each label. For example, different percentages of the total number of ingredients in the product must be from organic nature according to various organic cosmetic certification bodies. However usually, this number is 95% (NCS, n.d).

Much like organic food, organic cosmetics are perceived healthier by consumers, as these products usually contain fewer synthetic or genetically-modified ingredients (Annis, 2011). Consumption of organic cosmetics is therefore mainly for health benefits, as consumers for example are afraid that chemicals might enter their bodies via their skin (Cervellon & Carey, 2011). Global organic cosmetic sales are expected to grow to by 15.6 billion dollars in 2020 (Transparency Market Research, 2018). This in comparison with numbers from 2012, where sales numbers only reached 7.6 billion dollars (Transparency Market Research, 2012).

Labels

In order to sell their products, companies often use terms and images in their marketing such as ‘green’, ‘herbal’, ‘ecological’, ‘natural’, ‘sustainable’ and ‘organic’, indicating that their product is in some way healthier than other products. They claim that their ingredients are ‘nutritious’ like food, or even better for the environment (Annis, 2011). In the literature these terms are often used as well, but it is unclear what some of the the specific terms encompass.

Natural. The term ‘natural’ is often and widely used but there is no specific information about the production of this so called ‘natural’ personal care product. There are no certification bodies or formal legal definitions for when a company can label its ingredients as ‘natural’. It seems that companies are simply told to have a ‘transparent production process’ in order to prove the nature of their ingredients (Ministry of Foreign Affairs, 2018). This transparent production process however is difficult to achieve, and this essentially means that the word ‘natural’ may be used on a lot of products. Companies simply use the smallest amount of botanical ingredients for marketing purposes only, and do not aim to make the final product beneficial for the consumer or the environment (“Natural Ingredients for Cosmetics”, 2005).

A great deal of such words for green cosmetics are ambiguous and confusing, and might be misleading for the consumer. Research examined the packaging information of dishwashing liquids to confirm the accuracy of the environmental information and to what extent this information is misleading for the consumer (Polonsky et al., 1998). They found that firms are behaving unethical, as their claims are not accurate, but however not illegal. The companies do not behave in the environmentally conscious way that they are communicating towards their consumers, even though their images or words can be perceived as ‘quality information’.

Organic Label. It is very difficult for the consumer to examine the product process involved with organic products, thus making these products credence goods (Janssen & Hamm,

2014). One possible clarification for these processes is labelling the cosmetic products, as it can be used to report to the consumers that the product is trustworthy and in fact of organic nature. Larceneux, Benoit-Moreau and Renaudin (2012) give an example of the purpose of a label, stating: "As a form of certification, an organic label is an economic signal, offering proof of objective quality because the product has been produced following environmentally friendly requirements" (p.87). The organic labels, verified by third-party certifications, therefore demonstrate compliance with specific requirements in production processes and affirm the quality of the product for the consumer as they reduce the information-asymmetry.

Organic labels act as an indication of safety, as consumers associate this type of label with the product being free from pesticides for example (Caswell, 1998). Larceneux, Benoit-Moreau and Renaudin (2012) also show that organic labels have an advantage on the perceived quality (better taste) and perception that the product is environmentally conscious. Labels can impact on the decision-making process for consumers (Verbeke & Ward, 2006; Verbeke, 2005). Besides the fact that labels offer facts about the product, labels might also help to convince the consumers to buy or pay a premium price for certain products. As organic production is often difficult and therefore costly, the final organic product shows a premium price in comparison to conventional products (Giraud, 2002). An organic label, as the source of information, can therefore affirm that the price the consumer actually pays is legit.

Labelling one's product however might not always be beneficial to a company, as it does not necessarily mean that the consumer effectively understands or uses these labels and the corresponding information (Verbeke, 2005). Research from Cervellon, Rinaldi and Wernerfelt (2011) shows that the participants (all women) did not effectively understand the organic cosmetic labels displayed in the research. Some consumers might also not trust the certifications and are sceptic about the legitimacy of these organic labelled products (Hughner et al., 2007).

Since 2012, labelling organic foods produced in Europe with the certified EU logo became obligatory (Janssen & Hamm, 2014). This EU logo can be considered a governmental label, as this label was founded by the European Parliament and the Council through strict regulations (''Committee on organic production'', n.d). These regulations entail for instance transparency and significant restriction of the use of pesticides and fertilizers (''Commission Regulation (EC) No 889/2008'', 2008). The EU logo is mandatory to ensure the consumer about the quality of the product, and to make these organic products more recognizable (''The EU organic logo and labelling rules'', n.d). Companies can also implement private labels on their food products. In the Netherlands, the EKO label is one example. The EKO label is an independent non-profit private foundation for stimulating organic food production (''Over Eko'', n.d). Another example is the Demeter label established in Germany, as this organisation promotes biological agriculture internationally as well (Demeter, n.d).

Unlike the food industry, the cosmetics industry does not have such strong obligations for labelling organic cosmetics (Cervellon & Carey, 2011). In Europe, the European Ecolabel is an official certification process in the European Union that is focussed on sustainable and ecological production. The European Parliament and the Council implemented this label, according to the Verordening (EG) Nr. 66/2010 (2010). The European Commission manages this certification body. However, companies that sell organic cosmetics are not obligated to label their products with this Ecolabel.

For private labelling as a non-profit organisation, the COSMOS standard is the most dominant in the organic cosmetics industry (Cosmos-standard, 2013). The main goal of COSMOS is ''Establishing a "sustainable development" that would reconcile economic progress, social responsibility and maintain the natural balance of the planet is a project in which the cosmetics sector is willing to be fully involved'' (p.4). Five labels are associated

with the COSMOS standard, namely Ecocert, Cosmebio, Soil Association, ICEA and BDIH. None of these labels are of Dutch origin, but some of these labels are sold in the Netherlands.

Nonetheless, questions still remain how the consumers perceive these different natural and organic labels for cosmetics particularly. As there are differences in the certification organisations for these labels, namely governmental and private organisations, it can be interesting to look at the willingness to adopt these different types of organic labels into their everyday lives. It can be interesting for cosmetic companies to see if a certain organic label makes their product and company more reliable to eventually benefit their sales.

Hypotheses and Framework

In this research, both the willingness to purchase and willingness to pay for natural and organic labels are studied. We can differentiate three types of labels. The first one is generic labelling with the claim 'natural', the second label is the governmental organic label 'the European Ecolabel' and the third label is the private organic label 'BDIH'.

Willingness to Purchase

In this research, willingness to purchase refers to the preparedness of the consumer to buy a certain product, in this circumstance natural and organic cosmetics. Little research is done regarding the willingness to purchase for organic labels specifically, or for organic cosmetic labels (Cervellon, Rinaldi & Wernerfelt, 2011). One small research from Blend & Ravenswaay (1999) showed that little over half of the respondents would purchase eco-labelled apples, no matter what the specific label or price premium was. In this particular research it is hypothesized that the willingness to purchase for all labels (generic labelling, governmental labels and private labels) is higher than for cosmetic products without a label.

Hypothesis 1: The presence of a label positively influences the willingness to purchase. The willingness to purchase natural and organic cosmetics with a generic label (H1a),

governmental label (H1b) and private label (H1c) is higher than for natural and organic cosmetics without a label.

I further also hypothesize that the type of label might influence the willingness to purchase. It is theorised that people are more willing to purchase the governmental label than the generic label, as it is hypothesized that people have more trust in the government and its practices, than in the claims of the company itself or a private label. Research for example shows that the participants had more eco-label trust in the government-sourced label than in the corporate-sourced label (Atkinson & Rosenthal, 2014).

I however also assume that people do not have sufficient knowledge about the cosmetics labels in comparison to organic food labels. As an example, research from Cervellon, Rinaldi and Wernerfelt (2011) shows that the participants have little knowledge about what the different organic cosmetics labels in France exactly entail. Besides, it could be that consumers might not know or care about the difference between natural and organic and perceive it all to be the same. This is because it is hypothesized that a relatively unknown organic label such as the BDIH label and the simple claim 'natural' are perceived the same in the minds of the consumers in this research. Therefore, the meaning of private labels (like the BDIH label) are perceived to be the same as generic labels claiming the product is 'natural'.

Because of these assumptions, the following hypotheses are formed:

Hypothesis 2a: The willingness to purchase natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a generic label.

Hypothesis 2b: The willingness to purchase natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a private label.

Hypothesis 3: The willingness to purchase natural and organic cosmetics with a private label is the same as for natural and organic cosmetics with a generic label.

Willingness to Pay

Besides the willingness to purchase, the willingness to pay is measured to see if consumers are motivated to pay a premium price for a commodity or service, in this case natural and organic cosmetics with a certain label. Willingness to purchase does not necessarily mean that the consumer is willing to pay more money for the product.

Previous research from Janssen and Hamm in 2012 studied the effect of different organic food labels on the willingness to pay for consumers. The study shows that consumers have a higher willingness to pay for products with organic labels over products without an organic label (Janssen & Hamm, 2012). The consumers have little trust in products with unknown of generic labels (Janssen & Hamm, 2014). In this research, it is hypothesized that people are showing a low willing to pay for a non-certified product, namely a product with no label, but also a product with only a manufacturers claim as this is not an official label.

It is perceived in this research that consumers have trust in governmental labels and its information and are therefore willing to pay for this product. They are willing to pay for products with this type of label (the European Ecolabel). Conversely in this research, similar to the assumptions for the willingness to purchase, it is theorised that consumers might not always be familiar with the private labels (such as the BDIH label) for cosmetics. Therefore, they might not trust this label and the corresponding information that the product is in fact organic. Thus, they are not motivated and willing to actually pay for these products. Considering these assumptions, the following hypotheses are formulated:

Hypothesis 4a: The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics without a label

Hypothesis 4b: The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a generic label.

Hypothesis 4c: The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a private label.

Hypothesis 5: The willingness to pay for natural and organic cosmetics with a private label is the same as for natural and organic cosmetics with a generic label.

Hypothesis 6: The willingness to pay for natural and organic cosmetics with a generic label (H6a) and a private label (H6b) is the same as for natural and organic cosmetics without a label.

As organic products require more complex production processes, price are usually higher for these organic products in comparison to conventional products. Therefore, a consumer often needs to pay a price premium for organic products. Creyer and Ross (1997) show that people are willing to pay this price premium if a companies act in ethical corporate responsibility. As labels act as an important source of information, a labels is an important factor in showing this corporate responsibility.

Familiarity

Furthermore, in this research, it is predicted that familiarity with the particular label positively influences the willingness to purchase and willingness to pay. Research shows that familiarity with organic foods has a large influence on the organic food purchase, with the idea that there's a difference between organic food and conventional food and an influence of the particular organic certification (Fotopoulos & Chryssochoidis, 2001). Other research shows that the participants' preference for different organic certifications were influenced by the participants' familiarity with the label (Janssen & Hamm, 2011). Therefore, one more hypothesis is formed:

Hypothesis 7: The higher the familiarity with the label, the higher the Willingness to Purchase (H7a) and the Willingness to Pay (H7b) for natural and organic cosmetics.

Trust

As mentioned previously in this research, organic products are often considered credence goods, as their production process is difficult for the consumer to verify (Janssen & Hamm, 2014). Therefore, consumers make use of labels to make a more thought out decision in their purchasing process. However, research shows that consumers only make use of these labels if they actually trust the label (Thøgersen, 2000). Other research endorses this statement, as the participants purchasing behaviour was positively influenced by the trust in the label (Daugbjerg et al., 2014). Therefore, in this research, it is assumed that the more the consumers trust a certain organic label, the more they are willing to purchase and pay for this organic product. Hence, an additional hypothesis is formed:

Hypothesis 8: The higher the trust in the label, the higher the Willingness to Purchase (H8a) and the Willingness to Pay (H8b) for natural and organic cosmetics.

Familiarity Organic Cosmetics

Lastly, similar to the familiarity with an organic label, it is hypothesized that a high familiarity with organic cosmetics enhances the willingness to purchase and willingness to pay. As organic produce is a relatively new term and consumers' experience with organic produce is low, familiarity can be perceived as an important factor. Research shows a positive relationship between familiarity with organic products and organic purchases (Smith & Paladino 2010). Other research shows higher repurchase intentions when familiarity is high (Söderlund, 2002). Another hypothesis is constructed:

Hypothesis 9: The higher the familiarity with organic cosmetics, the higher the Willingness to Purchase (H9a) and the Willingness to Pay (H9b) for natural and organic cosmetics.

An overview of the framework and hypotheses is shown in Figure 1 and Table 1.

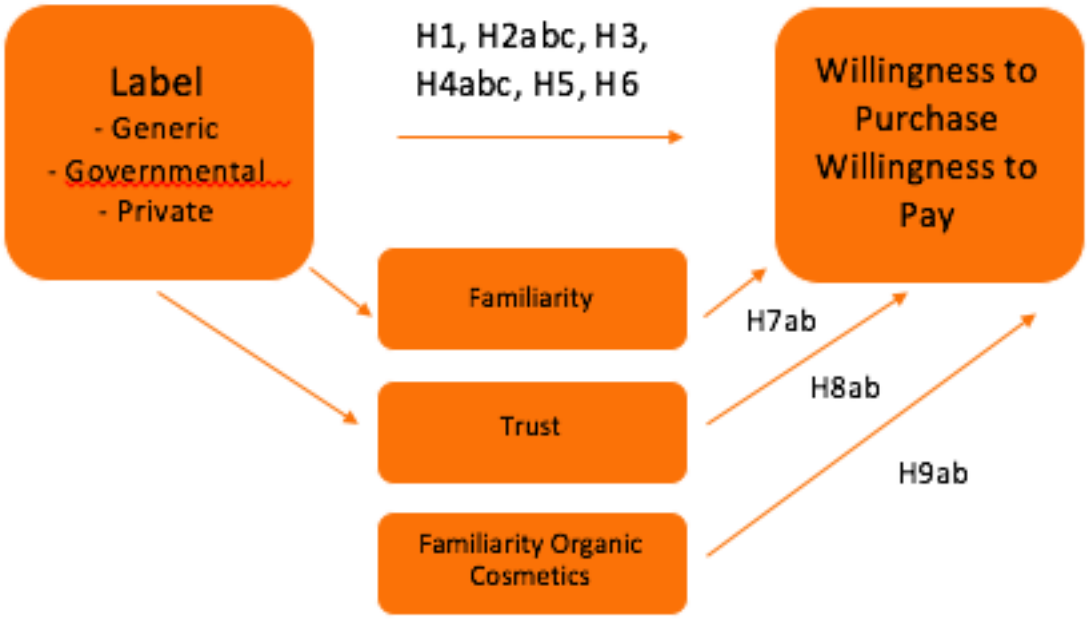

Figure 1. Theoretical Framework

H1	The presence of a label positively influences the willingness to purchase. The willingness to purchase natural and organic cosmetics with a generic label (H1a), governmental label (H1b) and private label (H1c) is higher than for natural and organic cosmetics without a label.
H2a	The willingness to purchase natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a generic label.
H2b	The willingness to purchase natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a private label.
H3	The willingness to purchase natural and organic cosmetics with a private label is the same as for natural and organic cosmetics with a generic label
H4a	The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics without a label
H4b	The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a generic label.
H4c	The willingness to pay for natural and organic cosmetics with a governmental label is higher than for natural and organic cosmetics with a private label.
H5	The willingness to pay for natural and organic cosmetics with a private label is the same as for natural and organic cosmetics with a generic label.
H6	The willingness to pay for natural and organic cosmetics with a generic label (H6a) and a private label (H6b) is the same as for natural and organic cosmetics without a label.
H7	The higher the familiarity with the label, the higher the Willingness to Purchase (H7a) and the Willingness to Pay (H7b) for natural and organic cosmetics.
H8	The higher the trust in the label, the higher the Willingness to Purchase (H8a) and the Willingness to Pay (H8b) for natural and organic cosmetics.
H9	The higher the familiarity with organic cosmetics, the higher the Willingness to Purchase (H9a) and the Willingness to Pay (H9b) for natural and organic cosmetics.

Table 1: Overview of hypotheses

2. Method

Design

The current research is a focussed on the willingness to purchase and willingness to pay for cosmetics (shampoo) with different natural and organic cosmetic labels. The study is a quantitative experiment with a between-subject design. Each respondent was categorized in only one of the four conditions (Table 2). These labels were placed on the bottles of shampoo (see Appendix 1).

Condition 1	Condition 2	Condition 3	Condition 4
No label	Generic label – Prefix 'Natural'	Governmental label – EU Ecolabel + Prefix 'Natural'	Private label – BDIH label + Prefix 'Natural'

Table 2. Overview of the labels used in the four conditions

The independent variables were the four different labels used in this research, displayed on a shampoo bottle. The dependent variables are both the willingness to purchase and willingness to pay for the different labels on natural and organic cosmetics, both measured with multiple items. Also familiarity with and trust in the labels, as well as familiarity with organic cosmetics were measured.

Participants

The participants for this research were conducted via Social Media, mainly via Facebook and WhatsApp. The participants filled in the survey in Qualtrics on a voluntary basis.

In total, 306 respondents were recorded. However, only 209 respondents successfully completed this survey. Therefore, 97 respondents were removed from the dataset in SPSS.

Also, possible outliers were analysed in the dataset. According to Field (2013), an outlier is an observation much different from the rest of the data and they bias statistics. The answers from the participants thus might not be completely in line with the other respondents and might have an influence on the validity of this research. Overall, 23 extreme outliers were detected via boxplots. These extreme outliers are presented as stars in SPSS, in contrast to mild outliers which are presented as circles. Mild outliers lie beyond the inner fences of Q1-1.5R and Q3+ 1.5R, with R being the Interquartile Range of Q3-Q1. An extreme outlier lies beyond the outer fences of Q1-3R and Q3+3R (Statistics How To, 2017). The extreme outliers were however not directly removed from the dataset, as simply removing this data is not (ethically) justified. Thus during each individual analysis, the dataset was checked without these outliers and different results were reported.

Via randomisation in Qualtrics, the respondents were randomly assigned to a particular condition. An overview is given in Table 3. Overall, 175 females (83,7%) and 34 males (16,3%) completed the survey. The mean age of the respondents was 33,78 years (SD= 15,11).

Condition	N
Control Condition (0)	54
Generic Condition (1)	47
Governmental Condition (2)	55
Private Condition (3)	53

Table 3. Number of respondents in each condition

Material

The cosmetic product used for this research is Shampoo. The first reason for the choosing of shampoo as the cosmetic product is the fact that this product is widely and regularly

used by both men and women, young and older people. This product is also available in organic quality and sold in Dutch (online) stores.

The image of shampoo bottle the participants were shown specified the name of the brand, Evolve Beauty (Evolve Beauty, n.d). Evolve Beauty is an UK-based organic beauty brand selling items such as daycreams, bodycreams and haircare products. Evolve beauty is exclusively an online shop, selling worldwide. It is however assumed that the participant had no knowledge of this particular brand. The look and feel of the bottle and the brand 'Evolve Beauty' was not similar to those who are sold in the Netherlands, as some bottles might be associated with a certain type of price. In this paper, only the name 'Evolve Beauty' and contours of the shampoo bottle were used. The image of the Evolve Beauty Shampoo in this paper displayed the following information: "Shine shampoo for normal to dry hair with nourishing ingredients for daily use". Some extra information was given, namely that the volume is 300ML and the conversion from fluid to ounce. For the shampoo bottles with the labels, images of leaves were added at the side as an extra indication of the product being natural. The control condition did not show these leaves, as the look of the bottle was plain, with information only.

Thus in combination with this particular image of the product, four different natural and organic cosmetic labels are used. The first one is no particular label at all, as this group is the control condition (see Appendix 1.2). The second label is the generic label, which means only using the prefix 'natural' as an indication on the packaging (see Appendix 1.3). No official certification is used for the usage of this prefix, as this phrase is a manufacturer's claim.

The third label is the governmental label. As this research is mostly applied to Dutch consumers, the European Ecolabel is used (see Appendix 1.4 & 1.5). Special regulations of this European Ecolabel are applicable to shampoo. For this certification, only a small number of ingredients, additives (preservatives, colorants and fragrances) and raw materials may be used

(Commission Regulation (EC) No 889/2008, 2008). Besides, numeral mixtures are permitted. The substances need to be biodegradable and the the non-biodegradable organic substances have strong limits (The EU Ecolabel for Rinse-off Cosmetic products, n.d; Commission Decision, n.d). There are strong boundaries for the toxicity of the water and dilution volume, meaning a lower impact on the aquatic environment (The EU Ecolabel for Rinse-off Cosmetic products, n.d; Commission Decision, n.d). There is also a strong emphasis on sustainable packaging, sustainable acquiring of palm oil and the products are not tested on animals (''EU Ecolabel'', n.d). With this label, the prefix 'natural' is also applied, as this particular shampoo displayed and used in this research is of natural nature.

The fourth label used in this research is the private label 'BDIH' (see Appendix 1.6 & 1.7). The BDIH label stands for Bundesverband der Industrie- und Handelsunternehmen, and is a member of the COSMOS-standard; an independent non-profit organisation (''Cosmetica BDIH'', n.d.; ''About the BDIH, n.d.). The BDIH label was used instead of the other organisations in this research as this label was the most sold in different (drug)stores in the Netherlands such as Ekoplaza, De Online Drogist and Dio. Similar to the Ecolabel, only a few additives are permitted, the products need to be biodegradable and the aquatic environment is protected from toxicity. The cosmetic products with the BDIH label are not tested on animals and there is focus on no use of GMO plants. Besides these criteria, at least 20% of total ingredients (including for example minerals, water and chemically processed ingredients) should be organic, whereas 95 percent of the physically processed agro-ingredients should be from organic nature (''COSMOS-standard certification with BDIH/IONC, 2014).

Procedure

For this research, a Qualtrics survey was constructed to retrieve data from the participants. Later, the statistical processing program SPSS was used to analyse the data. The participants were firstly welcomed and thanked for their participation and asked to read the

instructions carefully. The participants were told that this researched is focused on preferences in cosmetics. An example was given, as it was explained that products such as toothpaste, shampoo, body lotion, make-up and perfume are all considered to be cosmetics to make sure that every participant understood the meaning of the statements. It was said that there are no right or wrong answers, and that the participants remained anonymous. Then, the participants had to try and imagine themselves in a real buying situation, in a store wanting to buy a shampoo. They were shown one image of a shampoo bottle with a particular label, one of the four conditions.

Measures

Willingness to Purchase

Willingness to Purchase was measured with three statements: 'I could purchase this product'. The second statement showed 'I am willing to purchase this product', and the last statement presented 'I want to purchase this product'. The Likert 7-point scale was used with the options 'strongly disagree' (1), 'disagree' (2), 'disagree somewhat' (3), 'undecided' (4), 'agree somewhat' (5), 'agree' (6) and 'strongly agree' (7).

These three items were measured by a reliability analysis to check whether these items could be used together in one scale as a construct 'Willingness to Purchase'. This reliability analysis showed a Cronbach's Alpha value of 0.903, meaning an excellent internal consistency. Thus the mean value of the means of the three statements was calculated and combined into one variable, the complete Willingness to Purchase.

Willingness to Pay

To measure the dependent variable Willingness to Pay, two methods are used. First, a direct open-ended question was used where the participant indicated the exact amount of money (in euro's) they were willing to pay for the product. Besides this direct open-ended

question, a second method called the Price Sensitivity Meter was used (van Westendorp, 1976), which also uses open-ended questions combining quality and price. This Price Sensitivity Meter is a technique for measuring the consumer's perceptions of price for different products such as FMCG. With this method, a range of acceptable prices and an optimal price point can be calculated based on four different questions considering the prices in euros.

- 'At what price do you think the product is so inexpensive that you would doubt it's quality? (in euros)', ("SO INEXPENSIVE")
- 'At what price do you think the product is a bargain- a great buy for the money? (in euros)', ("BARGAIN")
- 'At what price do you think the product begins to seem expensive? (in euros)' ("BEGIN EXPENSIVE")
- 'At what price do you think the product is too expensive? (in euros)' ("TOO EXPENSIVE")

The answers were checked to make sure they were valid. The price for "So Inexpensive" should be the lowest followed by "Bargain", "Begin Expensive" and finally "Too Expensive". Responses who did not follow this were deleted from this price analysis (N=39). Next, the cumulative percentages are plotted. To do so, the responses were grouped in prices ranges ranging from 0 to 1, 1 to 2, and so on. Next, the cumulative distributions for "So Inexpensive" and "Begin Expensive" were converted into "Not So Inexpensive" and "No Begin Expensive". Finally, the four cumulative distributions were plotted: "Not so Inexpensive", "Bargain", "No Begin Expensive" and "Too Expensive". Based on these four graphs, a range of acceptable prices and also an optimal price point can be identified. This procedure was done for each of the four conditions, resulting in an acceptable price range and optimal price for each condition.

Two additional statements were constructed to look at the willingness to pay a premium price for this shampoo. These statements were conducted, as organic products usually have a

price premium (Creyer and Ross, 1997). The statements showed ‘I am willing to pay a price premium (more money) for this product’ and ‘This product is worth paying a price premium (more money) for’. The Likert 7-point scale was used again, as the options were ‘strongly disagree’, ‘disagree’, ‘disagree somewhat’, ‘undecided’, ‘agree somewhat’, ‘agree’ and ‘strongly agree’. Once again, these statement were checked via a reliability analysis. As the Cronbach’s Alpha is 0,878, these two items were combined into one variable, Willingness to pay Price Premium.

Familiarity of the label and Trust in the Label

The Familiarity with the label was measured with ‘I’m familiar with this label’ and the Trust in the label with ‘I trust this label’. Respondents could answer using the Likert 7-point scale (‘strongly disagree’ (1), to ‘strongly agree’ (7)). These statements were not shown to the participants with the control condition, as they did not see a label.

Manipulation check

Participants were asked which labels they saw. This question was asked in order to check whether the respondents were aware of the label they had seen. This question stated: ‘Which label did you see?’. The options were ‘I did not see any label’, ‘I saw the prefix ‘natural’’, ‘I saw the BDIH label and the prefix ‘natural’ and ‘I saw the European Ecolabel and the prefix ‘natural’’.

Familiarity and Buying Behaviour Organic Cosmetics

Then, two statements were displayed, to test the knowledge of the respondent about (the existence of) organic cosmetics. The first statement ‘I’m familiar with organic cosmetics’ was to measure Familiarity with Organic Cosmetics. The last statement was shown to test Purchase Behaviour, with the statement ‘I have bought organic cosmetics before’. The Likert

7-point scale was used once again for these statements (‘strongly disagree’ (1), to ‘strongly agree’ (7)).

Buying Behaviour Shampoo

Furthermore, the participants were asked how often they buy shampoo. The options were “Once a month”, “Once in 3 months”, “Twice a year”, “Once a year”, “Other, namely…”.

Socio-demographic information

Lastly, three demographic items were conducted at the end of the survey, as the gender, age and level of education were asked. These questions were asked in order to assess information about influences of gender, age and education on the willingness to purchase and willingness to pay.

At the very end of the survey, the participants were thanked for their participation, and had the opportunity to fill in any remarks or suggestions. The name of the researcher, Amber Stadhouders, and the corresponding email address were given as well. The full survey is shown in Appendix 3.

3. Results

In this particular research, the Willingness to Purchase and Willingness to Pay for natural and organic cosmetics labels is examined. The personal care product used for this study is shampoo. The survey showed that just over half of the respondents (52.2%) buys shampoo once every 3 months, and 24.4% buys shampoo every month. Furthermore, the participants were undecided about whether they had bought organic cosmetics before (M=4.25, SD=2.028).

Manipulation: labelling check

To check whether the manipulation of the labelling condition was successful, a cross-tabulation with chi-square for the conditions (0=No label,1 = Generic Label, 2 =Governmental Label, 3= Private Label) as a column and the question concerning the condition check as row (1 = I did not see any label, 2 = I saw the prefix 'natural', 3= I saw the BDIH label and the prefix 'natural', 4= I saw the European Ecolabel and the prefix 'natural') was conducted ($\chi 2$ = 79.664, df = 9, $p < 0.05$). An overview is given in Table 4. In the Control Condition (N=54), about half of the respondents (46,3%) noted correctly that they had not seen any label. In the Generic Condition (N=47) with the prefix 'natural', this percentage was 68,1%. For the Governmental condition (N=55), 58,2% of the respondents noted that they had seen the European Ecolabel and the prefix 'natural'. Noticeably, in the Private Condition (N=53), only 5,7% perceived that they had seen the BDIH label and the prefix 'natural'. Overall, 92 out of the 209 participants (44.0%) correctly identified the label they had seen in the survey.

Condition		No Label	Generic Label	Governmental Label	Private Label
Answer option	'I did not see any label'	25	12	7	12
	'I saw the prefix 'natural''	26	32	15	33
	'I saw the BDIH label and the prefix 'natural''	3	3	32	5
	'I saw the European Ecolabel and the prefix 'natural''	0	0	1	3

Table 4. Overview of the Labelling Check

Willingness to Purchase

To analyse the difference of the Willingness to Purchase across the four conditions, a univariate analysis (ANOVA) was performed. There was a statistically significant difference in Willingness to Purchase between the different conditions as determined by one-way ANOVA ($F(3,205)=3.050$ and $p=0.030$. As $p<0.05$). Furthermore, Levene's Test shows a value for $p=0.400$, and as this is $p>0.05$, we do not reject the assumption of equal variances met. All the variables were checked excluding the outliers. This did not have an effect on the levels of significance for each hypothesis.

	Mean	SD	
No Label (0)	3.765^{b}	1.592	N= 54
Generic Label (1)	4.539^{a}	1.444	N= 47
Governmental Label (2)	4.327^{ab}	1.400	N= 55
Private Label (3)	4.541^{a}	1.544	N= 53

Table 5. Mean values and Standard Deviation Willingness to Purchase
a, b = indicate significantly different means using LSD Post Hoc test

We expected that the willingness to purchase natural and organic cosmetics with a label would be higher than for natural and organic cosmetics without a label (H1). The Least Significant Difference (LSD) post hoc test revealed that this is not always the case. Looking at the mean for each condition, the mean willingness to purchase is statistically significantly lower for the no label condition (3.765 ± 1.592) than the generic condition (4.539 ± 1.444, p=0.012) and the private condition (4.541 ± 1.544, p=0.009). However, the mean willingness to purchase is not statistically lower for the no label condition than the governmental condition (4.327 ± 1.400, p=0.055) Therefore, hypothesis 1 is rejected.

It is also expected that the willingness to purchase natural and organic cosmetics with a governmental label (2) would be higher than for natural and organic cosmetics with a generic label (1) (H2a). The data did not support this assumption. This is because the LSD post-hoc test revealed no significant difference for the willingness to purchase natural and organic cosmetics with a governmental label and those with a generic label (p=0.484), thus hypothesis 2a is rejected.

In this study, it is also hypothesized that the willingness to purchase natural and organic cosmetics with a governmental label (2) would be higher than for natural and organic cosmetics with a private label (3) (H2b). The LSD post-hoc test showed no statistically significant difference (p=0.467), and hypothesis 2b is therefore rejected.

Furthermore, it was expected that the willingness to purchase natural and organic cosmetics with a private label (3) is the same as for natural and organic cosmetics with a generic label (1) (H3). The LSD post-hoc test revealed no significant difference between these two conditions (p=0.995), thus hypothesis 3 is accepted.

A) Direct Approach with single open-ended question

For the single open-ended direct measure for the Willingness to Pay, the direct approach, the Mean and Standard Deviations for each condition was calculated. There was a statistically significant difference in the Willingness to Pay between the different conditions as determined by one-way ANOVA ($F(3,202)= 3.003$, $p=0.032$). Besides, a value of $p=0.463$ was shown for Levene's Test, thus homogeneity of variances is met. The post hoc test of the Least Significant Difference (LSD) is applied to identify the difference. All the variables were checked excluding the outliers. This had an effect on some of the levels of significance for each hypothesis. The effects will be further explained for each hypothesis individually.

	Mean	SD	
No Label (0)	€3.579[a]	2.309	N=54
Generic Label (1)	€4.690[b]	2.785	N=47
Governmental Label (2)	€4.715[b]	2.161	N=53
Private Label (3)	€4.594[b]	1.890	N=52

Table 6. Mean values and Standard Deviation direct approach Willingness to Pay
a, b = indicate significantly different means using LSD Post Hoc test

Firstly, it is expected that the willingness to pay for natural and organic cosmetics with a governmental label (2) would be higher than for natural and organic cosmetics without a label (0) (H4a), with a generic label (1) (H4b) and with a private label (H4c). As seen in Table 6, the mean willingness to pay is statistically significantly higher for the governmental label (€4.715 ± 2.161) in comparison to no label (€3.579 ± 2.309, $p=0.011$). The hypothesis H4a can therefore be accepted. However, the mean willingness to pay for the governmental label is not statistically significantly higher when compared to the generic label (€4.690 ± 2.785, $p= 0.956$)

and the private label (€4.594 ± 1.890, p= 0.786) and therefore, hypotheses 4b and 4c are rejected.

Moreover, is it predicted that the willingness to pay for natural and organic cosmetics with the private label (3) is the same as for natural and organic cosmetics with a generic label (1) (H5). Looking at the mean values, the mean willingness to pay is not statistically significantly different when comparing the private label (€4.594 ± 1.890) with the generic label (€4.690 ± 2.785, p= 0.35). Hypothesis 5 is therefore accepted.

In addition, it is hypothesised that the willingness to pay for natural and organic cosmetics with a generic label (1) is the same as for natural and organic cosmetics without a label (0) (H6a). A higher mean of willingness to pay for the generic label, namely €4.690, can be found in comparison to €3.579 for no label (€3.579) (p=0.016). The hypothesis 6a can be rejected. However, when considering the ANOVA analysis with removing the outliers N=23) from the dataset, the mean value for the generic label (€4.120 ± 1.879) and the no label (€3.437 ± 2.040) is not significantly different (p=0.094). The hypothesis 6a thus is accepted when excluding the outliers.

Lastly, it is also predicted that the willingness to pay for natural and organic cosmetics with the private label (3) is the same as for natural and organic cosmetics without a label (0) (H6b). Bases on the LSD post-hoc test, the mean of willingness to pay for the private label (€4.594) is significant different from the no label (€3.579) (p=0.024). Hence the hypothesis 6b is rejected.

B) Price Sensitivity Meter

Furthermore, in this paper, the Price Sensitivity Meter is used to analyse the range of optimal prices and an optimal price point for each of the four conditions. The data is analysed in Excel to obtain cumulative distributions and plotted into graphs, for both the data with and without the outliers. For each of the conditions, a graph was created with four distributions

which illustrated the percentages of people who find certain prices too expensive, not so inexpensive, a bargain and not beginning to be expensive. An example of one of these graphs is given in Figure 2. An overview of all the graphs is given in Appendix 2.

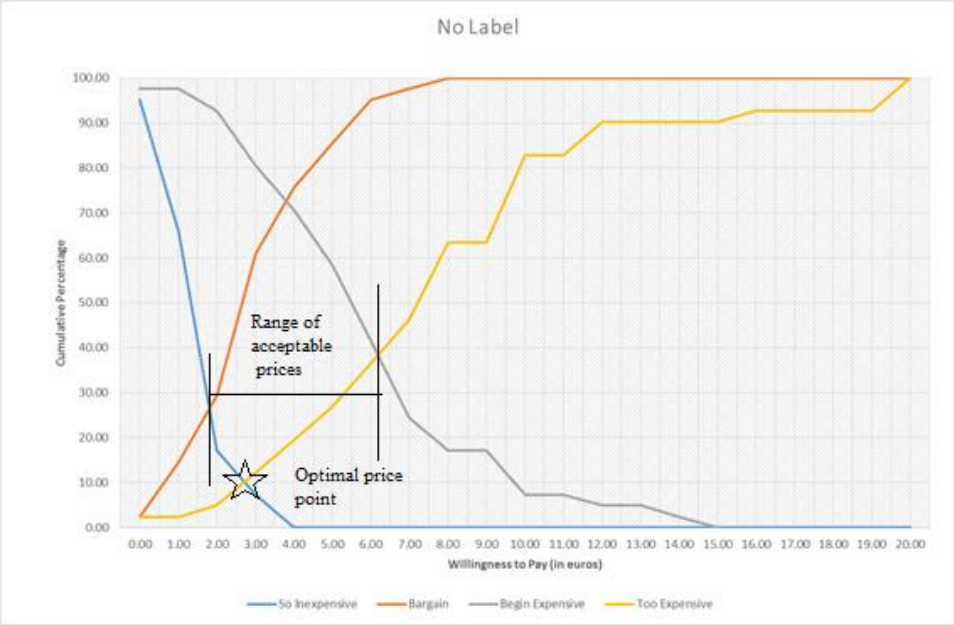

Figure 2. Price Sensitivity Meter – No Label Condition

For the No Label Condition (Figure 2.1), the range of acceptable prices is between €2,00 and €7,00. Additionally, the optimal price point for this shampoo is €3,00. Considering the outliers (N= 23), meaning the dataset without the outliers (Figure 2.2), this range of optimal prices lies between €2,00 and €6,00, with the optimal price point being €3,00.

For the Generic Label Condition, it can be found that the range of acceptable prices is between €2,00 and €7,00 (Figure 2.3). Furthermore, the optimal price is €3,00. When excluding the outliers (Figure 2.4), it can be seen that the range of acceptable prices is between €2,00 and €6,00, with the optimal price point again €3,00.

Moreover, for the Governmental Label Condition (Figure 2.5), the range of acceptable prices is considered to lie within the prices €3,00 and €8,00. In addition, the optimal price point

is €4,00. Looking at the data without the outliers (Figure 2.6), a range of optimal prices between €3,00 and €8,00 is observed once more. Also, an optimal price point of €4,00 is found.

Last but not least, in the Private Label Condition (Figure 2.7), the range of acceptable prices is between €3,00 and €7,00. Besides, the optimal price point is €4,00. When excluding the outliers (Figure 2.8), the range of optimal prices is also between €3,00 and €7,00, with an optimal price point of €4,00.

C) Willingness to Pay Price Premium

Lastly, for the Willingness to Pay, the Willingness to Pay a Price Premium was analysed indicating whether consumers want to pay a price premium for the product. An overview of the Mean Variables and Standard Deviation is given in Table 7.

	Mean	SD	
No Label	3.019[a]	1.447	N= 54
Generic Label	3.575[a]	1.216	N=47
Governmental Label	3.382[a]	1.347	N=55
Private Label	3.387[a]	1.546	N=53

Table 6. Mean values and Standard Deviation Willingness to Pay Price Premium*

a= Construct based on two items measures with a 7- point scale: 'strongly disagree' (1), to 'strongly agree' (7).

An ANOVA analysis is completed to see if there is a significant effect of the type of label on the Willingness to Pay a Price Premium. This effect however was not statistically significant ($F(3,205)=1.425$, $p=0.237$), meaning no effect of the type of label on the Willingness to Pay a Price Premium. Looking at the data without the outliers, for a second time, no significant effect is observed when looking at the type of label and the Willingness to Pay a Price Premium ($F(3,182)=1.737$, $p=0.161$).

Familiarity and Trust Label

To gain insight in the familiarity and the trust in the different labels, an overview of the Mean values and Standard Deviation is given in Table 8.1 and Table 8.2.

Familiarity Label	Mean	SD
Generic Label	1.62[a]	0.644
Governmental Label	2.07[a]	1.230
Private Label	1.98[a]	1.168

Table 8.1. Mean values and Standard Deviations Familiarity Label
a= Construct based on two items measures with a 7- point scale: 'strongly disagree' (1), to 'strongly agree' (7).

Trust Label	Mean	SD
Generic Label	3.77[a]	1.339
Governmental Label	3.93[ab]	1.425
Private Label	4.38[b]	1.471

Table 8.2. Mean value and Standard Deviations Trust Label
a, b = indicate significantly different means using LSD Post Hoc test

To examine the Familiarity in the different labels, an ANOVA analysis is run. According to this test, no significant differences between the Familiarity of the Label in each condition are detected ($F(2,152)=2.544$, $p=0.082$). Considering the outliers, thus excluding the extreme outliers from the dataset, again no significant differences are seen ($F(2,132)=3.009$, $p=0.053$).

Another ANOVA analysis is performed to analyse the Trust in de different labels in the conditions. Once again no significant differences are assumed between the Trust in the Label in the different conditions ($F(2,152)=2.558$, $p=0.081$). When the outliers are omitted, a significant effect between the type of label and the trust in the label are observed ($F(2,132)=3.824$, $p=0.024$). The Trust in the Generic Label ($M=3.71$, $SD=1.384$) appeared lower than the Trust in the Private Label ($p=0.008$, LSD-correction; $M= 4.52$, $SD=1.444$), but not compared with the Trust in the Governmental Label ($p=0.420$, LSD-correction; $M=3.96$,

SD=1.474). When the participants were shown the private label, they had more trust in this label compared to the participant who had seen the generic label. The Trust in the Private Label did not appear to be statistically different from the Trust in the Governmental Label (p=0.057, LSD-correction).

It is expected that, the higher the familiarity with the label, the higher the Willingness to Purchase (H7a) and the Willingness to Pay (H7b) for natural and organic cosmetics. A correlation analysis is performed, showing a significant positive effect for the Willingness to Purchase ($r(155)=0.287$, $p<0.001$) and for the Willingness to Pay ($r(152)=0.184$, $p=0.023$). Hypothesis 7a and 7b can therefore be accepted. However, when omitting the outliers from the dataset, the correlation analysis does not show a significant positive effect for the Willingness to Pay ($r(132)=0.138$, $p=0.116$). Hypothesis 7b is thus rejected when excluding the outliers.

It is also hypothesised that, the higher the trust in the label, the higher the Willingness to Purchase (H8a) and the Willingness to Pay (H8b) for natural and organic cosmetics. A correlation analysis is performed, and it is shown that there is a significant and positive effect for the Willingness to Purchase ($r(155)=0.457$, $p<0.001$) and the Willingness to Pay ($r(152)=0.238$, $p=0.003$). Hypothesis 8a and 8b are therefore accepted.

Familiarity Organic Cosmetics

To examine the Familiarity with Organic Cosmetics of the respondents, a correlation analysis is performed. The Mean values and Standard Deviation were calculated also (M=4.17, SD=1.875).

It is expected that, the higher the familiarity with organic cosmetics, the higher the Willingness to Purchase for natural and organic cosmetics (H9a). There appeared to be a significant positive effect of the Familiarity with Organic Cosmetics on the Willingness to Purchase at the p=0.01 level ($r(209)=0.401$, $p=0.000$). This result holds when omitting the outliers ($r(186)=0.376$, $p=0.000$). Hypothesis 9a is therefore accepted.

It is also hypothesized that, the higher the familiarity with organic cosmetics, the higher the Willingness to Pay (H9b). For the correlation between Willingness to Pay (single open-ended question) and the Familiarity with Organic Cosmetics, a statistically significant and positive effect can be observed at the p=0.01 level (r(206)=0.362, p=0.000). Once more, this effect upholds when leaving out the outliers from the dataset (r(183)=0.383, p=0.000). Hypothesis 9b is thus accepted.

Sample Description

Lastly, an overview of the sample description is given in Table 9.

To conduct information about differences between the four conditions for the variable Gender, a cross table analysis is run. According to the χ^2-test, no difference between the four different conditions and gender is detected (χ^2 (3)= 0.740, p= 0.864). This means that the number of female and male participants in each condition did not differ significantly compared to the others.

Furthermore, a One-Way ANOVA is run to test whether the average age differs across the groups. The ANOVA test shows (F(3,205)=0.675, p=0.568); it is found that there are no significant differences in the mean-values of Age between the different four conditions.

And lastly, the variable Level of Education is recoded. VWO and WO are combined into one group (1), higher education. HAVO and HBO (2) into the middle education group and VMBO and MBO (3) into the lower education group. Then once again, a cross table analysis is run. The test showed (χ^2(6)= 2.104, p=0.910), indicating no differences. The level of education in each condition did not differ significantly compared to the others.

	Control Condition N=54	Generic Condition N=47	Governmental Condition N=55	Private Condition N=53	Total
Gender[a]	47 Female (87,0%) 7 Male (13,0%)	38 Female (80,9%) 9 Male (19,1%)	46 Female (83,6%) 9 Male (16,4%)	44 Female (83,0%) 9 Male (17,0%)	175 Female (83,73%) 34 Male (16,27%)
Age[b]	M=33.667 SD=14.190	M=31.426 SD=15.329	M=35.473 SD=15.922	M=34.208 SD=15.1218	M= 33.78 SD=15.11
Level of Education[a]	Lower: N=3 Middle: N=19 Higher: N=32	Lower: N=1 Middle: N=15 Higher: N=31	Lower: N=3 Middle: N=20 Higher: N=32	Lower: N=4 Middle: N=16 Higher: N=33	Lower: N=11 Middle: N=70 Higher: N=128

Table 9. Gender, Age and Level of Education
a= based om Pearson Chi-Square
b= based on One-Way ANOVA with LSD post-hoc test

4. Discussion and Conclusion

FMCG are important products for people's daily lives (Erdoğan & Taymaz, 2005). And as the need for sustainable consumption patterns are becoming more and more popular today, the need to research the perceptions of sustainable FMCG is rising. However, existing research was mostly focussed on organic foods. This research provides supplementary support for the field of FMCG, as it is focused on cosmetics labels and how natural and organic cosmetics labels influence the final Willingness to Purchase and the Willingness to Pay (a premium price).

It appears that labelling an organic cosmetics product with a generic label (prefix 'natural') or a private BDIH label both equally positively influence the Willingness to Purchase for the consumer. Contrary to the predictions, labelling one's organic product with a governmental European Eco-label seems not to promote the Willingness to Purchase. However, the governmental European Eco-label has the same positive impact as the generic label (prefix 'natural') and the private BDIH label on the Willingness to Pay. The same optimal price point of €4,00 can be found for the governmental European Eco-label and the private BDIH label, in comparison to €3,00 for the generic label.

Furthermore, a high familiarity and trust in the label positively influences the Willingness to Purchase and Willingness to Pay. Besides, a high familiarity with organic cosmetics also positively influences the Willingness to Purchase and Willingness to Pay.

Practical Relevance

The results of this research show practical relevance for the field of FMCG. Cosmetics companies can benefit from this research, as this paper shows information that is does help to provide the cosmetics product with a label. However, it does not seem necessarily to improve or invest in a more sustainable production processes to label the product with a private or

governmental certification. Simply using the prefix ‘natural’ appears to have the same impact on the consumers’ Willingness to Purchase and Willingness to Pay.

This research is also an indication for other companies with FMCG, as it shows that findings on organic food cannot be generalized to their own products, as previous food-related research shows a bigger Willingness to Pay for organic food that is labelled (with both a private or a governmental label) compared to a generic label (Janssen, 2012).

To stimulate consumption of organic products through labels, one recommendation might be to provide more information about these labels, as this might help convincing people to buy these organic products. In research from Tsakiridou, Boutsouki, Zotos and Mattas (2008), university graduates showed that advanced information about organic product might help to convince people to buy more organic products. And as higher educated people are more likely to buy organic products (Ott et al., 1990), it would be interesting for companies to consider this recommendation. Laroche, Bergeron and Barbaro-Forleo (2001) show similar recommendations, as they advise companies and marketers to display educational information for their organic products.

Limitations

In this research, a few limitations can be seen. Firstly, the Likert 7-scale was used to measure the different items in the survey. For mobile phone users, the negative side of the scale (strongly disagree, disagree, disagree somewhat) was shown firstly. This might have biased the participants into choosing these options more. Another limitation is the fact that in the survey no trap questions were asked. A trap question might have helped to enhance the reliability of the research, as this type of question checks if the participant thoroughly reads and answers each question.

Furthermore, for measuring willingness to pay, the single open-ended direct approach was used. However, Breidert, Hahsler and Reutterer (2015) declare that this method has some

weaknesses. For instance, the participants might be too focussed on the price and not on other attributes of the product. They also might over or underestimate the true value of the product because of this unfamiliar task (as they usually have a particular starting point for the price). And obviously, the prices the respondents present do not predict actual future purchase behaviour.

Also in this research, the only cosmetics product examined was shampoo. As this product is a rinse-off product, the interest in natural and organic properties might differ for lotions for instance, as these particular products have extended contact with the body. Besides, shampoo is only used for one part of the body, namely the hair on the head. Once again, the need for natural and organic assets might be different for other parts of the body. As a recommendation for future research, it can be interesting to look at products with different properties and for different parts of the body.

The survey was completed by a lot of female respondents. As mentioned before, women are usually more interested in buying organic products (Magnusson et al., 2001). Therefore, this research might not be representable for the perceptions of natural and organic cosmetics of both men and women.

Furthermore, for 61,24% of the participants (N=128) the education level was either VWO or WO, which is the highest education level possible. Ott (1990), Onyango, Hallman and Bellows (2007) state that higher educated people more likely to purchase organic products. For future research in the area of natural and organic, it might be interesting to include more variety in levels of education.

It would be desirable to conduct this research in other countries as well, as this particular research was focussed on Dutch consumers only. As the Netherlands is a rich country, this can mean that Dutch consumers have more money for green practices compared

to for example third-world countries (because as previously mentioned, organic and thus more sustainable products are often more expensive).

And lastly, the distribution of the survey was mainly focussed on students at Wageningen University. As this university is known ‘to explore the potential of nature to improve the quality of life’ (WUR, n.d) the students at this university might be biased in their interest for sustainability and thus natural and organic cosmetic products. Therefore, the results might again not be generalizable to the population as a whole.

Future Research

Future studies can further investigate different FMCG in order to gain deeper understanding in the consumers’ perceptions about organic FMCG, as this study shows that results from research with different FMCG might differ from each other.

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6. Appendix

Appendix 1: Shampoo Bottles and Labels

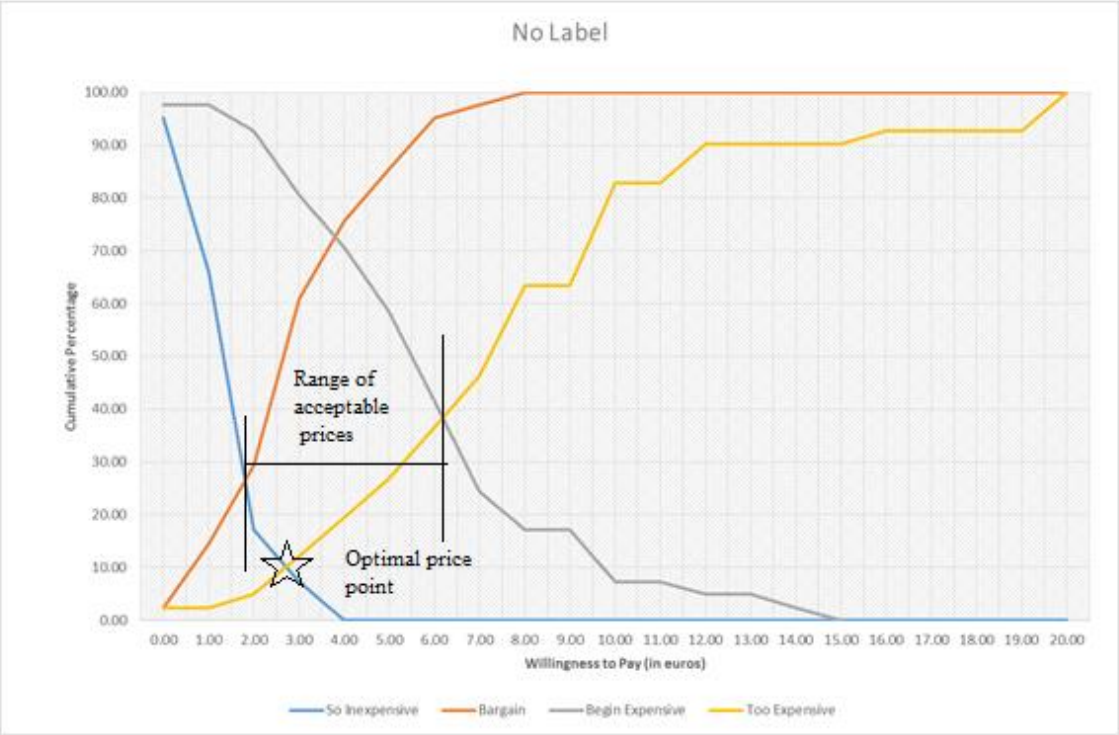
Appendix 1.1. Original Shampoo Bottle. Source:
https://www.evolvebeauty.co.uk/products/superfood-shine-natural-shampoo

Appendix 1.2. Control condition
Appendix 1.3. Shampoo bottle + Generic Label (prefix 'natural'). Source:
https://www.freepngimg.com/png/14567-leaves-png-clipart

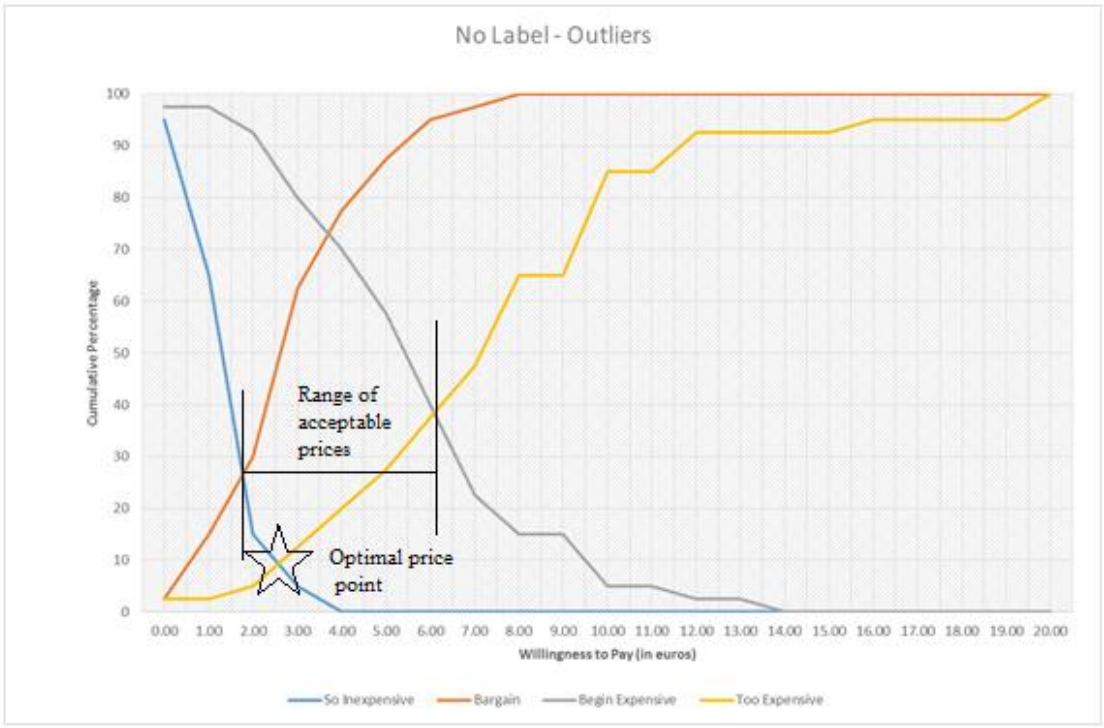
Appendix 1.4. Shampoo bottle + governmental label (Ecolabel)
Appendix 1.5. Governmental Label – Europe Ecolabel. Source: https://keurmerken.milieucentraal.nl/keurmerken/europees-ecolabel-schoonmaak/

Appendix 1.6. Shampoo bottle+ Private label (BDIH label)
Appendix 1.7. Private Label BDIH. Source: https://www.labelinfo.be/label/cosmetica-bdih

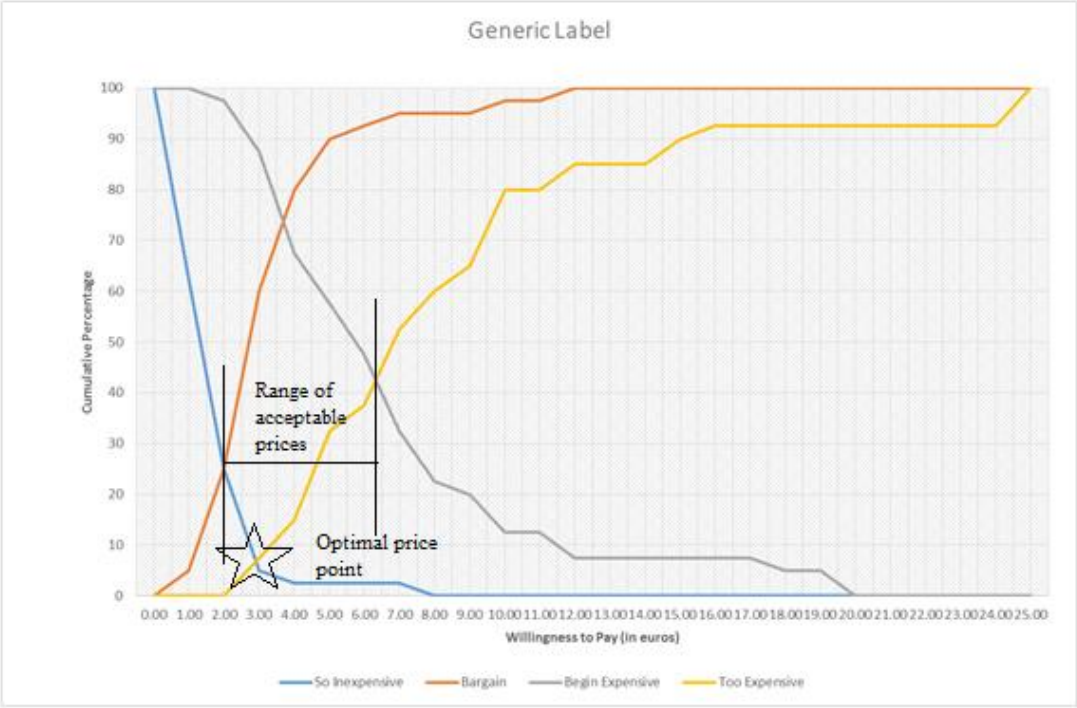
Appendix 2: Price Sensitivity Meter Graphs



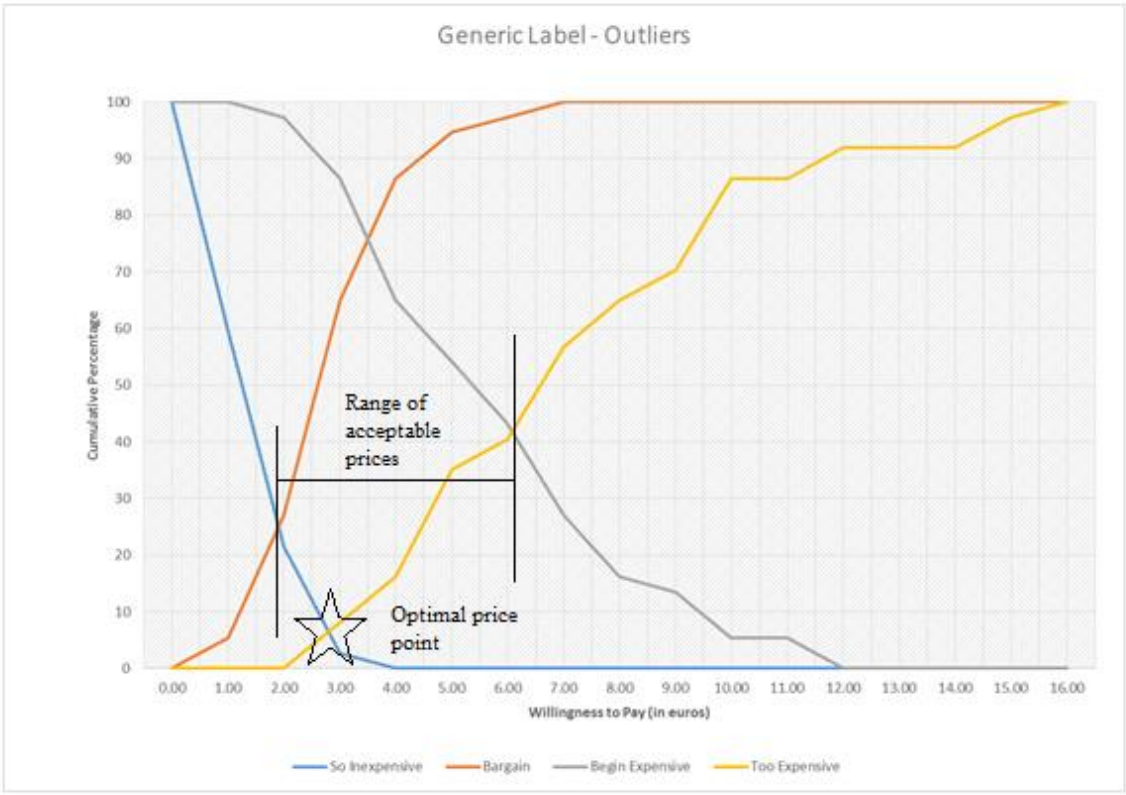
Appendix 2.1. No Label Condition – Price Sensitivity Meter



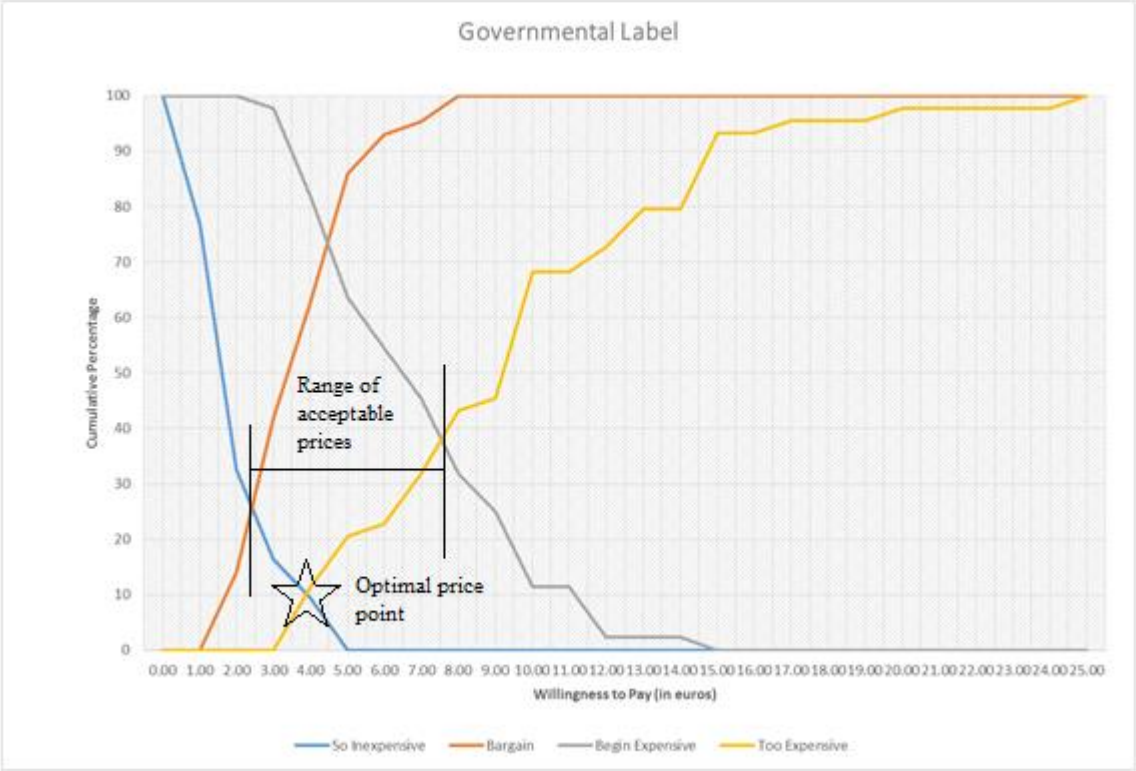
Appendix 2.2. No Label Condition without Outliers – Price Sensitivity Meter



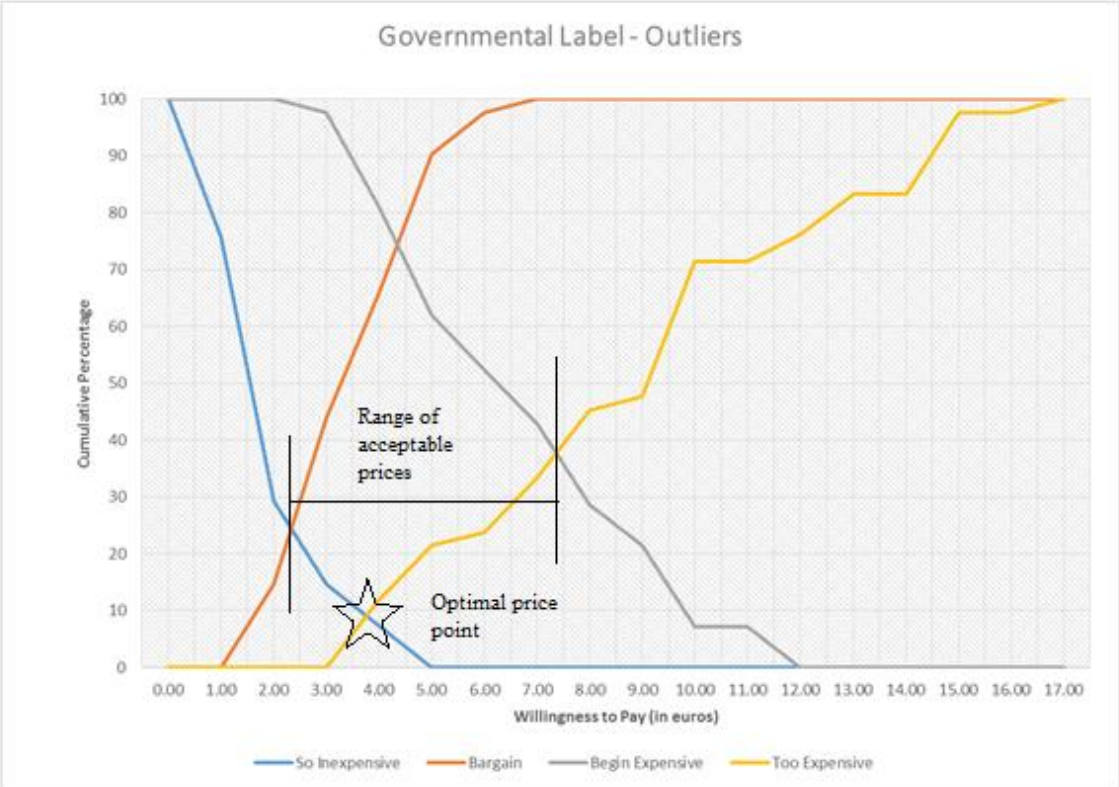
Appendix 2.3. Generic Label Condition – Price Sensitivity Meter



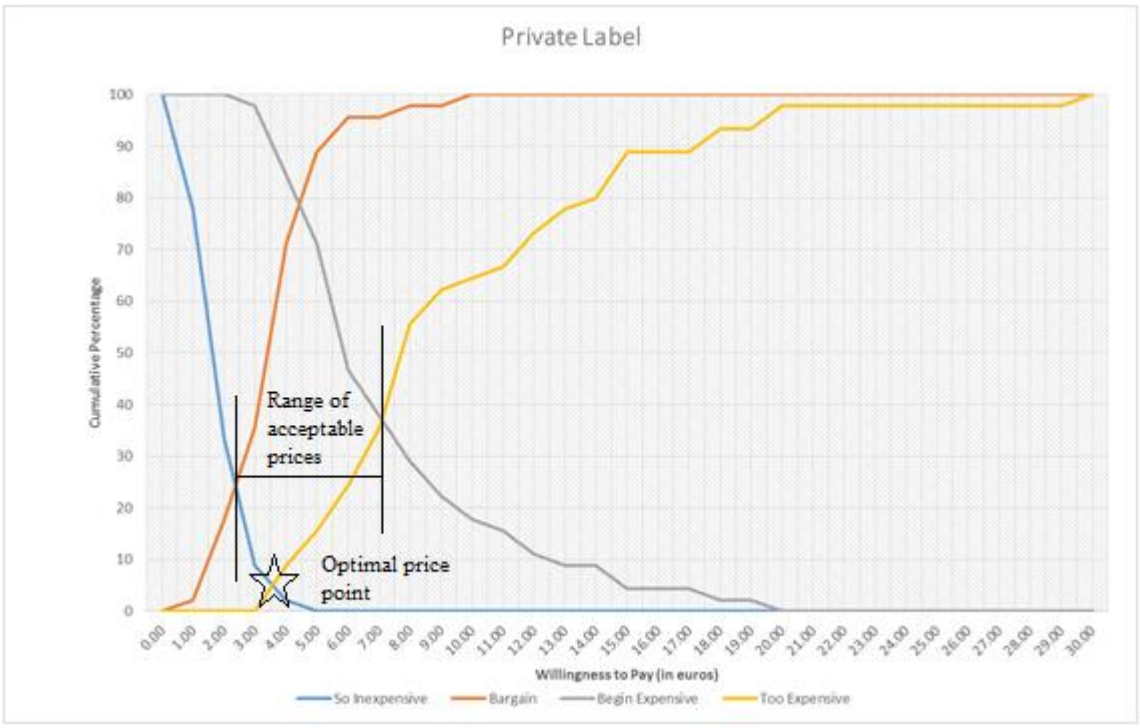
Appendix 2.4: Generic Label Condition without Outliers – Price Sensitivity Meter



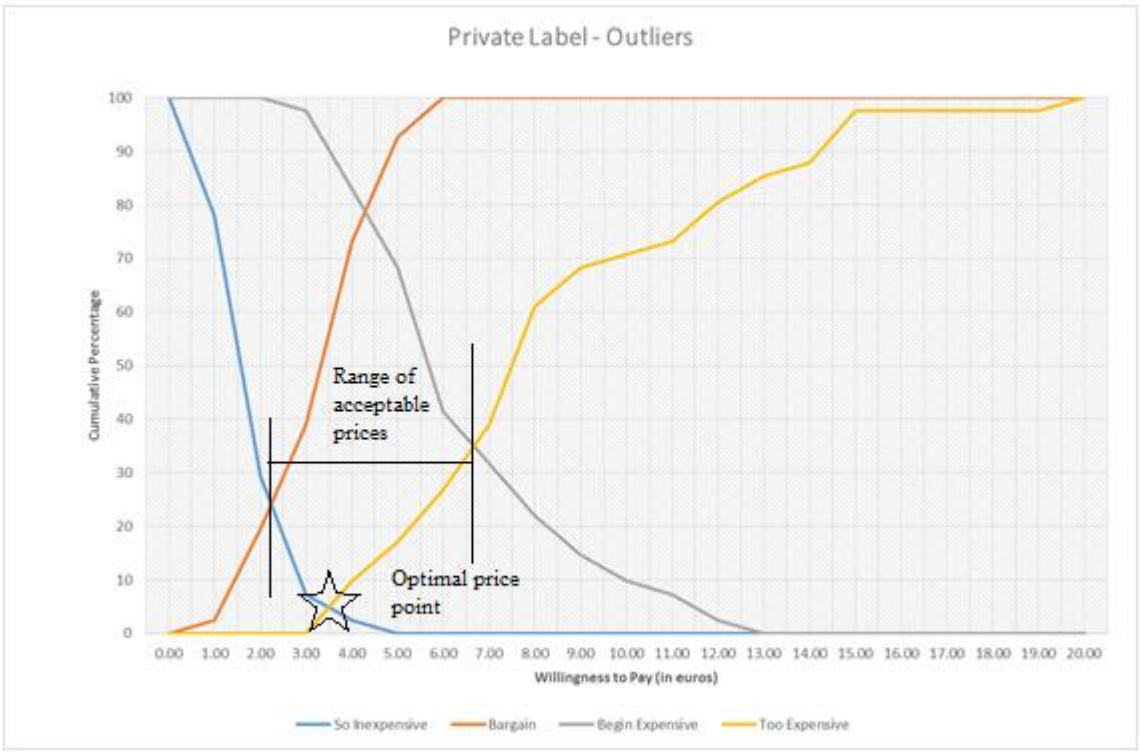
Appendix 2.5. Governmental Label Condition – Price Sensitivity Meter



Appendix 2.6. Governmental Label Condition without Outliers – Price Sensitivity Meter



Appendix 2.7. Private Label Condition – Price Sensitivity Meter



Appendix 2.8. Private Label Condition without Outliers – Price Sensitivity Meter

Appendix 3: Survey Qualtrics

Start of Block: Intro

Q1.1
Welcome! Please read this page carefully
Thank you very much for participating in this research. For this research, we are interested in the preferences in cosmetics. As an example, products such as toothpaste, shampoo, shower gel, body lotion, make-up and perfume are all considered to be cosmetics.

There are no right or wrong answers, so please fill in your true opinion. This survey is anonymous and the results will be used for this research only. The survey takes around 5 minutes to complete.

Page Break

Q1.2 Imagine yourself shopping in your local drugstore or supermarket. You are in need of a new shampoo. On the next screen, you will see an image of a shampoo bottle. Please look at this bottle as if you are in a store and really intend to buy this product.

Page Break

End of Block: Intro

Start of Block: Controle conditie

Q2.2 Please look at this product very carefully. Then, please fill in the following statements

Q58 Please look at this product carefully. Then, please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I could purchase this product (1)	○	○	○	○	○	○	○
I am willing to purchase this product (2)	○	○	○	○	○	○	○
I want to purchase this product (3)	○	○	○	○	○	○	○

Q48 Please fill in the exact amount of money (in euros) you would pay for this product

_____

Q50 At what price do you think the product is so inexpensive that you would doubt it's quality? (in euros)

_____

Q51 At what price do you think the product is a bargain - a great buy for the money? (in euros)

_____

Q52 At what price do you think the product begins to seem expensive? (in euros)

_____

Q55 At what price do you think the product is too expensive? (in euros)

_____

Q84 Please fill in the statements below.

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am willing to pay a price premium (more money) for this product (1)	○	○	○	○	○	○	○
This product is worth paying a price premium (more money) for (2)	○	○	○	○	○	○	○

Page Break

End of Block: Controle conditie

Start of Block: Generic Label

Page Break

Q57 Please look at this product very carefully. Then, please fill in the following statements

Q47 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I could purchase this product (1)	○	○	○	○	○	○	○
I am willing to purchase this product (2)	○	○	○	○	○	○	○
I want to purchase this product (3)	○	○	○	○	○	○	○

Q61 Please fill in the exact amount of money (in euros) you would pay for this product

_____

Q62 At what price do you think the product is so inexpensive that you would doubt it's quality? (in euros)

_____

Q63 At what price do you think the product is a bargain- a great buy for the money? (in euros)

_____

Q64 At what price do you think the product begins to seem expensive? (in euros)

_____

Q65 At what price do you think the product is too expensive? (in euros)

_____

Q67 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am willing to pay a price premium (more money) for this product (1)	○	○	○	○	○	○	○
This product is worth paying a price premium (more money) for (2)	○	○	○	○	○	○	○

Q90 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am familiar with this label (1)	○	○	○	○	○	○	○
I trust this label (4)	○	○	○	○	○	○	○

End of Block: Generic Label

Start of Block: Governmental Label

Page Break

Q59 Please look at this product very carefully. Then, please fill in the following statements

Q56 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I could purchase this product (1)	○	○	○	○	○	○	○
I am willing to purchase this product (2)	○	○	○	○	○	○	○
I want to purchase this product (3)	○	○	○	○	○	○	○

Q74 Please fill in the exact amount of money (in euros) you would pay for this product

_____

Q75 At what price do you think the product is so inexpensive that you would doubt it's quality? (in euros)

_____

Q76 At what price do you think the product is a bargain- a great buy for the money? (in euros)

_____

Q77 At what price do you think the product begins to seem expensive? (in euros)

_____

Q78 At what price do you think the product is too expensive? (in euros)

_____

Q79 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am willing to pay a price premium (more money) for this product (1)	○	○	○	○	○	○	○
This product is worth paying a price premium (more money) for (2)	○	○	○	○	○	○	○

Q88 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am familiar with this label (1)	○	○	○	○	○	○	○
I trust this label (4)	○	○	○	○	○	○	○

End of Block: Governmental Label

Start of Block: Private Label

Page Break

Q60 Please look at this product very carefully. Then, please fill in the following statements

Q68 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I could purchase this product (1)	○	○	○	○	○	○	○
I am willing to purchase this product (2)	○	○	○	○	○	○	○
I want to purchase this product (3)	○	○	○	○	○	○	○

Q69 Please fill in the exact amount of money (in euros) you would pay for this product

_____

Q70 At what price do you think the product is so inexpensive that you would doubt it's quality? (in euros)

_____

Q71 At what price do you think the product is a bargain- a great buy for the money? (in euros)

_____

Q72 At what price do you think the product begins to seem expensive? (in euros)

_____

Q73 At what price do you think the product is too expensive? (in euros)

_____

Q85 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am willing to pay a price premium (more money) for this product (1)	○	○	○	○	○	○	○
This product is worth paying a price premium (more money) for (2)	○	○	○	○	○	○	○

Q89 Please fill in the statements below

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (7)
I am familiar with this label (1)	○	○	○	○	○	○	○
I trust this label (4)	○	○	○	○	○	○	○

Page Break

End of Block: Private Label

Start of Block: Demographics + End of Survey

Q91 Which label did you see?

- ○ I did not see any label (1)
- ○ I saw the prefix 'natural' (2)
- ○ I saw the BDIH label and the prefix 'natural' (3)
- ○ I saw the European Ecolabel and the prefix 'natural' (4)

Q38 Please fill in the following statements

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Undecided (4)	Agree somewhat (5)	Agree (6)	Strongly agree (8)
I am familiar with organic cosmetics (1)	○	○	○	○	○	○	○
I have bought organic cosmetics before (2)	○	○	○	○	○	○	○

Q86 How often do you buy shampoo?

- ○ Once a month (1)
- ○ Once in 3 months (2)
- ○ Twice a year (3)
- ○ Once a year (4)
- ○ Other, namely (5) _____

Page Break

Q41 What is your gender?

- ○ Female (2)
- ○ Male (3)
- ○ Other (specify) (4) _____

Q42 What is your age (in years)?

_____

Q43 What is your highest level of education currently achieved?

- ○ VMBO (1)
- ○ HAVO (2)
- ○ VWO (3)
- ○ MBO (4)
- ○ HBO (5)
- ○ WO (6)

Page Break

Q42
Warning: Please submit this last question by clicking on the arrows below!

Thank you very much for your participation in this research!

If you would like to comment on this research, or would like to give other suggestions, you can enter it below or contact Amber Stadhouders via amber.stadhouders@wur.nl. If not, please enter: -
Thank you very much for your time!

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End of Block: Demographics + End of Survey