

Bachelor Thesis

Premium goes green

-

How certification and design complexity of a packaging influence the perception of “green” premium apparel products.

Researcher: Jana Potthoff

Supervisor: Dr. Mirjam Galetzka

Institution: University of Twente

Faculty: Faculty of Behavioural, Management, and Social

Science Department: Communication Science

26.06.2020

Abstract

Objective: While a rising number of fashion brands incorporate sustainability, premium labels lag behind. The combination of premium and sustainability is not investigated in detail, so far. This study focuses on two specific packaging characteristics, on the example of organic cotton socks. The study was conducted in collaboration with the German legwear brand Elbeo to accompany the implementation of a “green” premium product and to link findings of previous studies.

Method: This thesis aimed to investigate two packaging design elements for their influence on values, premium and “green” evaluation, and credibility in relation to environmental concern. After a pre-study, two main studies were conducted. First a third-party and an internal certificate were compared (N = 113), second a complex design was compared to a minimalistic design (N = 124)

Results: People with high environmental concern rated the products better in several aspects. The certificates had an influence on self-serving motives in relation to environmental concern. Participants with high environmental concern rated the internal certificate better, while the perception of the third-party certificate did not depend on environmental concern.

Discussion: The findings highlight the importance of investigating the target group for its characteristics. The perception of an introduction of “green” products in premium brands is influenced by customers’ attitude. Certificates are also perceived different, depending on the level of environmental concern. This stresses a careful consideration and investigation of the surrounding circumstances.

Keywords: Packaging, Premium, Eco-certificates, Environmental Concern, Self-serving Motives, Minimalistic Design, Consumer Perception

Table of content

1 Introduction.....	5
2 Organizational context.....	7
3 Theoretical framework.....	8
3.1 Self-serving motives and values.....	8
3.2 “Green” certification.....	9
3.3 Design complexity.....	11
3.4 Environmental Concern.....	12
3.5 Hypothesized model.....	13
4 Pre-Study.....	15
4.1 Study design.....	15
4.2 Participants.....	15
4.3 Analysis and results.....	15
4.4 Conclusion and implications for main studies.....	16
5 Main Study 1 – Certificates.....	17
5.1 Study design and procedure.....	17
5.2 Participants.....	18
5.3 Stimuli material.....	18
5.4 Measures.....	19
5.5 Results.....	21
5.5.1 Environmental concern.....	22
5.5.2 Interaction effect.....	22
5.6 Conclusion.....	24
6 Main Study 2 - Background Complexity.....	26
6.1 Study design and procedures.....	26
6.2 Participants.....	26
6.3 Stimuli material.....	26
6.4 Measures.....	28
6.5 Results	29
6.6 Conclusion.....	29
7 Summary of the two main studies.....	30
8 General discussion.....	32
8.1 Limitations.....	34

8.2 Future research recommendations.....	34
9 Conclusion.....	35
References.....	36
Appendix.....	38

1 Introduction

Sustainability developed into an important movement in the past years and shaped consuming behaviour in several aspects. Recent societal and political developments and the rising attention within the media concerning topics like global warming and exhausting resources promoted the importance of an active change to more sustainable consuming behaviour. Companies have long recognized that this development allows the shift to new product sectors, which align with this “green” movement (Koeijer, Gelhard, & Klooster, 2019). The change to sustainable materials is increasingly adopted by luxury brands even though the initial material costs rise, since the brands believe in future rewards through added value (Karaosman, Perry, Brun, & Morales-Alonso, 2018).

Using the packaging as a tool of communication to promote “green” products can be a helpful instrument in persuading customers. The packaging of a product is one of the first points of contact between the customer and the product, and the impact goes far beyond the functional effect of containing and protecting the product. This is an opportunity to underline important aspects of the product and to stand out against competitors (Ciravegna, 2017). Especially, in the high-end product sector, the communication of an environmentally friendly alternative can be a complex endeavour. The green aspect must not contrast with the high-quality appearance, but successfully combine these two areas. In Germany, “green” fashion suffers from a dusty and unpopular image. Customers associate green fashion with unfashionable products and sustainable clothing is not widely accepted (Eifler & Diekamp, 2013). Consequently, the packaging attributes should reflect the high quality and the green aspect of the product and ultimately convince the consumer of a purchase decision.

Elbeo, a German premium brand for hosiery and knitted socks is preparing to introduce a new range of socks with organic cotton. In the branch of premium hosiery and knit legwear, “green” products are only sparsely represented. At the same time, the textile industry is one of the biggest polluters worldwide. Especially water waste and contamination of the environment with toxins as well as negative effects on the people along the whole the supply chain are environmental consequences of the textile market (Muthu, 2020). A change to sustainable fashion is therefore important in all textile product sectors. The development of a suitable packaging for “green” premium products was accompanied with this study. The findings give input for organizations in the development stage of packaging for “green” premium products.

Several studies regarding packaging cues and claims for green products are already developed, but how certificates and design complexity influence eco-friendliness in combination with the luxury aspect is not largely investigated. Therefore, this study is expected to deliver an extension of findings regarding “green” packaging and to illuminate the topic from a premium product perspective. Further this study seeks to provide a contribution for existing literature concerning

packaging design for premium or “green” fashion products, by linking findings from both fields. Through the investigation of two design elements in detail, this study is expected to add insights in how certificates and design complexity are perceived in a product that is not either a “green” or a premium product, but both. Ultimately, this is expected to add to the research in the field concerning packaging design and its effect on customers’ perception. This study aimed to investigate how different design cues influence the perception customers have of the product in several aspects. More precisely, this study investigated the relation of the concepts environmentally friendliness and premium characteristics, first impression, self-serving motives and credibility on the basis of two packaging design elements in two quantitative, experimental 2x3 design studies and a prior qualitative interview study. The first main study focused on certification (third-party certificate vs. internal certificate), and the second main study focused on design complexity (complex design vs. minimalistic design).

Ultimately, the influence of these two cues on “green” and premium associations, emotions, as well as credibility were measured. Previously, in a small qualitative study, the self-serving motives and values, that need to be fulfilled in order to enhance purchase intention with “green” product aspects were investigated. In interviews, the self-serving motives as important product aspects with a focus on “green” characteristics, as well as on premium characteristics are investigated and are included as input for the quantitative study to design a relevant instrument. Additionally, environmental concern of the participants was tested for a moderator influence on the effect of the certificates and the design complexity on the concepts. The three studies were conducted to answer the research question “How do certification and design complexity, of “green” premium packaging impact values and priorities, premium and “green” evaluation, and credibility in relation to environmental concern?”

2 Organizational Context

Hanes Germany, part of a US company that produces basic apparel and innerwear is developing a new packaging for one of their subsidiaries ELBEO. The parent company Hanesbrands is one of the world's biggest producer of basic apparel products like underwear, socks, legwear and t-shirts. In the year 2019, Hanesbrands ranked place 436 in the fortune 500 list (Fortune Media IP Limited, 2020). ELBEO is a German brand for socks and hosiery, founded in 1748. Next to hosiery products, the product palette includes never out of stock (NOS) and seasonal trend knit wear made from conventionally grown cotton. ELBEO products are comparably expensive and are only sold in specialist shops. Additionally, only comparably small quantities of products are produced with a high standard of quality and aesthetics.

In the season Autumn/Winter 2021, an introduction of a new NOS sock range made from organic cotton was planned. These new products were already developed and certified by the GOTS label. GOTS stands for global organic textile standard. This label ensures a percentage of at least 75 of organic cotton in the end product, defines humane working conditions in the farming and factory process to social standards, and requests a responsible handling with resources along the whole cultivation and manufacturing process. Beginning at the limited use of pesticides and requirements of water purification during the cultivation of the cotton, over a ban of toxins during the manufacturing process, to the final product with a packaging that needs to be recyclable (Global Standard gGmbH, 2020). Together with the researcher, Hanes developed four packaging designs for the new organic cotton socks to test whether logos or background complexity have an influence on the aforementioned variables.

3 Theoretical Framework

Packaging is an important factor in consumer decision-making (Azzi, Battini, Persona, & Sgarbossa, 2012). Koenig-Lewis, Palmer, Dermody, & Urbye (2014) argue that pro-environmental purchase behaviour is driven by emotions, rather than rationales. Therefore, the development of the packaging should not only focus on the factual and informational description of the benefits, but also on design elements that provoke positive emotions in the consumer. Combining the high-end character with environmentally friendliness includes some pitfalls, since some design characteristics seem to be partly contradictory. Dekhili, Achabou and Alharbi (2019) investigated the effect of sustainability aspects on the perception of luxury fashion items. In general, the consumers rated the products lower in quality when a sustainability or “green” factor was included. An incorporation of sustainability is therefore not universally considered as a positive bonus for premium fashion consumers.

However, it was also discovered that the observed negative effect of sustainability on quality evaluation can be influenced by the way the brand presents itself and depends on the country the product is sold in (Dekhili, Achabou, & Alharbi, 2019). A negative conflict between “green” and premium fashion is therefore not an inevitable consequence but depends on the presentation and third-party factors. It was further discovered (Doval, Pal Singh, & Batra, 2014) that while in the past the environmental concern did not have a high influence in premium brand customers, this changed within the last decades. Accordingly, environmental consciousness has the potential to be slowly embraced by premium brands and implemented in the product ranges and marketing strategies without diminishing the premium aspect of the products.

3.1 Self-serving motives and values

The reason why people engage in the consumption and purchase of luxury products are diverse. Joy et al. (2012) investigated fast fashion versus luxury fashion and their respective potential to incorporate sustainability into their products and brand identity. They discovered that the motives why people choose luxury or premium fashion products are “exclusivity”, “aesthetics” and a factor that can be described as “prestige” that comes from being able to afford and to show off products from specific luxury fashion brands. Implying that fashion items can work as an indicator of status of an individual. In the same study, Joy et al. (2012) also investigated the aspects consumers expect from sustainable fashion. The results indicated that the product criteria “quality”, “durability” and “style” were considered as most important. The expected values of sustainable fashion are therefore not contradictory to premium fashion but mostly congruent. However, premium fashion products include even more aspects, that need to be fulfilled in order to appeal to luxury fashion consumers. Hennings et al. (2012) found individual motives in addition to the aforementioned motives, where

consumers described that they buy luxury products to reward themselves and to make them feel good, and a high expectation regarding quality.

The relation between those self-serving and “green” product aspects requires special attention. Schuitema and de Groot (2014) discovered a trade-off between egoistic motives to buy premium fashion products and “green” product attributes. Here the “green” aspects only enhanced the purchase intention, if the self-serving motives of the consumers were already fulfilled by the product. This study proposed low price as one self-serving motive, which is arguably not the case for premium brands. For premium fashion brands, the self-serving motives possibly differ from the motives to buy regular fashion.

As mentioned above, the self-serving motives of the customers need to be fulfilled in the first place. The “green” product benefit only has a positive influence if these expectations are met. Doval, Pal Singh and Batra (2014) discovered that the general customers of luxury products who are interested in the environment want to know how and where the product was made. For these customers, third-party benefits are more important than themselves, when evaluating the value of products. This indicates that the customers with high ecological concern are more interested in the benefits the product brings to third-party factors, like the environment and the workers in the supply chain than to themselves. An understanding of the customers’ motives to purchase premium or luxury products and what values they seek and expect in the products is important (Hennings et al., 2012). Identifying the expectations of consumers helps to fit the needs and to incorporate a “green” product aspect that brings further value and does not contradict the self-serving motives to buy premium fashion products. To investigate these self-serving motives of premium apparel buyers, interviews with participants from the target group were conducted.

3.2 “Green” certification

When it comes to claims, which cannot be followed up or checked in any way by the customer, trust plays an important role in decision making (Atkinson, & Rosenthal, 2014). This is also the case for the socks in question. When hanging in the shelf, the customer has no way to check where and how the product was produced, let alone what the components consist of. For products, claiming to be “green” the customer has no other choice than to trust the company for making truthful statements and not engaging in greenwashing. Labels can be a helpful cue to convince customers of the legitimacy of the “green” product (Atkinson, & Rosenthal, 2014). According to the authors, labels are information tools that indicate the benefit the product inhabits in regard to environmental issues. Labels and certificates regarding ecological factors can be divided into two groups: external or third-party labels and labels that are developed internally by the company itself (Pancer, Mcshane, & Noseworthy, 2015). The authors propose that labels and especially third-party labels generally have a positive influence on the perception of environmental friendliness.

However, their findings suggest that specificity of the claims is even more important for trust and favourability towards the product than the source of the eco-label. Participants with low ecological concern liked the organizational label better than the third-party governmental label. The authors discussed that this may result from the reward for the effort of organizations to comply to ecological requirements. It was discovered that third-party certifications need to be credible to the consumer to promote trustworthiness and reliability (Brach, Walsh, & Shaw, 2018). The authors discovered that while the third-party certification has the general ability to reduce risk in purchase decision making of “green” products, this effect can mainly be reached with labels and certification that are already credible to the consumer. Implementing a third-party label, which may not fit the aesthetic of the premium packaging may have a negative effect on quality assessment and price expectation. The premium aspect of the product can therefore be diminished by the use of eco-labels.

Findings from Atkinson and Rosenthal (2014) suggest that eco-labels without any design support of the green aspect (like use of the colour green) had a negative effect on product efficacy. The other way around, using the colour green without further support from an eco-label had the same negative effect. Moreover, the packages that included eco-labels without additional “green” cues had a more negative effect on product efficacy than a packaging that did not include an eco-label at all. This indicates that supporting cues play an important role on the effect of eco-labels on “green” packaging. The effect of eco-labels is mitigated by supporting “green” cues, which reduces insecurity in the customers towards the trustworthiness and efficacy of the product. A “green” design is therefore important to build a whole and consistent “green” packaging and to ultimately enhance the effect of the label.

- ➔ H1: The third-party certificate opposed to the internal certificate has a positive influence on credibility.
- ➔ H2: The internal certificate opposed to the third-party certificate has a positive influence on premium evaluation.
- ➔ H3: The third-party certificate opposed to the internal label has a positive influence on “green” evaluation
- ➔ H4: The third-party certificate opposed to the internal certificate has a positive influence on self-serving motives.
- ➔ H5: The third-party certificate opposed to the internal certificate has a positive influence on first impression.

3.3 Design complexity

For premium brands, Mugge et al. (2014) propose that minimalism is one of the most important packaging design cues. In a study with several food products, the participants connected ornamented packaging including several details with lower intrinsic quality. The authors propose that the superior evaluation of minimalistic packaging in terms of premium aspects suggests to reduce shapes, elements and text on the packaging to create a clean, unified look. This is supported by Favier, Celhay, and Pantin-Sohier (2019) who discovered that the complexity of a packaging has an important influence on brand perception and evaluation. In a study about the packaging of champagne simple, minimalistic designs were associated with being modern, authentic and higher quality. Further a minimalist designed package was more likely to be bought. The implementation of the “green” packaging details is therefore to evaluate against this minimalism aspect. Angelis, Adigüzel, and Amatulli, (2017) found out that the predominant opinion among consumers still assumes a contradiction between luxury and green products. The authors investigated how packaging design can influence this perception to heighten the acceptance and adoption of new sustainable products from luxury brands. It was proposed that the brands should not engage in a completely different new design process for the new packaging, but rather orientate on the existing packaging. Brands that focus on “green”, sustainable products should not be taken as reference, but rather the existing packages from the own brand.

In another study (Barchiesi, Castellan, & Costa, 2016) colour as packaging design element was investigated for its effect on CSR perception. While usually the colour green is associated with environmentally friendly, sustainable products, it is not the best option to highlight the CSR aspect with the packaging. Classically, muted dark colours like grey and black are associated with luxury and premium brands. In the study it was also discovered that a green packaging scored lowest in credibility and attractiveness (compared to white and blue packaging). These findings take up the findings of the study from Angelis, Adigüzel, and Amatulli (2017) and support the advice to not necessarily chose a green packaging colour in order to introduce a new environmentally friendly product line. Howell and Schifferstein (2019) investigated how background colour influenced attractiveness and expensiveness of fresh food. They found out that the dark background with 90% black rated highest in both categories. This indicated that consumers connect a neutral, dark background with expensiveness and attractiveness.

Minimalism is a trend for luxury products (Chou, 2011). This trend focuses on reduced shapes and colours to create a clean simplistic look. However, it was also discovered that the preference for minimalistic design does not have a linear effect. Designs that are “too” minimalistic can also be experienced as boring and dull (Berlyne, 1971). It is therefore important to find the appropriate degree of minimalism to profit from the premium association minimalistic packaging design offers.

The implementation of a “green” product aspect should therefore be included in a more reduced way to not interfere with the premium aspect of the product. Choosing the colour green as classical cue for environmentally friendliness should accordingly only happen with a muted shade of green, that includes a higher portion of black.

- ➔ H6: The minimalistic design, opposed to the complex design has a positive influence on the “premium” evaluation
- ➔ H7: The minimalistic design, opposed to the complex design has a positive influence on “green” evaluation
- ➔ H8: The minimalistic design, opposed to the complex design has a positive effect on first impression
- ➔ H9: The minimalistic design, opposed to the complex design has a positive influence on self-serving motives

3.4 Environmental concern

Koenig-Lewis, Palmer, Dermody, and Urbye (2014) discovered that concern for the environment is an important antecedent for purchase decision. Participants who stated that they are interested in and concerned for the environment were more influenced to buy a product with eco-packaging cues. Similarly, Magnier and Schoormans (2015) discovered that environmental concern is an important factor when investigating claims regarding environmental friendliness. The authors discovered that customers with a low environmental concern considered a packaging with an environmentally friendly claim in combination with conventional design as negative. It was proposed that these findings are the result of consumers’ perception that the company engages in green washing and only claims eco aspects due to marketing reasons without fundamental and real behaviour behind the claim. Purchase decision making was discovered to be lower in individuals with low environmental concern for conventional looking packaging with environmental claims. The study suggests that congruence between the packaging design and the presence of environmental claims is an important factor on buying intention. Especially for customers with low environmental concern, the congruence had a strong impact. To be convincing to both customers with low and with high environmental concern, the package therefore needs to have a “green” design accompanying the claims.

As mentioned above, the motives to buy a “green” luxury product also depend on the environmental concerns of the customer. In the two studies, the environmental concern of the participants was enquired and investigated for its moderating effect on the relation between the different concepts and their influence on the participants.

- ➔ H10: For participants with high environmental concern, the third-party certificate will have a higher impact on “green” evaluation than for participants with low environmental concern
- ➔ H11: For participants with high environmental concern, the third-party certificate will have a higher impact on first impression than for participants with low environmental concern
- ➔ H12: For participants with high environmental concern, the third-party certificate will have a higher impact on credibility than for participants with low environmental concern
- ➔ H13: Participants with high environmental concern opposed to participants with low environmental concern will rate the self-serving motives higher for the design with the complex background
- ➔ H14: Participants with high environmental concern opposed to participants with low environmental concern will rate the third-party certificate higher on premium aspects
- ➔ H15: Participants with high environmental concern opposed to participants with low environmental concern will rate the packaging with the third-party label higher in terms of self-serving motives than the packaging with the internal certificate

3.5 Hypothesized model

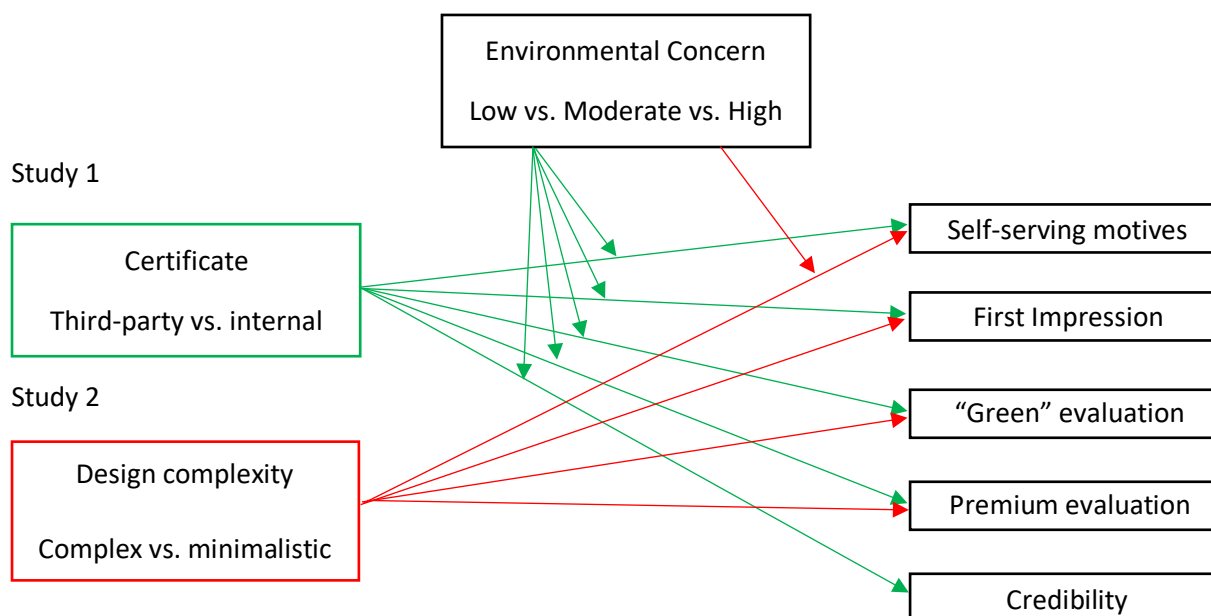


Figure 1

Hypothesized model

The goal of the research was to determine how the packaging characteristics certification and design complexity influence a “green” impression, and play together with the premium aspect of

a product. A mixed method approach was developed to find correlations between the two aspects “green” and premium and to put the findings into context. To gather these insights two quantitative experimental 2x3 design studies and a preparing small qualitative interview study were conducted. This combination of a previous qualitative and following quantitative studies was expected to deliver a relevant instrument. With the data from the qualitative research, the motives to buy premium apparel were identified. The findings from the qualitative study served as input for the quantitative study, to formulate relevant questions when asking about self-serving motives. The first main study was an experimental 2 (third-party certificate vs. internal certificate) x 3 (low vs. moderate vs. high environmental concern) study on the constructs self-serving motives, first impression, “green” evaluation, premium evaluation and credibility. The second main study was designed in the same way, but investigated the influence of another independent variable on the constructs. Here an experimental 2 (minimalistic vs. complex design) x 3 (low vs. moderate vs. high environmental concern) study was conducted to investigate their influence on the constructs self-serving motives, first impression, “green” evaluation and premium evaluation.

4 Pre-Study

The aim of the pre-study was to investigate the self-serving motives that underlie the decision to purchase premium apparel products. Therefore, a small qualitative study among people from the target group was conducted. The findings of the pre-study served as input for the two main studies. Formulating relevant and fitting questions regarding self-serving motives with the input from the participants from the pre-study was the aim of this step. Additionally, this part can give insight into the motivation of the participants to choose or refrain from a product.

4.1 Study Design

In semi-structured interviews (see appendix) the participants were asked to elaborate why they prefer premium clothing, what defines a premium or luxury fashion product for them, and how they evaluate if a product fits their needs. Due to the coronavirus outbreak and the accompanying regulations for personal human interaction, the interviews were held over skype or phone to keep participants and researcher safe. The participants received an informed consent by mail and a virtual meeting was scheduled. In the meeting the participants answered the questions regarding their self-serving motives and were encouraged to share their feelings and emotions when buying premium fashion products. The interviews were voice recorded and notes were taken to investigate the self-serving motives of the participants. No visual cues were used during this phase, since the general motives to buy premium fashion were the centre of the investigation without associations from existing products and packaging.

4.2 Participants

The qualitative study was conducted among 8 participants between the age of 30 to 58 ($M=48.88$, $SD=9.01$). Within this sample three of the participants were male and five were female. To gather a relevant insight into the self-serving motives of premium basic apparel consumers, the participants were selected according to their fit into the target group by their apparel shopping behaviour. In this context, people who buy fashion in specialist shops and set value on premium products were suitable. The selection of the participants was limited to German speaking German citizens.

4.3 Analysis and Results

The motives, the participants mentioned when buying premium fashion products were written down and compared to each other. Most of the motives were mentioned by several participants. The phrasing of the motives was simplified, translated from German to English and compared in Table 1 so that reoccurring answers could be identified. One participant stated to only buy from certain premium brands, since they “just always proved to be of high quality in the past and

I still have pieces from years ago, because they last that long and are really well made". The two most popular answers were "Higher quality" and "Better fit while worn". The superior fit was highlighted by another participant who stated: "I know the size I have in products from this brand and I can just buy new products, without trying them on, because they always fit me perfectly. Oftentimes, clothing pieces from cheap brands are not good tailored and differ in sizes and fit, even though you buy from the same brand."

Table 1

Self-serving Motives

Motive	Occurrence	Percentage
"Higher Quality"	8	100%
"Style"	6	75%
"Superiority"	7	88%
"Innovation"	6	75%
"Fits my needs"	5	63%
"Better material feeling"	7	88%
"Better fit while worn"	8	100%
"Makes me feel good about myself"	3	38%
"Durability"	7	88%

4.4 Conclusion and implications for main studies

The Pre-Study revealed that the motives to buy premium fashion products are relatively congruent to the results of previous studies. Some of the motives had to be excluded, since they depended on prolonged use and wearing of the products, which was not possible in this study. The motives "Better material feeling", "Better fit while worn", and "Durability" were therefore excluded from the survey for the two main studies. Additionally, the motive "Makes me feel good about myself" was excluded from the main studies, since this motive was only mentioned by less than half of the participants and the motive "Style" was excluded, since this motive concerns the fashion item itself and is hardly to derive from a packaging. Hence, four of the investigated motives were used in the following two main studies to investigate self-serving motives, which were "Higher quality", "Superiority", "Innovation", and "Fits my needs".

5 Main Study 1 – Certification

After determining the self-serving motives participants have to buy premium fashion products, the first main study was conducted.

5.1 Study design and procedure

The first main study aimed to investigate the influence of third-party and internal labels on premium and green product evaluations, first impression, and credibility in combination with environmental concern. For this purpose, an online survey (see Appendix) on the platform Qualtrics was developed and conducted. The survey was online for two weeks until data saturation was reached. Through an anonymous link, the survey was spread among the sample. Socks can be considered an essential wardrobe item to almost all humans, therefore no further limitations regarding the relevance of the product for the participants were made. The participants were convenience sampled in a snowball sampling approach. By sharing the link among friends, family and co-workers with an accompanying text explaining the study, inviting participation and further sharing, the survey was spread. All answers were recorded with an anonymous, randomized participant ID and the data was transferred to SPSS for analysis after enough participants finished the survey.

After answering questions regarding demographics, like age and gender, the participants gave details about their current shopping behaviour for socks. Questions that asked for the typical place of purchase (e.g. drugstores, online-stores, etc.) and what brands the participants regularly wore indicated, if the sample was more prone to buying premium socks or retail, discount socks. The visual stimuli, either a packaging with third-party or internal logo was now shown to the participants. With the Qualtrics randomizer feature, the participants were randomly assigned to the two different designs to ensure equal distribution of demographics and equal group sizes. Subsequently, the main part of the study tested different claims regarding first impression, “green” evaluation, premium evaluation, self-serving motives and credibility. On a 7-point Likert scale, the participants indicated to what extent they agreed or disagreed with the statements. After this, the participants were asked questions regarding their environmental concern in relation to the textile industry and if they are familiar with the logo on the packaging. The construct environmental concern was then coded into a categorical variable with three groups ranging from low (N=32), moderate (N=29) to high environmental concern (N=52) by a percentile split into thirds. Therefore, main study 1 consisted of a 2 (third-party certificate vs. internal certificate) x 3 (low vs. moderate vs. high environmental concern) study.

5.2 Participants

A total of 138 participants took the survey. After removing all participants who did not fit the age range or did not finish the survey, 115 participants were left. From this sample two more participants had to be removed, since they indicated in the beginning of the survey that they reject the brand ELBEO on principle and would never buy any products from said brand. This removal was done to ensure that the negative feelings of the individuals towards the brand were not transferred to the evaluation of the packaging, which could possibly result in a negatively biased assessment. From this sample of 113 participants 53 evaluated the third-party logo and 60 evaluated the internal logo. Age and gender were equally distributed between these two groups. In general, the age ranged from 30 to 60 with a mean age of 48.83 (SD=8.26) and with 79.65%, women made up the majority of the participants.

Table 2

Characteristics of participants per certificate group

Certificate	Participants	Age	Gender (in %)	
	N	Mean (SD)	Male	Female
Third-party	53	48.4 (7.58)	20.75%	79.25%
Internal	60	48.83 (8,87)	20%	80%
Total	113	48.63 (8,26)	20.35%	79.65%

5.3 Stimuli material

To test whether third-party opposed to internal logos have an influence on the constructs first impression, “green” evaluation, premium evaluation, self-serving motives and credibility, two packaging designs were developed. The third-party logo was the aforementioned GOTS Logo. This logo is only awarded by a third-party, independent testing agency and is subject to strict conditions with regard to production, working conditions and protection of resources. Therefore, a certificate by GOTS is a valid indicator for customers to evaluate the environmental friendliness of a textile product. As counterpart, a logo, which was designed by the Hanes internal graphics department was used. This logo is not protected in any way and resembles other generic “organic cotton” logos that can be found on the internet. This logo is aesthetically pleasing, but does not stand for any environmental standards. In fact, every producer could use this logo as part of their design, without having to comply with any requirements or undergo third-party audits. These two logos were chosen to test, if the origin or meaning of the certificate on the packaging has an influence on the evaluation.



Figure 2

Third-party certificate



Figure 3

Internal certificate

5.4 Measures

Self-serving motives, first impression, “green” evaluation, premium evaluation and credibility served as dependent variables. Additionally, environmental concern served as moderator variable. On a 7-point Likert scale, the degree of agreement to claims from the different dependent constructs was recorded. This items on the scale were “Completely disagree”, “Largely disagree”, “Partially disagree”, “Neither disagree nor agree”, “Partially agree”, “Largely agree”, and “Completely agree”. The questionnaire was held in German, but was translated to English for the analysis due to reasons of universal understandability. All constructs were tested for reliability. Since all constructs show a Cronbach’s Alpha equal to or above .70, the constructs were considered reliable and were used

further in the analysis. The constructs and the items they consist of, together with the Cronbach's Alpha were reported in Table 3.

Table 3

Constructs, items and reliability

Construct	N	Items	Cronbach's Alpha
Self-serving motives	4	These socks offer something to me, others do not offer These socks fit my needs especially well The quality of these socks is superior to others These are very innovative socks	0.75
First impression	5	I like the packaging a lot The packaging is not appealing to me* The general design is visually appealing The packaging looks modern The packaging is a real "Headturner"	0.81
Green	4	The packaging indicates an environmentally friendly product These socks are environmentally friendlier than other socks I have the feeling to contribute to environmental protection with a purchase of this product The claims on the packaging clearly identify the product as environmentally friendly	0.7
Premium	4	These socks offer me something, I am willing to pay more for The product appears to be of high quality The packaging looks cheap* This is a premium product	0.75
Credibility	2	The claims on the packaging are reliable The claims are credible	0,7
Envi. Concern	6	I am personally committed to protecting the planet I am very concerned about the environmental impact of the textile industry When buying clothes, I try to choose products with low environmental impact I pay particular attention to sustainable clothing when shopping I am willing to pay more for sustainable clothing	0.89

I search specifically for environmental
certificates when I buy clothes

Note. * Items reverse coded

5.5 Results

Multivariate analysis of variance

The data collected in the first main study was analysed to investigate the effect of the two different design elements third-party certificate and internal certificate and for the moderating effect of environmental concern. With a multivariate analysis of variance (MANOVA) the effect of type of certificate and environmental concern on the combined dependent variables (first impression, self-serving motives, premium evaluation, “green” evaluation and credibility) was tested. In a Bonferroni post hoc analysis, the influence on the individual constructs was investigated. The multivariate analysis of variance revealed that the independent variable certificate (third-party certificate and internal certificate) did not have a significant main effect on the constructs. (Wilk’s Lambda $F(5,103) = .08$, $p = 1.0$, $\eta^2 = .00$.) However, Wilk’s Lambda revealed that there was a significant main effect of environmental concern on the constructs ($F(10,206) = 2.73$, $p = .004$, $\eta^2 = .12$) and a significant interaction effect of certificate and environmental concern ($F(10,206) = 2.11$, $p = .025$, $\eta^2 = .09$). For comparison, the results of the between subject effects for the effect of the variables certificate, environmental concern and environmental concern*certificate from the multivariate analysis of variance were further investigated per construct and presented in Table 4.

Table 4

Results of the MANOVA per construct

IV	Construct	df	Error df	F	p	η^2
Certificate	First impression	1	107	.08	.78	< .00
	Premium	1	107	.01	.92	< .00
	Green	1	107	.25	.62	< .00
	Self-serving m.	1	107	.08	.78	< .00
	Credibility	1	107	.01	.93	< .00
Env. Concern	First impression	2	107	3.42	.04**	.06
	Premium	2	107	4.78	.01**	.08
	Green	2	107	2.17	.12	.04
	Self-serving m.	2	107	11.19	.00**	.17
	Credibility	2	107	.17	.84	< .00
Env. C*Certificate	First impression	2	107	.74	.48	.01

Premium	2	107	1.56	.22	.03
Green	2	107	2.79	.07	.05
Self-serving m.	2	107	3.58	.03**	.06
Credibility	2	107	.45	.64	.01

Note. ** significant, $p < .05$

5.5.1 Environmental concern

In this paragraph the influence of the independent variables was analysed in regard to the constructs they had a significant effect on.

First impression: The variable environmental concern had a significant influence on the construct first impression ($F(2,107) = 3.42$, $p = .04$, $\eta^2 = .06$). Participants with moderate environmental concern rated their first impression more positive ($M = 4.68$, $SD = 1.10$) than participants with low environmental concern ($M = 4.45$, $SD = 1.15$). Participants with a high environmental concern rated the first impression as most positive ($M = 5.11$, $SD = 1.16$).

Premium: For the construct premium, the level of environmental concern of the participants had a significant effect ($F(2,107) = 4.78$, $p = .01$, $\eta^2 = .08$), too. High environmental concern had a positive influence on the construct premium. The participants with high environmental concern ($M = 5.03$, $SD = 1.11$) rated the premium construct higher than participants with moderate ($M = 4.44$, $SD = 1.10$) and low ($M = 4.33$, $SD = 1.11$) environmental concern.

Self-serving motives: Environmental concern had a significant effect on the construct self-serving motives ($F(2,107) = 11.19$, $p = .00$, $\eta^2 = .17$). The fulfilment of self-serving motives was rated highest from participants with high environmental concern ($M = 4.86$, $SD = 1.25$) than participants with moderate ($M = 4.07$, $SD = 1.02$) and low ($M = 3.77$, $SD = .90$) environmental concern.

5.5.2 Interaction effect.

With the MANOVA a significant interaction effect between environmental concern and the certificate on self-serving motives could be proven ($F(10,206) = 2.11$, $p = .025$, $\eta^2 = .09$). This effect was further analysed in a linear regression analysis. For this purpose, the categorical variable environmental concern was dummy coded. The regression analysis showed that the certificate itself, without the interaction effect is not a good predictor of the construct self-serving motives ($F(1,111) = .00$, $p = 0.95$, $R^2 = .00$). In combination with the environmental concern, the model becomes significant, which makes it a relatively suitable predictor for self-serving motives ($F(2,109) = 9.24$, $p = .00$, $R^2 = .20$). With an R^2 change of .2, the interaction between certificate and environmental concern accounted for significantly more variance than only certificate. Therefore, environmental concern

might have a moderating effect on certificate for self-serving motives. Figure 4 visualizes the effect of environmental concern in regard to the certificates. It can be seen that participants with high environmental concern generally rated the self-serving motives highest. They also preferred the internal logo over the third-party logo. Opposed to this trend, the participants who reported a moderate or low environmental concern both evaluated the packaging with the third-party certificate as more credible.

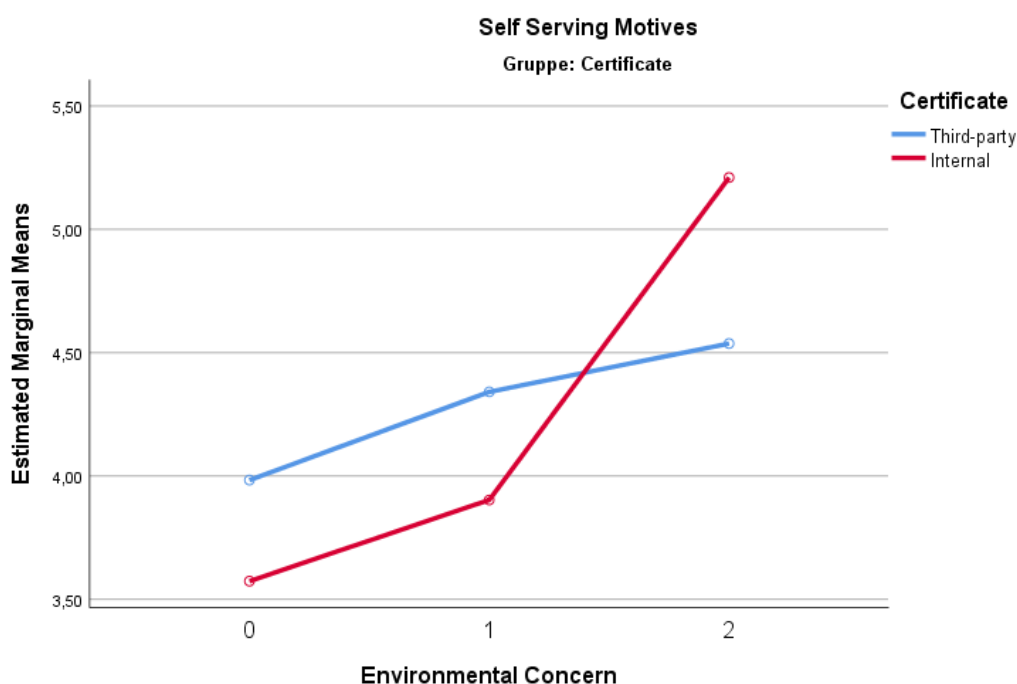


Figure 4

Interaction effect of certificate and environmental concern

The effect was further analysed in a one-way ANOVA. This comparison was done for each of the two certificate groups separately. In a multiple comparison the results for each of the three levels of environmental concern were compared with each other. Table 5 illustrates the differences between the evaluation of the three environmental concern groups per certificate. For the third-party certificate, the analysis revealed that people with high environmental concern ($M = 4.54$, $SD = 1.35$) rated self-serving motive higher than participants with moderate environmental concern ($M = 4.34$, $SD = .46$) and low environmental concern ($M = 3.98$, $SD = .73$). Though it can be seen that these differences between the groups were not significant. However, when the internal certificate was included, participants with high environmental concern ($M = 5.21$, $SD = 1.03$) rated self-serving motives significantly higher than participants with moderate ($M = 3.9$, $SD = 1.22$) or low environmental concern ($M = 3.57$, $SD = 1$).

Table 5*Multiple comparison*

Certificate	Environm. C.	Environm. C.	Mean Difference	Std. Error	Sig. Bonferroni
Third-party	Low	Moderate	-.36	.43	1
		High	-.55	.35	.35
	Moderate	Low	.36	.43	1
		High	-.2	.38	1
	High	Low	.55	.35	3.5
		Moderate	.2	.38	1
Internal	Low	Moderate	-.33	.37	1
		High	-1.64	.34	< .00**
	Moderate	Low	.33	.37	1
		High	-1.31	.33	< .01**
	High	Low	1.64	.34	< .00**
		Moderate	1.31	.33	< .01**

Note. ** significant, $p < .05$

5.6 Conclusion

While the different certificates themselves did not have a significant effect on the constructs, environmental concern had a positive influence on the rating in terms of first impression, premium evaluation and self-serving motives. The higher the environmental concerns of the participant, the higher the three different concepts were rated. However, the assessment of the "green" aspect was not influenced by the environmental concerns of the participants. The impression and assessment of the product as environmentally friendly was therefore universal, regardless of the personal attitude of the participants. However, this impression had a positive effect on the participants, who indicated a high level of environmental concern. Apparently, participants with high environmental concern further tend to perceive the products as premium products, had a more positive impression of the products and implied that the products fulfil their self-serving motives better than participants with low environmental concern. Participants with a high level of environmental awareness were therefore more satisfied with an environmentally friendly product in their personal values and wishes. Additionally, there was an interaction effect between the certificates and environmental concern on the construct self-serving motives. Apparently, the participants with high environmental concern preferred the internal certificate, while the participants with moderate and low environmental concern rated the third-party certificate higher than the internal label. While the third-party certificate did not lead to significant differences on the evaluation of self-serving motives

between the three different groups of environmental concern, the internal label was significantly higher rated by participants who reported high environmental concern.

6 Main Study 2 – Design Complexity

The second main study was conducted in the same way as the first main study. The data was collected with the same procedure in the same online study.

6.1 Study design and procedure

Participants entered the survey through the same link. The survey and measures were congruent to the first group to investigate the effect of design complexity on first impression, “green” evaluation, premium evaluation, self-serving motives and credibility. After questions concerning the demographics of the participants, the main part of the survey started to test effect of the design on the different constructs. Afterwards, another block of questions investigated the environmental concern of the participants. Therefore, main study 2 consisted of a 2 (complex design vs. minimalistic design) x 3 (low vs. moderate vs. high environmental concern) study. The results from the pre-study were used again to build relevant items for the construct self-serving motives. After data saturation was reached, the data was transferred to SPSS and cleaned for the analysis.

6.2 Participants

The survey was completed by 147 participants. After removing the participants who did not finish the survey or who did not fit the age range, 124 valid responses from participants between the age of 30 to 60 were left. This sample consisted of 75.88% women, 22.56% men and 1.56% participants, who indicated diverse as their gender. The mean age was 48.91 (SD = 8.76). There was an equal distribution of gender and age between the groups design complex and design minimalistic. Again, the participation was limited to German speaking German citizens.

Table 6

Characteristics of participants per design group

Design	Participants	Age	Gender (in %)		
	N	Mean (SD)	Male	Female	Diverse
Complex	64	49.16 (8.13)	23.44%	76.56%	0%
Minimalistic	60	48.65 (9.44)	21.67%	76.77%	1.56%
Total	124	48.91 (8.76)	22.56%	75.88%	1.56%

6.3 Stimuli material

To test the influence of packaging design complexity two design were developed by the Hanes internal graphic design department and the researcher. The complex design was composed of

a background with detailed small parts of leaves on twigs. Due to the white background, the green leaves stand out and compose a complex, irregular pattern. The leaves are painted in different shades of yellow and green, which makes the design appear vibrant and rich. Opposed to the complex design, a minimalist design was developed. For this version, the background was designed with large-scale leaves. The whole background including the leaves were coloured in the same tone, a muted green with grey. Because the leaves in the background have been inserted in large format, they blur with the background of the same color. This created a calm and uniform design which suits the minimalist design approach. Figure 8 shows the design with the complex design approach, while Figure 9 depicts the minimalistic design.



Figure 5

Complex Design



Figure 6

Minimalistic Design

6.4 Measures

To test the variables self-serving motives, first impression, “green” evaluation, premium evaluation and credibility, several constructs were put together. Since the survey for this study was equal to the main study survey, the constructs consisted of the same items. Here too, the participants expressed their degree of agreement or disagreement with various statements using a 7-point Likert scale. The scale consisted of the same answer possibilities, which were “Completely disagree”, “Largely disagree”, “Partially disagree”, “Neither disagree nor agree”, “Partially agree”, “Largely agree”, and “Completely agree”. Environmental concern was again tested for a moderating effect on the constructs. The Cronbach’s Alpha was calculated to test the individual constructs for reliability. Since all constructs were found to have a Cronbach’s Alpha above .7, the constructs were considered reliable. Hence, the constructs were used in the subsequent analysis. Table 7 shows the different constructs with their according items and the calculated Cronbach’s Alpha.

Table 7

Constructs, items and reliability

Construct	N	Items	Cronbach’s Alpha
Self-serving motives	4	These socks offer something to me, others do not offer These socks fit my needs especially well The quality of these socks is superior to others These are very innovative socks	.85
First impression	5	I like the packaging a lot The packaging is not appealing to me* The general design is visually appealing The packaging looks modern The packaging is a real “Headturner”	.80
Green	4	The packaging indicates an environmentally friendly product These socks are environmentally friendlier than other socks I have the feeling to contribute to environmental protection with a purchase if this product The claims on the packaging clearly identify the product as environmentally friendly	.81
Premium	4	These socks offer me something, I am willing to pay more for The product appears to be of high quality The packaging looks cheap*	.77

This is a premium product			
Credibility	2	The claims on the packaging are reliable	.73
		The claims are credible	
Envi. Concern	6	I am personally committed to protecting the planet	.85
		I am very concerned about the environmental impact of the textile industry	
		When buying clothes, I try to choose products with low environmental impact	
		I pay particular attention to sustainable clothing when shopping	
		I am willing to pay more for sustainable clothing	
		I search specifically for environmental certificates when I buy clothes	

Note. * Items reverse coded

6.5 Results

To test the effects of design complexity on the constructs first impression, self-serving motives, “green” evaluation, premium evaluation and credibility a multivariate analysis of variance (MANOVA) was conducted. The MANOVA showed that there was no significant main effect of design complexity on the constructs ($F(5,114) = 1.42$, $p = .22$, $\eta^2 = .06$). Additionally, there was no significant main effect of environmental concern ($F(10,228) = 1.31$, $p = .23$, $\eta^2 = .05$) and no significant interaction effect ($F(10,228) = .80$, $p = .63$, $\eta^2 = .03$) between design complexity and environmental concern found. Therefore, the analysis was not further continued. The hypotheses could not be proven and therefore have to be rejected.

6.6 Conclusion

Neither the different designs, nor the environmental concern of the participants had a significant influence on the evaluation of the constructs.

7 Summary of the two main studies

This study aimed to investigate how certificates and design complexity influence the perception of an apparel product in several aspects. The focus was to investigate the relationship between premium and “green” aspects of a product. As mentioned before, these two aspects can be experienced as contradictory by the consumer and negatively influence each other. However, neither the certificates nor the design complexity had an influence on the constructs. None of the hypotheses could be proven with this study. Table 8 gives an overview of all previously formulated hypotheses, in which of the two main studies they were examined and the results of the investigation. Nevertheless, the main study 1 has produced some unexpected results, which are further discussed in chapter 8.

Table 8

Results of Hypotheses tests

Study	Hypothesis	Result
1	1 - The third-party label opposed to the internal label has a positive influence on credibility	Rejected
1	2 - The internal label opposed to the third-party label has a positive influence on premium evaluation.	Rejected
1	3 - The third-party label opposed to the internal label has a positive influence on “green” evaluation	Rejected
1	4 - The third-party certificate opposed to the internal certificate has a positive influence on self-serving motives.	Rejected
1	5 - The third-party certificate opposed to the internal certificate has a positive influence on first impression.	Rejected
2	6 - The minimalistic design, opposed to the complex design has a positive influence on the “premium” evaluation	Rejected
2	7 - The minimalistic design, opposed to the complex design has a positive influence on “green” evaluation	Rejected
2	8 - The minimalistic design, opposed to the complex design has a positive effect on first impression	Rejected
2	9 - The minimalistic design, opposed to the complex design has a positive influence on self-serving motives	Rejected

1	10 - For participants with high environmental concern, the third-party certificate will have a higher impact on “green” evaluation than for participants with low environmental concern	Rejected
1	11 - For participants with high environmental concern, the third-party certificate will have a higher impact on first impression than for participants with low environmental concern	Rejected
1	12 - For participants with high environmental concern, the third-party certificate will have a higher impact on credibility than for participants with low environmental concern	Rejected
2	13 - Participants with high environmental concern opposed to participants with low environmental concern will rate the self-serving motives higher for the design with the complex background	Rejected
1	14- Participants with high environmental concern opposed to participants with low environmental concern will rate the third-party certificate higher on premium aspects	Rejected
1	15 - Participants with high environmental concern opposed to participants with low environmental concern will rate the packaging with the third-party label higher in terms of self-serving motives than the packaging with the internal certificate	Rejected

8 General discussion

Neither the origin of the certificates nor the complexity of the design had an influence on the evaluation of the products, even though previous studies did prove a difference between the effects of third-party and internal labels and different levels of design complexity. A possible explanation for this might be the product itself. Although socks are an indispensable part of most people's wardrobe and an essential part of their daily clothing, most people probably do not consider socks to be as relevant as other items of clothing. The careful considerations, people make when buying clothes may not apply to socks, since socks are more of a necessity and often not visible to others. Therefore, the relevance of environmental friendliness and according certificates and design cues might not be as prominent for socks as it is for other items of clothing. Even if people have an interest in environmental topics, socks may not be one of the points where they plan to change their behaviour or see a problem with the environmental consequences of the product. The context of the investigation may therefore influence how the certificates and design complexity are perceived. With socks, the choice may have been made for a product that is not even considered relevant by the customer. Especially the two aspects premium and environmental friendliness may not be considered as important for socks as it is for other items of clothing.

The results of the study indicated that environmental concern does have a significant influence on the way people perceive the packaging of an environmentally friendly product. Generally, high environmental concern led to a more positive perception of the product, since it possibly fits the personal values and needs of the participants better. These results are in line with previous studies, which revealed that people with high environmental concern have a more favourable attitude towards environmentally friendly products. This implies that producers of premium apparel products should carefully investigate and consider the characteristics of their target group, especially in terms of environmental concern and attitude towards the topic environmental protection. The implementation of a green product line for premium apparel products appears to be more fruitful for customers who already have a high interest and concern in environmental related topics, since they can perceive environmental friendliness as added value.

The fact that people with high environmental concern preferred the internal certificate, opposed to the people with low or moderate environmental concern, who preferred the third-party certificate, delivers interesting input for practical implications. This was a surprising result, since it was expected that especially people who state that they have an interest and concern in environmental topics would prefer a third-party certificate. After all, this certificate is more reliable when seriously looking for sustainable, environmentally friendly clothing. This result is in contrast to previous findings of the investigation. In fact, third-party certificates are usually preferred by customers because they are more reliable (Pancer, Mcshane, & Noseworthy, 2015). But while the

third-party certificate did not lead to significant differences on the evaluation of self-serving motives between the three different groups of environmental concern, the internal label was significantly higher rated by participants who reported high environmental concern. It is possible that the participants could not correctly classify the certificates. As mentioned earlier, previous research has shown that the positive effect of third-party certificates can only be fully effective if customers are aware of the meaning of the certificate. Nevertheless, participants with high environmental awareness preferred the internal certificate. This result may also be related to the fact that although the participants did not know what the internal certificate meant, the claim on the certificate allowed conclusions to be drawn about its meaning.

The result may be related to this aspect of previous research. Even though the internal certificate does not stand for any reliable credibility, the certificate itself was formulated in another way than the third-party certificate. As mentioned above, the specificity of a certificate or claim plays an important role for trust and favourability towards a certificate (Pancer, Mcshane, & Noseworthy, 2015). In this case the internal certificate promised "Bio Cotton", while the claim of the third-party certificate consisted of the name of the testing body, namely "Global organic textile standard". The claim from the internal label may have appeared more specific and relatable by the participants with high environmental concern and was therefore rated better. Especially in non-native English-speaking countries, like Germany, the phrasing of the GOTS certificate was probably not self-explanatory to every participant. Including labels to push credibility is therefore to consider against this aspect. Third-party labels that are not formulated in a specified way, could be combined with additional information for the certificate on the packaging. Alternatively, in information campaigns the actual meaning of the third-party label could be explained in a specific way. This way the third-party certificates could be connected to specific claims by the customer, without changing the design and the claims on the certificate itself.

The second main study could not confirm earlier research results on minimalism as a premium product cue. One reason for this could be that the minimalist design was still too exciting and thus did not meet the classic minimalist design requirements. Although the minimalist packaging design was "quieter" and the colours more muted than the complex design, the differences between the designs may not have been strong enough to really show the difference in complexity. In addition, the complex design also included a large grey box with the brand name and other product aspects that might have dampened the irregular, vibrant effect of the complex design in the background. As mentioned above, the reason that the study failed to prove earlier results on minimalistic design effects, may be the product itself. Minimalism as premium cue may not have a strong impact for socks products, since they are more of a necessity and do not serve the typical goals of a premium product. Reasons to buy premium products included factors that need the

fashion product to be seen by others. Prestige and Status as well as aesthetics may not play such an important role in a product that most of the time it cannot be seen by other people. Therefore, classical premium cues may not have such a strong impact for socks products than it has for other clothing items. This implies that producers of sock products should focus especially on how to communicate their premium products and how the implementation of “green” product cues can further contribute to this aspect.

8.1 Limitations

Due to the developing Corona virus crisis and the accompanying regulations to human interaction, the data collection only took place in an online setting, without physical contact. This led to some limitations, since every computer screen depicts colours and contrasts different. This may have led to a varying visualisation and therefore perception of the colours. A great variety in illustration of colour might have reduced the influence of the complex versus minimalistic design study, since the two designs did not differ much in colour and were perceived different according to the computer or phone screen of the participant. Especially due to the fact that the visual perception of the designs was an important antecedent of the study, this ambivalence might have caused a varying visual perception of the designs. Another limitation was the convenience sampling of the sample. A sampling that uses existing social bonds and relations might have led to a relatively homogenous sample. This state may have led to the fact that there were no major differences in the perception of the designs because the participants were generally relatively unanimous in their attitude.

8.2 Future research recommendations

An effect of design complexity could not be proven but through the circumstances of the product, the study suggests that the boundaries between minimalist and complex designs could be further explored and directly related to a product. The interaction of the certificates and environmental concern also contains an interesting perspective for future research. Why participants with high environmental concern preferred the internal label over the third-party label opposed to participants with low or moderate environmental concern could be investigated in qualitative, in-depth interviews to gather a greater insight into how the participants perceive the certificates and how the certificate impacts their personal values and priorities. It was revealed that the perception of certificates depends on the level of environmental concern. Especially in context with the specificity of claims in relation to environmental concern, this holds an interesting perspective for future research. The comparison of two certificates that consist of exactly the same wording, but implemented in third-party and internal certificates could investigate if and how the specificity of claims has an influence on the perception of certificates in relation to environmental

attitude. Additionally, another sample method that ensures a more heterogenic group of participants may deliver results that show stronger contrasts in perception of designs and certificates.

9 Conclusion

This study investigated how certification and design complexity, of “green” premium packaging impact values and priorities, premium and “green” evaluation, and credibility in relation to environmental concern. It was discovered that high environmental concern led to a more positive perception of the packaging in several aspects. Prior research results according the effect of certificates and design complexity could not be replicated. But some aspects of prior research concerning certificates were conditionally supported and the study added the aspect of the product context and customer attitude as interesting new aspects. The study suggests that marketing practitioners should carefully investigate their target group for their attitude towards environmental topics, since this factor influences how certificates are perceived. An important aspect that was highlighted by the study is the context and the circumstances in which the marketing through packaging design takes place. A close monitoring of the values and attitudes of the target group as well as putting the product with its special features in focus is important to combine premium products with a “green” aspect. Especially in a field where these two aspects are widely perceived as contradictory, attention to the surrounding conditions is vital for a successful introduction of “green” products in an existing line of premium apparel products. A universal solution for introducing “green” products into the range of premium brands appears to be not realistic but rather to depend on individual circumstances.

References

- Angelis, M. D., Adıgüzel, F., & Amatulli, C. (2017). The role of design similarity in consumers' evaluation of new green products: An investigation of luxury fashion brands. *Journal of Cleaner Production*, 141, 1515–1527. doi: 10.1016/j.jclepro.2016.09.230
- Atkinson, L., & Rosenthal, S. (2014). Signaling the Green Sell: The Influence of Eco-Label Source, Argument Specificity, and Product Involvement on Consumer Trust. *Journal of Advertising*, 43(1), 33–45. doi: 10.1080/00913367.2013...
- Azzi, A., Battini, D., Persona, A., & Sgarbossa, F. (2012). Packaging Design: General Framework and Research Agenda. *Packaging Technology and Science*, 25(8), 435–456. doi: 10.1002/pts.993
- Barchiesi, M. A., Castellan, S., & Costa, R. (2016). In the eye of the beholder: Communicating CSR through color in packaging design. *Journal of Marketing Communications*, 24(7), 720–733. doi: 10.1080/13527266.2016.1224771
- Berlyne, D.E. (1971). *Aesthetics and Psychobiology*, Appleton-Century-Crofts, New York, NY
- Brach, S., Walsh, G., & Shaw, D. (2018). Sustainable consumption and third-party certification labels: Consumers' perceptions and reactions. *European Management Journal*, 36(2), 254–265. doi: 10.1016/j.emj.2017.03.005
- Chind, K., & Sahachaisaeree, N. (2012). Purchasers' Perception on Packaging Formal Design: A Comparative Case Study on Luxury Goods Merchandizing. *Procedia - Social and Behavioral Sciences*, 42, 436–442. doi: 10.1016/j.sbspro.2012.04.208
- Chou, J.-R. (2011). A Gestalt–Minimalism-based decision-making model for evaluating product form design. *International Journal of Industrial Ergonomics*, 41(6), 607–616. doi: 10.1016/j.ergon.2011.07.006
- Ciravegna, E. (2017). Diseño de packaging. Una aproximación sistémica a un artefacto complejo. *RChD: Creación y Pensamiento*, 2(3). doi: 10.5354/0719-837x.2017.47825
- Decré, G. B., & Cloonan, C. (2019). A touch of gloss: haptic perception of packaging and consumers' reactions. *Journal of Product & Brand Management*, 28(1), 117–132. doi:10.1108/jpbm-05-2017-1472
- Dekhili, S., Achabou, M. A., & Alharbi, F. (2019). Could sustainability improve the promotion of luxury products? *European Business Review*, 31(4), 488–511. doi: 10.1108/eb-042018-0083
- Doval, J., Singh, E. P., & Batra, G. S. (2014). Green Buzz in Luxury Brands. *Review of Management*, 5. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2450992
- Favier, M., Celhay, F., & Pantin-Sohier, G. (2019). Is less more or a bore? Package design simplicity and brand perception: an application to Champagne. *Journal of Retailing and Consumer Services*, 46, 11–20. doi: 10.1016/j.jretconser.2018.09.013
- Fortune Media IP Limited. (2020, May 18). Hanesbrands Company Profile. Retrieved May 20, 2020, from <https://fortune.com/company/hanesbrands/fortune500/>
- Hennigs, N., Wiedmann, K.-P., Klarmann, C., Strehlau, S., Godey, B., Pederzoli, D., ... Oh, H. (2012). What is the Value of Luxury? A Cross-Cultural Consumer Perspective. *Psychology & Marketing*, 29(12), 1018–1034. doi: 10.1002/mar.20583

- Howell, B. F., & Schifferstein, H. N. (2019). How neutral coloured backgrounds affect the attractiveness and expensiveness of fresh produce. *Food Quality and Preference*, 78, 103718. doi: 10.1016/j.foodqual.2019.05.018
- Joy, A., Sherry, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands. *Fashion Theory*, 16(3), 273–295. doi: 10.2752/175174112x13340749707123
- Karaosman, H., Perry, P., Brun, A., & Morales-Alonso, G. (2018). Behind the runway: Extending sustainability in luxury fashion supply chains. *Journal of Business Research*. doi: 10.1016/j.jbusres.2018.09.017
- Koeijer, B., Gelhard, C., & Klooster, R. (2019). Sustainability priorities across the strategic and operational level in packaging development. *Packaging Technology and Science*, 32(12), 618–629. doi: 10.1002/pts.2480
- Koenig-Lewis, N., Palmer, A., Dermody, J., & Urbye, A. (2014). Consumers evaluations of ecological packaging – Rational and emotional approaches. *Journal of Environmental Psychology*, 37, 94–105. doi: 10.1016/j.jenvp.2013.11.009
- Magnier, L., & Crié, D. (2015). Communicating packaging eco-friendliness. *International Journal of Retail & Distribution Management*, 43(4/5), 350–366. doi: 10.1108/ijrdm-04-2014-0048
- Magnier, L., & Schoormans, J. (2015). Consumer reactions to sustainable packaging: The interplay of visual appearance, verbal claim and environmental concern. *Journal of Environmental Psychology*, 44, 53–62. doi: 10.1016/j.jenvp.2015.09.005
- Marckhgott, E., & Kamleitner, B. (2019). Matte matters: when matte packaging increases perceptions of food naturalness. *Marketing Letters*, 30(2), 167–178. doi: 10.1007/s11002-019-09488-6
- Mugge, R., Massink, T., Hultink, E. J., & Berg-Weitzel, L. V. D. (2014). Designing a Premium Package: Some Guidelines for Designers and Marketers. *The Design Journal*, 17(4), 583–605. doi: 10.2752/175630614x14056185480140
- Muthu, S. S. (2020). *Assessing the Environmental Impact of Textiles and the Clothing Supply Chain*. S.I.: Woodhead Publishing.
- Pancer, E., Mcshane, L., & Noseworthy, T. J. (2015). Isolated Environmental Cues and Product Efficacy Penalties: The Color Green and Eco-labels. *Journal of Business Ethics*, 143(1), 159–177. doi: 10.1007/s10551-015-2764-4
- Schuitema, G., & Groot, J. I. M. D. (2014). Green consumerism: The influence of product attributes and values on purchasing intentions. *Journal of Consumer Behaviour*, 14(1), 57–69. doi: 10.1002/cb.1501

Appendix

Questions for qualitative interviews:

- Question 1 - What criteria must clothes meet for you to buy it?
- Question 2 - How exactly does the clothing you buy differ from the clothing you do not buy?
- Question 3 - How do you choose clothes? - Imagine you are standing in a shop; how do you find out that the clothes meet the criteria you just mentioned?
- Question 4 - Do you only buy clothes from specific brands?
➔ Yes: Why only from these brands?
- Question 5 - Why are these criteria important for you?
- Question 6 - What do you expect from a premium fashion product?
- Question 7 – Do you prefer premium products over conventional products?
➔ Yes: Why?

Search log

*“How do **certification** and design complexity, of “green” premium packaging impact values and proprieties, premium and “green” evaluation, and credibility in relation to environmental concern?”*

Construct	Related terms	Broader terms	Narrower terms
Certification	Certificate , labels, eco certification, sustainable certification	Packaging, Eco textile, fashion	Green label, sustainable fashion

Date	Source	Search terms and strategies	How many hits (how many relevant)	Related terms/authors	Notes
16.03.2020	Scopus	(certification OR certificate) AND (textile OR fashion)	825 hits, after sorted on relevance 3 relevant		Already some interesting findings which provides an interesting stating point
	Google Scholar	(label OR certificate) AND (textile OR fashion) AND	341,000 hits, relevant: 6		Lot of results, still very broad

		(sustainable OR eco)			
	Scopus	((green OR eco OR sustainable) AND (fashion OR textile) AND (label OR eco OR certification))	71 hits, relevant: 5 seem useful	Fashion industry	Found relevant articles, for green labels in fashion
	Scopus	(fashion industry AND fashion OR textile) AND (certification OR certificate OR label) AND (eco AND sustainable AND green)	5, relevant: 2		Relevant articles found about communicating green fashion

Survey for the two main studies

Sehr geehrte Teilnehmer,

Sie sind eingeladen, an einer Forschungsstudie zur Untersuchung von verschiedenen Verpackungselementen teilzunehmen. Diese Studie wird von Jana Potthoff von der Fakultät für Verhaltens-, Management- und Sozialwissenschaften an der University of Twente durchgeführt.

Für die Durchführung dieser Studie benötigen Sie etwa 15 Minuten. Die Daten werden dazu verwendet, die Auswirkungen verschiedener Designelemente zu vergleichen und werden anschließend in einer Bachelorarbeit präsentiert.

Diese Studie können Sie am PC oder am Smartphone durchführen. Für eine bessere Darstellung empfehlen wir jedoch die Teilnahme am PC oder Laptop.

Ihre Teilnahme an dieser Studie ist vollkommen freiwillig und Sie können jederzeit zurücktreten. Es steht Ihnen frei, Fragen auszulassen.

Wir sind der Meinung, dass mit dieser Forschungsstudie keine bekannten Risiken verbunden sind; wie bei jeder Online-bezogenen Aktivität ist jedoch das Risiko eines Verstoßes immer möglich. Nach bestem Wissen und Gewissen werden Ihre Antworten in dieser Studie vertraulich bleiben. Für diese Studie werden keine persönlichen Daten benötigt. Wir werden jegliche Risiken minimieren, indem wir einen vertraulichen Umgang mit Ihren Daten sicherstellen. Die Daten werden sicher gespeichert und nicht an Dritte weitergegeben. Darüber hinaus werden die Daten nur zur Untersuchung der beschriebenen Phänomene verwendet und nach Abschluss der Studie vernichtet.

Kontaktdaten der Studie für weitere Informationen: Jana Potthoff,
j.potthoff@student.utwente.nl

Wenn Sie Fragen zu Ihren Rechten als Forschungsteilnehmer haben oder bei jemand anderem als dem Forscher Informationen erhalten, Fragen stellen oder Bedenken bezüglich dieser Studie diskutieren möchten, wenden Sie sich bitte an den Sekretär der Ethikkommission der Fakultät für Verhaltens-, Management- und Sozialwissenschaften der Universität Twente unter ethicscommittee-bms@utwente.nl

- ☐ Ich habe alles oben genannte gelesen und verstanden und erkläre mich bereit, an der Studie teilzunehmen. Ferner nehme ich aus freiem Willen teil und ich bin darüber informiert, dass ich jederzeit ohne Angabe von Gründen von der Studie zurücktreten kann.

Geschlecht

- ☐ Männlich
- ☐ Weiblich
- ☐ Divers

Alter

Welches dieser Produkte haben Sie in den letzten 12 Monaten gekauft? Mehrere Antworten sind möglich.

- ☐ Socken/Kniestrümpfe (z.B. mit Baumwolle)
- ☐ Unterhosen/Slips/Boxershorts
- ☐ Unterhemden/Shirts/Tops
- ☐ T-shirts
- ☐ Keins davon

Wo erwerben Sie Socken oder Kniestrümpfe üblicherweise? Mehrere Antworten sind möglich.

- ☐ Verbrauchermärkte (wie real, Kaufland, E-center, etc.)
- ☐ Supermärkte
- ☐ Drogerien
- ☐ Spezialisierte Wäsche- und Sockengeschäfte (wie Hunkemöller, etc.)
- ☐ Bekleidungsfachgeschäfte
- ☐ Warenhäuser (wie Kaufhof, Karstadt, etc.)
- ☐ Textildiscounter (wie TAKKO, KIK, etc.)
- ☐ Modeketten (wie H&M, C&A, Esprit, etc.)
- ☐ Internet (Zalando, amazon, etc.)
- ☐ Katalogbestellung von Versandhandeln (wie Otto, Baur, etc.)
- ☐ Lebensmitteldiscounter (wie Aldi, Lidl, Netto, etc.)

Lehnen Sie eins oder mehrere der folgenden Geschäfte für den Kauf von Socken oder Kniestrümpfen ab? Mehrere Antworten sind möglich.

- ☐ Drogerien
- ☐ Bekleidungsgeschäfte
- ☐ Spezialisierte Wäsche- und Sockengeschäfte (wie Hunkemöller)
- ☐ Warenhäuser (wie Kaufhof, Karstadt, etc.)
- ☐ ☒ Ich lehne keins der Geschäfte ab

Von welchen der folgenden Marken würden Sie auf keinen Fall Socken oder Kniestrümpfe kaufen? Mehrere Antworten sind möglich.

- ☐ Falke
- ☐ C&A
- ☐ Elbeo
- ☐ Nur Die
- ☐ Puma
- ☐ Ich lehne keine der Marken ab

Von welchen Marken sind die Socken oder Kniestrümpfe, die Sie innerhalb der letzten vier Wochen getragen haben? Mehrere Antworten sind möglich.

- ☐ Falke
- ☐ Elbeo
- ☐ Esprit
- ☐ Camano
- ☐ H&M
- ☐ TCM (Tchibo)
- ☐ Puma
- ☐ Burlington
- ☐ Happy Socks
- ☐ Andere Eigenmarken
- ☐ Andere Marken
 - nur Frauen
 - ☐ Canda (C&A)
 - ☐ Esmara (Lidl)
 - ☐ Gina Benotti (Ernsting's Family)
 - ☐ Yessica (C&A)
 - ☐ Fascino
 - ☐ Hudson
 - ☐ Kunert
 - ☐ Nur Die
 - nur Männer
 - ☐ Tom Tailor
 - ☐ Tommy Hilfiger
 - ☐ Nike
 - ☐ H.I.S.
 - ☐ Livergy (Lidl)
 - ☐ Nur Der

Sie sehen nun einen Design Entwurf für eine Verpackung. Nachfolgend finden Sie verschiedene Aussagen über diese Verpackung. Bitte geben Sie zu jeder einzelnen Aussage an, zu welchem Grad Sie mit dieser Aussage überein stimmen. Schauen Sie sich die Verpackung in Ruhe an und wenden sich dann den Fragen zu.

➔ One of the four designs, by randomizer

Bitte seien Sie ehrlich bei der Beantwortung, es gibt keine falschen Meinungen!

Erster Eindruck

[illegible]

Design

Design

[illegible]

Angaben & Marke

[illegible]

Persönliche Einstellung

	Stimme absolut nicht zu	Stimme größtenteils nicht zu	Stimme teilweise nicht zu	Stimme weder zu noch dagegen	Stimme teilweise zu	Stimme größtenteils zu	Stimme absolut zu
Mir liegt der Schutz des Planeten persönlich am Herzen	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich bin sehr besorgt über die Umweltauswirkungen der Textilindustrie	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beim Kauf von Kleidung versuche ich Produkte mit geringer Umweltbelastung zu wählen	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich achte beim Einkaufen besonders auf nachhaltige Kleidung	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[illegible]